



BANCO SANTANDER, S.A.

ANNUAL REPORT

FOR THE YEAR ENDED 31 DECEMBER 2022

TABLE OF CONTENTS

Part 1.- Consolidated directors' report, auditor's report and consolidated financial statements	3
Part 2.- Supplemental information	812

Part 1.

Consolidated directors' report,
auditor's report and
consolidated financial
statements

For a brighter tomorrow

2022 Annual report





2022 Annual report

Unless otherwise specified, references in this annual report to other documents, including but not limited to other reports and websites, including our own, are for information purposes only. If the contents of such other documents and websites refer to this annual report, they are not nor should be considered part of it.

Unless the context suggests otherwise, 'Banco Santander' means Banco Santander, S.A., and 'Santander', 'the Group' and 'Grupo Santander' mean Banco Santander, S.A. and subsidiaries.

Consolidated directors' report

8 Business model and strategy

18 Responsible banking

Consolidated non-financial information statement

- 21 2022 Overview
- 24 Our ESG strategy
- 31 Building a more responsible bank
- 77 Our progress in figures
- 93 Further information
- 105 ESG reporting standards and references
- 155 Independent verification report

158 Corporate Governance

- 161 2022 Overview
- 167 Ownership structure
- 173 Shareholders. Engagement and general meeting
- 180 Board of directors
- 228 Management team
- 230 Remuneration
- 257 Group structure and internal governance
- 260 Internal control over financial reporting (ICFR)
- 267 Other corporate governance information

304 Economic and financial review

- 306 Economic, regulatory and competitive context
- 310 Group selected data
- 312 Group financial performance
- 357 Financial information by segments
- 400 Research, development and innovation (R&D&I)
- 402 Significant events since year end
- 403 Trend information 2023
- 411 Alternative performance measures (APM)

420 Risk management and compliance

- 422 Risk management and compliance
- 430 Risk management and control model
- 437 Credit risk
- 456 Market, structural and liquidity risk
- 469 Capital risk
- 471 Operational risk
- 478 Compliance and conduct risk
- 485 Model risk
- 487 Strategic risk
- 488 Climate and environmental risk

Auditor's report and consolidated financial statements

504 Auditor's report

514 Consolidated financial statements

530 Notes to the consolidated financial statements

766 Appendix

498 Glossary

809 General information



2022 consolidated directors' report

This report was approved unanimously by our board of directors on 27 February 2023

Our approach to this document

We changed the layout of our consolidated directors' report in 2018 to include the contents previously provided in these documents, which we no longer prepare separately:

- Annual report
- Consolidated directors' report
- Annual corporate governance report (CNMV format document)
- Board committee reports
- Sustainability report
- Annual report on our directors' remuneration (CNMV format document)

The consolidated directors' report also includes all information required by Spanish Act 11/2018 on non-financial information and diversity. It can be found in the ['Responsible banking'](#) chapter, which constitutes the consolidated non-financial information statement (NFI).

Auditors' reviews

As required by law, our 2022 consolidated directors' report was subject to three reviews by our independent statutory auditors, PricewaterhouseCoopers Auditores, S.L. They can be summarized as follows:

- PricewaterhouseCoopers Auditores, S.L. verified that the information in this report is consistent with our consolidated financial statements and that its contents comply with applicable regulation. For more details, see 'Other information: Consolidated management report section of the ['Auditor's report'](#) within ['Auditor's report and consolidated annual accounts'](#).

- PricewaterhouseCoopers Auditores, S.L. issued a verification report, with limited assurance, on the non-financial and diversity information indicators as required by Spanish Act 11/2018 and included in this consolidated directors' report. To read the verification report, see the ['Independent verification report'](#) in the ['Responsible banking'](#) chapter.
- PricewaterhouseCoopers Auditores, S.L. issued an independent reasonable assurance report on the design and effectiveness of Banco Santander's internal control over financial reporting, which can be found in section [8.6](#) of the ['Corporate governance'](#) chapter.

Non-IFRS and alternative performance measures

This report contains financial information prepared according to International Financial Reporting Standards (IFRS) and taken from our consolidated financial statements, as well as alternative performance measures (APMs) as defined in the Guidelines on Alternative Performance Measures issued by the European Securities and Markets Authority (ESMA) on 5 October 2015, and other non-IFRS measures. The APMs and non-IFRS measures were calculated with information from Grupo Santander; however, they are neither defined or detailed in the applicable financial reporting framework nor audited or reviewed by our auditors.

We use the APMs and non-IFRS measures when planning, monitoring and evaluating our performance. We consider them to be useful metrics for our management and investors to compare operating performance between accounting periods.

Nonetheless, the APMs and non-IFRS measures are supplemental information; their purpose is not to substitute the IFRS measures. Furthermore, companies in our industry and others may calculate or use APMs and non-IFRS measures differently, thus making them less useful for comparison purposes.

For more details on APMs and non-IFRS measures, see section 8 of the ['Economic and financial review'](#).



Non-financial information

This report contains, in addition to financial information, non-financial information (NFI), including environmental, social and governance-related metrics, statements, goals, commitments and opinions. The NFI can be found throughout the report but mostly in the ['Responsible banking'](#) chapter.

NFI is included to comply with Spanish Act 11/2018 on non-financial information and diversity and to provide a broader view of our impact. NFI is not audited nor, save as expressly indicated under ['Auditors' reviews'](#), reviewed by an external auditor. NFI is prepared following various external and internal frameworks, reporting guidelines and measurement, collection and verification methods and practices, which are materially

different from those applicable to financial information and are in many cases emerging and evolving. NFI is based on various materiality thresholds, estimates, assumptions, judgments and underlying data derived internally and from third parties. NFI is thus subject to significant measurement uncertainties, may not be comparable to NFI of other companies or over time or across periods and its inclusion is not meant to imply that the information is fit for any particular purpose or that it is material to us under mandatory reporting standards. NFI is for informational purposes only, without any liability being accepted in connection with it except where such liability cannot be limited under overriding provisions of applicable law.

Forward-looking statements

Banco Santander hereby warns that this annual report contains "forward-looking statements", as defined by the US Private Securities Litigation Reform Act of 1995. Such statements can be understood through words and expressions like "expect", "project", "anticipate", "should", "intend", "probability", "risk", "VaR", "RoRAC", "RoRWA", "TNAV", "target", "goal", "objective", "estimate", "future", "commitment", "commit", "focus", "pledge" and similar expressions. They include (but are not limited to) statements on future business development, shareholder remuneration policy and NFI. However, risks, uncertainties and other important factors may lead to developments and results that differ materially from those anticipated, expected, projected or assumed in forward-looking statements.

The important factors below (and others described elsewhere in this report), as well as other unknown or unpredictable factors, could affect our future development and results and could lead to outcomes materially different from what our forward-looking statements anticipate, expect, project or assume:

- general economic or industry conditions (e.g., an economic downturn; higher volatility in the capital markets; inflation; deflation; changes in demographics, consumer spending, investment or saving habits; and the effects of the war in Ukraine or the COVID-19 pandemic in the global economy) in areas where we have significant operations or investments;
- climate-related conditions, regulations, targets and weather events;
- exposure to market risks (e.g., risks from interest rates, foreign exchange rates, equity prices and new benchmark indices);

- potential losses from early loan repayment, collateral depreciation or counterparty risk;
- political instability in Spain, the UK, other European countries, Latin America and the US;
- legislative, regulatory or tax changes (including regulatory capital and liquidity requirements), especially in view of the UK's exit from the European Union and greater regulation prompted by financial crises;



- acquisition integration and challenges arising from deviating management's resources and attention from other strategic opportunities and operational matters;
- uncertainty over the scope of actions that may be required by us, governments and other to achieve goals relating to climate, environmental and social matters, as well as the evolving nature of underlying science and industry and governmental standards and regulations; and
- changes affecting our access to liquidity and funding on acceptable terms, especially due to credit spread shifts or credit rating downgrade for the entire group or core subsidiaries.

Forward looking statements are based on current expectations and future estimates about Santander's and third-parties' operations and businesses and address matters that are uncertain to varying degrees, including, but not limited to developing standards that may change in the future; plans, projections, expectations, targets, objectives, strategies and goals relating to environmental, social, safety and governance performance, including expectations regarding future execution of Santander's and third parties' energy and climate strategies, and the underlying assumptions and estimated impacts on Santander's and third-parties' businesses related thereto; Santander's and third-parties' approach, plans and expectations in relation to carbon use and targeted reductions of emissions; changes in operations or investments under existing or future environmental laws and regulations; and changes in government regulations and regulatory requirements, including those related to climate-related initiatives.

Forward-looking statements are aspirational, should be regarded as indicative, preliminary and for illustrative purposes only, speak only as of the date of approval of this annual report and are informed by the knowledge, information and views available on such date and are subject to change without notice. Banco Santander is not required to update or revise any forward-looking statements, regardless of new information, future events or otherwise, except as required by applicable law.



Past performance does not indicate future outcomes

Statements about historical performance or growth rates must not be construed as suggesting that future performance, share price or earnings (including earnings per share) will necessarily be the same or higher than in a previous period. Nothing in this annual report should be taken as a profit and loss forecast.

XHTML electronic format and XBRL tags

This annual report was prepared in eXtensible HyperText Markup Language (XHTML) format, and the consolidated financial statements it includes have been tagged with eXtensible Business Reporting Language (XBRL), in accordance with Directive 2004/109/EC and Commission Delegated Regulation (EU) 2019/815.

To view the XBRL tags, you must open this document with an appropriate viewer. You can find this document with an XBRL viewer on Banco Santander's corporate website.

Not a securities offer

This annual report and the information it contains does not constitute an offer to sell, nor a solicitation of an offer to buy any securities.



Business model and strategy

We follow **The Santander Way**:



Our aim

To be the **best open financial services platform**, by acting **responsibly** and earning the **lasting loyalty** of our people, customers, shareholders and communities



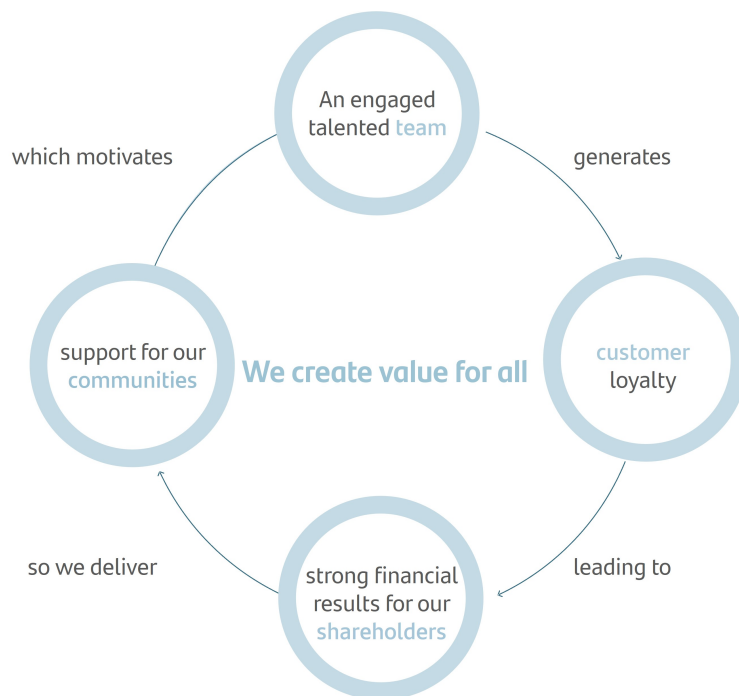
Our purpose

To help people and businesses prosper



Our how

Everything we do should be **Simple, Personal and Fair**




For more information see the [Responsible banking](#) chapter.

Our business model | Our customer focus, global scale and diversification are the foundations for generating value for our shareholders

01. Customer focus

Digital bank with branches



- **Santander provides access to financial services for our customers** through several channels (universal branches, specialist centres, contact centres, etc.) and supports customers with more digital services and products.
- We continue to enhance customer **experience and satisfaction**. All this is reflected in growth in customers and NPS^A improvement.
- Our focus is to further transform our business and operating model through our global technology initiatives with the aim to build a **Digital bank with branches**.

A. NPS – internal benchmark of individual customers' satisfaction audited by Stiga/Deloitte H2'22.


	2022	YoY
Total customers	160 mn	+7 mn
Loyal customers	27 mn	+8%
Digital customers	51 mn	+8%
Digital transactions	80%	+4 pp

Top 3 in customer satisfaction^A



02. Scale

In-market & global



- **In-market scale** in each of our core markets in volumes in each of our core markets combined with our **global scale** support greater profitability and provide a competitive advantage over local peers.
- **Global scale and network business: SCIB and WM&I** coupled with our capabilities in **auto and payments** drive in-market and Group profitable growth and value.


A. Market share data latest available. Spain includes Santander España + Hub Madrid + SCF España + Openbank and Other Resident sectors in deposits. The UK: includes mortgages and retail deposits. Poland: including SCF business in Poland. The US: retail auto loans includes Santander Consumer USA and Chrysler Capital combined. Deposits considering all states where Santander Bank operates. Brazil: deposits including debenture, LCA (agribusiness notes), LCI (real estate credit notes), financial bills (*letras financeiras*) and COE (certificates of structured operations).

Top 3 in lending^A in 10 of our markets



03. Diversification

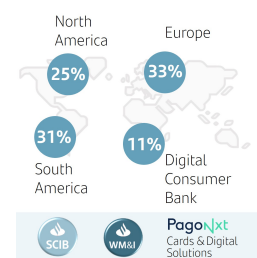
Geographical Business Balance sheet



- Our diversified **geographical** footprint is well balanced between developing and mature markets.
- **Business** diversification between customer segments (individuals, SMEs, mid-market companies and large corporates).
- Diversification delivers **recurrent pre-provision profit with low volatility**. Our aim is to have a **rock-solid, diversified balance sheet** which reduces risk and further contributes to profitability.

A. 2022 underlying attributable profit by region percentage of operating areas excluding Corporate Centre.

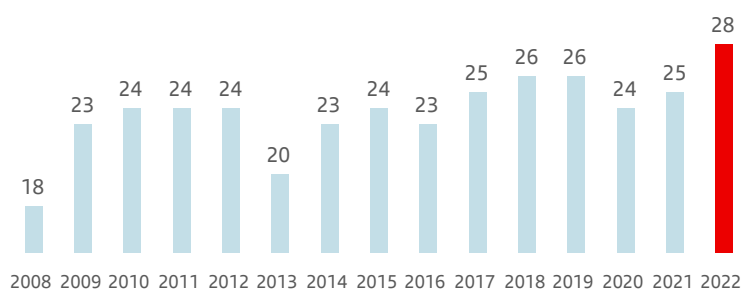
Contribution to Group's profit^A



Our strong model is reflected in the resilience of our net operating income. It is a competitive strength that continues to differentiate us.

Group net operating income (pre-provision profit)

EUR billion









2022 results: our success shows our business model works

Over the past seven years, we have laid the foundations and have reinforced our business model, based on customer focus, scale and diversification, which has resulted in a strong operating performance.

Our Aim, our Purpose and How we do things remained the same: to be the best open financial services platform by acting responsibly and earning the lasting loyalty of our people, customers, shareholders and communities; to help people and businesses prosper; and to aspire to make all of what we do Simple, Personal and Fair.

In 2022, we delivered record attributable profit of EUR 9.6 bn, supported by strong net operating income, translated into increased profitability and cash dividend per share (DPS), and all of this, with sound credit quality, liquidity and capital positions.

Our strategy execution delivered record results with an 18%^A increase in attributable profit

	Delivered record year in profit	Attributable profit	EUR 9.6 bn
	Increased profitability, shareholder value and returns	RoTE	13.4%
		EPS	+23%
	Further strengthened our rock-solid balance sheet	FL CET1	12.04%
		CoR	0.99%
	Customer focus and scale drove profitable growth	Customers	+7 mn
		Total revenue ^A	+12%

The increase in profitability enabled us to grow our business, strengthen our balance sheet and generate value for our shareholders

Note: FY'22 data or year-on-year changes.

A. In euros. In constant euros: attributable profit +8%, total revenue +6%.

We achieved our 2019 medium-term and 2022 Group financial targets

In 2022, we delivered strong financial results, while reaching the targets we set for ourselves at the beginning of the year: mid-single digit revenue growth in constant euros (+6%), contained cost of risk (below 1%), capital level (FL CET1 over 12%) and profitability (RoTE over 13%). We ended very close to our efficiency target of 45%, demonstrating an improvement compared to the previous year, and in a year with considerable inflationary pressures.



We have a strong track record in delivering on our targets. We also met our 2019 Investor Day medium-term targets. We believe our success shows our business model works.

Our 2022 and 2019 medium-term Group financial targets

	2019 medium-term targets	2022 targets	2022 results
Revenue		Mid-single digit growth ^A	+6%
Efficiency ratio	42-45%	~45%	45.8%
CoR		<1%	0.99%
RoTE	13-15%	>13%	13.4%
FL CET1	11-12%	~12%	12.04%
Payout	40-50%	40%	40% ^B

A. In constant euros.

B. Subject to approval of the final dividend at the 2023 AGM and completion of the Second 2022 Buyback Programme under the terms agreed by the board (see section [3.3 'Dividends and shareholder remuneration'](#) in the 'Corporate Governance' chapter).

Our customer focus, scale and diversification drive profitable growth and doing so in the right way

In a challenging year, we were able to increase profitability and shareholder remuneration. We believe our diversification also allowed us to further strengthen our strong balance sheet. We have a high-quality, simple balance sheet that we believe is well prepared to face the current uncertain environment. At the same time, we have built a solid capital level.

We believe in-market scale and operational improvements allowed us to be leaders in profitability, whilst our global network (global businesses combined with our Auto and Payments capabilities across our footprint) increased Group value added to the countries where we operate.



2022 results by region

We leveraged our strategy to improve the operational performance and results of our three geographical regions and Digital Consumer Bank.



Europe

2022 Key data and highlights

Loans EUR 579 bn	Customer funds EUR 737 bn	Efficiency 47.3%	<ul style="list-style-type: none"> → Business transformation to deliver accelerated growth, a more efficient operating model and increased customer satisfaction. → Customers, loans and deposits up in most countries. → Double-digit profit growth (+38% in constant euros) supported by strong NII performance, cost control and contained CoR. → Costs decreased 7% in real terms and efficiency improved 5 pp, reflecting the structural changes in our operating model.
Cost of risk 0.39%	Profit EUR 3.8 bn	RoTE ^A 9.3%	

A. Underlying RoTE. RoTE adjusted based on Group's deployed capital calculated as contribution of RWAs at 12% would be 12.5%.



North America

2022 Key data and highlights

Loans EUR 157 bn	Customer funds EUR 164 bn	Efficiency 47.7%	<ul style="list-style-type: none"> → Larger customer base and enhanced customer experience through tailored products and services. → Overall volumes growth, driven by most segments in Mexico and by CIB, Commercial Real Estate (CRE) and Auto in the US. → Profitability remained high driven by outstanding results in Mexico and high profit in the US.
Cost of risk 1.49%	Profit EUR 2.9 bn	RoTE ^A 11.1%	

A. Underlying RoTE. RoTE adjusted based on Group's deployed capital calculated as contribution of RWAs at 12% would be 20.5%.



South America

2022 Key data and highlights

Loans EUR 152 bn	Customer funds EUR 183 bn	Efficiency 37.0%	<ul style="list-style-type: none"> → Strengthening the connection and sharing best practices among units, capturing new business opportunities. → Customer base growth (+7mn year-on-year). → Profit up year-on-year boosted by revenue and a lower tax burden, more than offsetting inflationary pressures and higher LLPs. → High profitability, with double-digit RoTEs in all countries.
Cost of risk 3.32%	Profit EUR 3.7 bn	RoTE ^A 18.8%	

A. Underlying RoTE. RoTE adjusted based on Group's deployed capital calculated as contribution of RWAs at 12% would be 25.1%.

Digital Consumer Bank

2022 Key data and highlights

Loans EUR 125 bn	Customer funds EUR 62 bn	Efficiency 46.7%	<ul style="list-style-type: none"> → Value proposition further expanded with new commercial alliances, leasing, subscription and BNPL services. → Significant market share gains as new lending increased (+10% year-on-year). → Revenue up (leasing and fees) more than absorbed negative sensitivity to interest rate rises and new TLTRO conditions. → Costs grew well below inflation (-6% in real terms). → Credit quality remains solid; NPL down to 2.06% and CoR low at 0.45%.
Cost of risk 0.45%	Profit EUR 1.3 bn	RoTE ^A 13.7%	

A. Underlying RoTE. RoTE adjusted based on Group's deployed capital calculated as contribution of RWAs at 12% would be 14.4%



2022 results by global businesses

Our SCIB, WM&I and Payments businesses increased Group value added to the countries where we operate.

Santander Corporate & Investment Banking

2022 Key data and highlights

Revenue EUR 7.4 bn	Fee income EUR 2.0 bn	<ul style="list-style-type: none"> → SCIB's client centric transformation from lenders to strategic partners is yielding strong results. → Further diversified business model across clients, countries and products. Accelerated capital rotation.
Profit EUR 2.8 bn	RoTE 22.0%	

Wealth Management & Insurance

2022 Key data and highlights

Assets under management (AuMs) EUR 401 bn	Total fees ^A EUR 3.7 bn	<ul style="list-style-type: none"> → Strong growth in contribution to Group profit in a challenging market. → Private Banking: recognized as a Top 3 Best Global Private Bank^B by <i>Euromoney</i> and achieved a record year in results and cross-border business.
Profit EUR 1.1 bn Contribution to Group's profit EUR 2.7 bn^A	RoTE 59.7%	

A. Including fees generated by asset management and insurance ceded to the commercial network.

B. Clients up to USD 250 million.

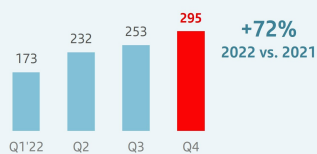


2022 payments businesses results

PagoNxt

2022 Key data and highlights

PagoNxt revenue performance^A



Getnetⁱⁱⁱ

Merchant TPV
EUR 165 bn

Active merchants (#)
1.32 bn

- PagoNxt's revenue rose 72% in constant euros, achieving our +50% target set for 2022 earlier this year.
- Growth due to overall increase in activity and volumes in all regions.
- **Merchants:** in merchant acquiring, Total Payments Volume (TPV) rose 27% backed by Brazil (+16%), Europe (+39%) and Mexico (+35%).
- **International Trade:** over 30k active customers in Ebury and One Trade.

A. Constant EUR mn and year-on-year changes in constant euros.

Cards & Digital Solutions

2022 Key data and highlights

Revenue performance^A



Turnover
EUR 302 bn

Transactions
+13%

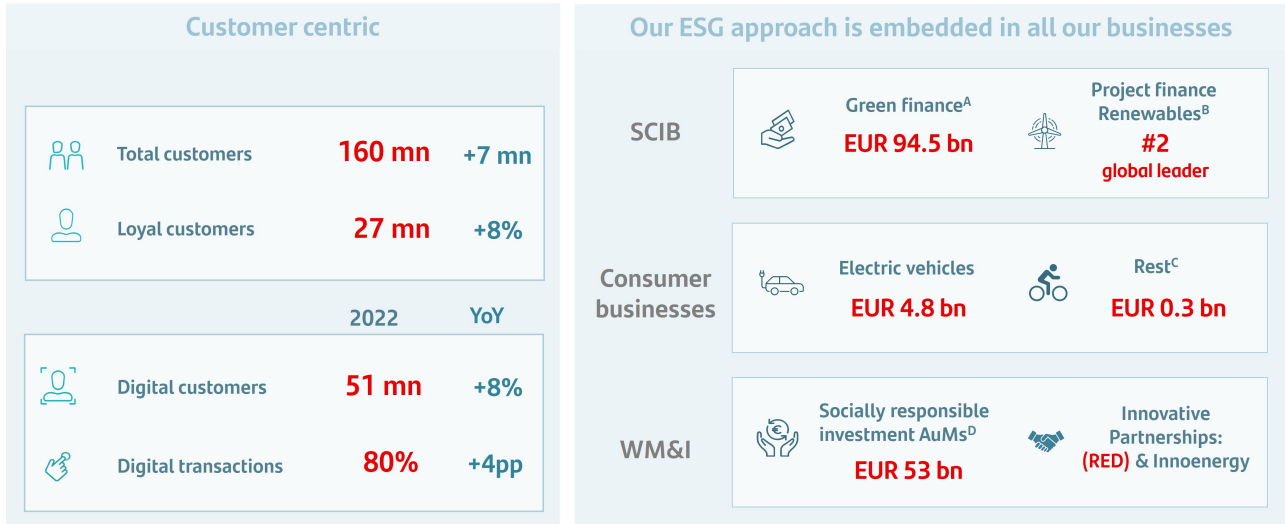
- 97 million cards managed globally (+4% in 2022).
- Revenue grew 19% in constant euros, boosted by a 14% rise in total turnover and a +13% increase in the number of transactions.
- High profitability with a RoTE of approximately 30%.

A. Constant EUR mn and year-on-year changes in constant euros.



Our actions are enabling us to deliver on our customer and digital targets while supporting the transition to a green economy

We have an opportunity and a responsibility to do everything in the right way, so our ESG approach is embedded in all our businesses. We have a competitive advantage in supporting our customers in their green transitions.



Note: 2022 figures, unless stated otherwise.

A. Cumulative since 2019. Public target of EUR 120 bn by 2025 and EUR 220 bn by 2030.

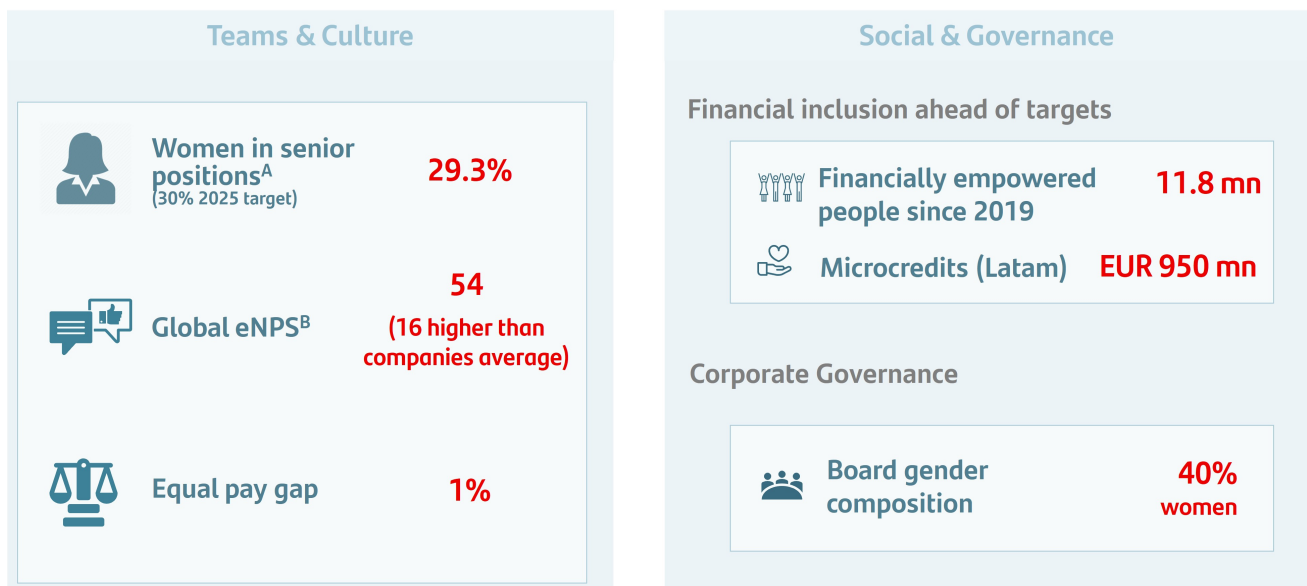
B. According to Infralogic Dec-22.

C. Includes bicycles, solar panels, electric chargers, green heating systems, etc.

D. AuMs classified as Article 8 and 9 funds (SFDR) from SAM, plus third-party funds and other ESG products according to EU taxonomy from Private Banking. We apply equivalent ESG criteria to SAM's funds in Latin America.

Supporting our teams, strengthening our culture and promoting financial inclusion

At the core of our success is our effort and ability to attract a diverse and talented workforce, our culture of teamwork and our promotion of financial inclusion.



Note: 2022 figures.

A. Senior positions make up 1.2% of the total workforce.

B. Employee net promoter score. According to external benchmark *Workday Peakon Employee Voice*.

For more details, see the ['Responsible banking'](#) chapter.



In summary, the Group's business model drove another strong year where we have delivered on profitability, capital and CoR targets



We continue to serve more customers while maintaining a rock-solid balance sheet

- +7 million customers in 2022
- Top 3 by NPS in 8 markets
- FL CET1 above 12%, while delivering on CoR target (<1%)



As a result, 2022 was a record year

- Double-digit growth in revenue (+6% in constant euros) and profit
- RoTE 13.4% and EPS +23% year-on-year
- Increased shareholder remuneration: cash DPS +18% year-on-year

Note: our 2022 shareholder remuneration policy consists of distributing approximately 40% of the Group's attributable underlying profit split in approximately equal parts in cash dividend and share buybacks. The dividend against 2022 results has been submitted to the 2023 AGM for approval. In the last two years, we have repurchased 5% of our outstanding shares (including share buybacks completed in November 2021, May 2022 and January 2023).

Looking ahead

Thanks to our scale, geographic footprint and business diversification, we have numerous opportunities to grow, which should allow us to remain our customers' first choice.

To make the most of those opportunities, our focus is on implementing plans that enhance the existing network across all the countries and businesses, and improving the profitability of our core businesses through disciplined capital allocation.

We will do this while delivering on our commitment to offer our customers financial products and services in a Simple, Personal and Fair way, and creating value for our shareholders.

In summary, we believe we are well positioned to drive profitable growth in 2023.

2023 financial targets



We are confident that our customer focus and consistent track record in increasing profitability will enable us to achieve the following 2023 targets:

Revenue	Efficiency ratio	CoR	FL CET1	RoTE
⇓	⇓	⇓	⇓	⇓
Double-digit growth	44-45%	<1.2%	>12%	>15%

Note: Targets are market dependent.

Responsible banking

Consolidated non-financial information statement





About this chapter

GRI 1, 2-2, 2-3, 2-5

This chapter is the consolidated non-financial information statement of Banco Santander, S.A. and its subsidiaries. It provides detailed information in accordance with Art. 49, sections 5, 6, 7, 8 and 9 of the Spanish Commercial Code as amended by Act 11/2018, which transposes into Spanish law Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information.

Scope

This chapter covers the core activities of Banco Santander and its subsidiaries from 1 January to 31 December 2022 (for more details, see Notes [3](#) and [52](#) to the consolidated financial statements and Sections [3](#) and [4](#) of the Economic and financial review). It gives economic information according to the bank's accounting principles. Social and environmental information has been prepared according to the same definition, where available. Significant criteria differences from the 2021 Responsible banking chapter are explained in the related section as well as in the [Global Reporting Initiative \(GRI\) Content Index](#).

Regulation, reporting standards and other references that this chapter addresses

This chapter meets the Spanish Act 11/2018, UE 2017/C215/01 Guidelines on non-financial reporting, European Taxonomy regulation (Regulation (EU) 2020/852 and Commission Delegated Regulations 2021/2139 and 2021/2178), GRI Standards, and the GRI G4 guidelines on financial services disclosures.

It also takes into account the Sustainability Accounting Standards Board's (SASB) 2018-10 industry standards, and the World Economic Forum's Stakeholder Capitalism Metrics. It shows Santander's progress with respect to the UN Global Compact, UNEP FI Principles for Responsible Banking, the TCFD recommendations and the UN Sustainable Development Goals.

Each section of the chapter relates to GRI and SASB indicators to which the content responds. Likewise, section [6. ESG reporting standards and references](#) provides the regulation, reporting standards and other references mentioned above; with tables showing where information on each one can be found in the report..

Material aspects and stakeholder involvement

Santander maintains an active dialogue with its stakeholders to understand their expectations. It conducts a materiality assessment of ESG matters and closely monitors questionnaires and recommendations of ESG ratings (MSCI, Sustainalytics, CDP, S&P-DJSI, ISS, Moody's, FTSE4Good, Bloomberg Gender Equality Index and Shareaction), as well as other international sustainability initiatives it takes part in.

This chapter illustrates the sustainability of the bank's local and global operations, especially in terms of internal and external impact. For details on its preparation and on our materiality assessment findings, see '[5.1 Stakeholder engagement](#)' and '[5.2 Materiality assessment](#)' sections of this chapter.

External verification

PricewaterhouseCoopers Auditores, S.L., an independent firm charged with auditing the financial statements of Banco Santander S.A., issued a verification report, with limited assurance, on the non-financial information required under Act 11/2018 and the GRI standards found in this chapter. The report's conclusion can be found in the "[Independent verification report](#)" at the end of the chapter. For more details on the preparation and oversight of non-financial information, see the "Non-financial information" section in the [introductory pages](#) of the 2022 consolidated management report.

The use by Banco Santander, S.A. of any MSCI ESG RESEARCH LLC or its affiliates ("MSCI") data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Banco Santander, S.A. by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided 'as-is' and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

1. 2022 overview	21	4. Our progress in figures	77
1.1 Highlights 2022	22	4.1 Employees	78
2. Our ESG strategy	24	4.2 Customers	86
2.1 Materiality matrix	24	4.3 Tax contribution	88
2.2 Risk and opportunities	25	4.4 Green transition	89
2.3 Our ESG agenda	26	4.5 Equator Principles	91
2.4 Policies	27	4.6 Financial inclusion	91
2.5 Governance	28	4.7 Community investment	92
2.6 Shareholder value	29	5. Further information	93
3. Building a more responsible bank	31	5.1 Stakeholder engagement	93
3.1 A strong and inclusive culture	32	5.2 Materiality assessment	96
3.1.1 Our corporate culture	32	5.3 Risk and opportunities	98
3.2 Conduct and ethical behaviour	33	5.4 EU taxonomy	100
3.2.1 General code of conduct	33	5.5 Sustainable finance classification system	102
3.2.2 Financial crime compliance	34	5.6 Country by country report	103
3.2.3 Environmental, social and climate change risk management	34	6. ESG reporting standards and references	105
3.2.4 Principles of action in tax matters	36	6.1 Non-financial information Act11/2018 content index	106
3.2.5 Ethical channels	37	6.2 UN Global Compact content index	111
3.2.6 Relations with political parties	37	6.3 UNEP FI Principles for Responsible Banking reporting index	112
3.3 A talented and motivated team	38	6.4 Global Reporting Initiative (GRI) content index	130
3.3.1 Putting the employee at the centre	38	6.5 Sustainability Accounting Standards Board (SASB) content index	144
3.3.2 Ensuring we have the right talent and skills	43	6.6 Stakeholder Capitalism Metrics content index	147
3.3.3 Supporting to the needs of the teams	45	6.7 Task Force on Climate-related Financial Disclosure (TCFD) content index	152
3.4 Acting responsibly towards customers	48	6.8 SDGs contribution content index	153
3.4.1 Customer experience and satisfaction	48	7. Independent verification report	155
3.4.2 Product governance and consumer protection	49		
3.4.3 Privacy, data protection and cybersecurity	51		
3.5 Responsible procurement	52		
3.6 Supporting the green transition	53		
3.6.1 Our ambition and strategy	54		
3.6.2 Governance	56		
3.6.3 Risk management	57		
3.6.4 Metrics and targets	58		
3.6.5 Supporting our customers in the transition	62		
3.6.6 Our approach to nature and biodiversity	65		
3.6.7 Reducing our environmental footprint	66		
3.7 Socially responsible investment	68		
3.8 Financial inclusion and empowerment	70		
3.9 Support to higher education and other local initiatives	73		

1. 2022 Overview

Helping people and businesses prosper

People

EUR 12,547 million Staff costs

Customers

EUR 1,036,004 million loans outstanding (net)

→ EUR 562,078 million to households

→ EUR 345,083 million to companies

→ EUR 24,436 million to government agencies

→ EUR 104,407 million to others^A

Shareholders

~40% payout policy^B

Suppliers

EUR 14,065 million paid to suppliers

Tax contribution

EUR 9,734 million total taxes paid by the group

Helping to address society's challenges

Environmental

EUR 28.8 bn in green finance raised and facilitated in 2022^C

EUR 53.2 bn assets under management in socially responsible investments

58% reduction of CO₂ emissions in our internal operations^D. 88% of the electricity used from renewable sources^E



Social

54% of our workforce are women; 29.3% of women in senior positions

EUR 950 million credit disbursed to 1.6 million micro-entrepreneurs

EUR 163 million invested in communities, including EUR 100 million to promote higher education, employability and entrepreneurship.



Governance

66.67% independent directors

40% of members of the board are women



Measures to address cost of living crisis

In 2022, inflation has been one of the most urgent challenges to tackle. Rising costs of energy bills and shopping basket and increases in interest rates impact people and businesses. The cost of living is the main concern for citizens in well above all other issues. Santander response has included tailored measures in on six aspects:

- Support measures for employees
- Mortgage relief
- Financial inclusion measures
- Price caps for basic services
- Special attention to vulnerable customers
- Promotion of Energy Efficiency

For more detail on our contribution to UN SDGs see [6.8 SDGs contribution content index](#) of this chapter.

A. Including financial business activities and customer prepayments.
 B. Payout of approximately 40% of ordinary profit, divided in approximately equal parts between a cash dividend and a share buyback. Subject to approval of the final dividend at the 2023 AGM and completion of the Second 2022 Buyback Programme under the terms agreed by the board (see section 3.3 'Dividends and shareholder remuneration' in the 'Corporate Governance' chapter).
 C. Includes Grupo Santander's contribution to green finance: project finance; syndicated loans; green bonds; capital finance; export finance, advisory services, structuring and other products, to help customers transition to a low-carbon economy. EUR 220bn committed from 2019 to 2030
 D. At Banco Santander, we define "own emissions" as direct "Scope 1" emissions and indirect emissions from power consumption and employee travel. Comparing these emissions with 2019 annual report data, employee travel emissions have been reduced by 33%, and total emissions have been reduced by 58%. A 2021-2022 comparison is available in section 4. 'Our progress in figures' of this chapter.
 E. In countries where we can verify electricity from renewable sources at Banco Santander properties.



1.1 Highlights 2022


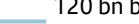













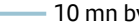
- E**
Support transition to a low carbon economy
- We disclosed our Sustainable Finance Classification System, TCFD^A report and third Green bond report.
 - We set three new interim targets to decarbonize our portfolios by 2030: -29% absolute emissions financed in the energy (oil & gas) sector; -33% emissions intensity in the aviation sector and -32% emissions intensity in the steel sector. In 2021 we set a target of -46% emissions financed in the power generation sector.
 - We financed more than 150,000 electric vehicles for a volume of more than €4.8 billion.
 - We created a new function to drive the Green Finance business across Retail & Commercial Banking, leveraging on synergies with SCIB (Santander corporate and Investment banking).
 - We completed the acquisition of 80% of WayCarbon, a leading Brazil-based ESG consultancy firm to continue to support our customers in their energy transition.
 - Together with five other major companies, we created Biomás in Brazil, a new forest carbon company with the ambition to protect and restore 4 million hectares of native vegetation..
 - Santander Universities launched the Santander X Global Challenge | Countdown to Zero to help society find the most innovative and sustainable solutions.
-
- S**
Promote inclusive Growth
- We ranked in the Top 3 in NPS^B in 8 markets.
 - We registered the highest score in the finance industry and the second highest overall worldwide in the Bloomberg Gender Equality Index.
 - We enhanced our "active listening" mechanism for employees to be constant and scalable.
 - We created accessibility programmes for vulnerable groups, especially elderly people.
 - We met ahead of plan our goal of financially empowering 10 million people between 2019-2025. We were named as Best Bank in Financial Inclusion by Euromoney for second year in a row, and by The Banker for the first time.
 - We are launching Everyday banking proposals in all European countries where every customer will get access to a financial advisor, to foster the financial health of our entire customer base.
 - Santander Asset Management launched Santander Prosperity, its first social investment fund classified under article 9 of the Sustainable Finance Disclosure Regulation (SFDR).
 - Santander Universities launched the Santander X Global Challenge | Blockchain and Beyond and the Santander X Global Challenge | Food for the future to seek startups and scale ups with innovative and scalable solutions using food technology.
 - We supported the humanitarian response to the war in Ukraine, particularly in Poland, where we worked with the UN Refugee Agency (UNHCR). Thus, Euromoney named us Central & Eastern Europe's Best Bank for Corporate Responsibility.
-
- G**
Strong governance and culture across the organization
- We revised our corporate behaviours (called "TEAMS") to enhance our culture and better respond our stakeholders needs.
 - We overhauled our General Code of Conduct, making it easier to understand, accessible and didactic.
 - We included ESG criteria in long-term incentives and short-term remuneration schemes, for the 1st & 3rd year respectively.
 - We created a new Talent and Culture function that report to the Executive Chair.
 - We strengthened ESG risk management, with a new ESG risk function under Chief Risk Officer.
 - We enhanced due diligence with revised socio-environmental surveys for customer-facing operations and vendor certification.
 - We implemented the Data Ethics Guide and trained employees on how to use data and advanced analytics in an ethical manner.
 - We developed our internal regulation to clarify roles and responsibilities in developing responsible banking strategy.

A. Task Force on Climate related financial Disclosure.

B. NPS –internal benchmark of individual customers' satisfaction audited by Stiga/Deloitte H2'22.

Meeting our public targets

Following the UN Principles for Responsible Banking, of which we are a founding member, we have set targets in those areas where we have the greatest potential impact. Thanks to the progress we have made towards some of the targets we set in 2019, we are considering revising our ambition in a few of them.

	2018	2019	2020	2021	2022	Target
Green finance raised and facilitated (cumulative)(EUR) ^A		19 bn	33.8 bn	65.7 bn	94.5 bn	 120 bn by 2025 220 bn by 2030
Socially Responsible Investments AuMs				27.1 bn	53.2 bn	 100 bn by 2025
Electricity used from renewable energy sources ^B	43% 	50%	57%	75%	88%	 100% by 2025
Thermal coal-related power & mining phase-out (EUR)				7 bn	5.9 bn	 0 by 2030
Emissions intensity of power generation portfolio ^{C,D}		0.21	0.17			 0.11 tCO ₂ e / MWh in 2030
Absolute emissions of energy (oil & gas) portfolio ^C		23.84				 16.98 mtCO ₂ e in 2030
Emissions intensity of aviation portfolio ^C		92.47				 61.71 grCO ₂ e / RPK in 2030
Emissions intensity of steel portfolio ^C		1.58				 1.07 tCO ₂ e / tS in 2030
Women in senior positions (%) ^E	20% 	22.7%	23.7%	26.3%	29.3%	 30% by 2025
Equal pay gap ^F	3% 	2%	2%	1%	1%	 ~0% by 2025
Financially empowered people (cumulative) ^G		2.0 mn	4.9 mn	7.5 mn	11.8 mn	 10 mn by 2025

 Cumulative target  From... to...

In 2022, we also continued to:

- Have a board of directors with 40-60% women members.
- Not provide single-use plastics in our buildings and offices.
- Be carbon neutral in our operations.^H

A. Includes Grupo Santander's contribution to green finance: project finance; syndicated loans; green bonds; capital finance; export finance, advisory services, structuring and other products, to help customers transition to a low-carbon economy.

B. In countries where we can verify electricity from renewable sources at Banco Santander properties.

C. The figures displayed are the latest available. Given limited data availability from customers to assess financed emission, we plan to provide target progress update in the June 2023 – Climate Finance Report". Banco Santander's internal calculation methodology has been used, based on the Partnership for Carbon Accounting Financials (PCAF). See more information in section "3.6 Supporting the transition to a green economy".

D. In 2021 Annual report and Climate Finance report, we assessed the 2019 financed emissions of our power generation portfolio, including guarantees and other types of off-balance exposure to our customers that do not entail current funding. Because, according to the PCAF standard, such exposure should not be calculated if its attribution factor is "outstanding", we were over-attributed with our corporate customers' emissions. Therefore, the 2019 baseline emissions intensity has been restated from 0.23 to 0.21. The target and climate ambition remains for this sector.

E. Senior positions make up 1% of the total workforce

F. Equal pay gap based on same jobs, levels and functions

G. Unbanked, underbanked and financially vulnerable individuals who receive tailored finance solutions and become more aware and resilient through financial education.

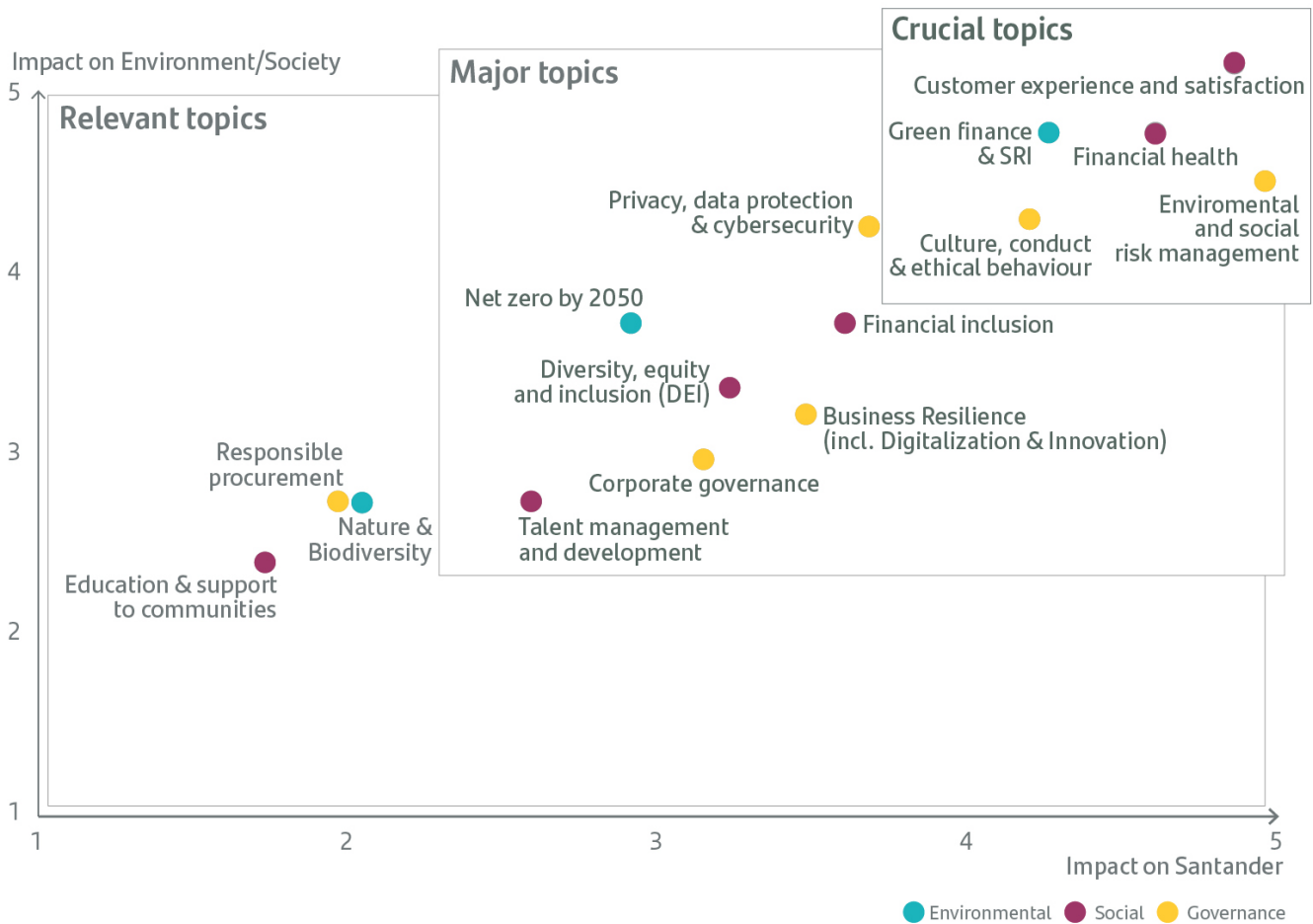
H. In our core markets (G10)

2. Our ESG strategy

2.1 Materiality matrix

GRI 3-2

Our materiality assessment identified 15 ESG topics we should focus on.



Results

The Group Materiality Matrix reflects trends relating to geopolitical tensions; inequality; the rising cost of living; stricter regulation; and other aspects that impact on our markets. It also takes inputs from subsidiaries on digitalization, innovation, human rights; regulation; and other issues. The assessment prompted these changes compared with previous matrix:

- Net zero by 2050 now includes portfolio alignment and operational footprint.
- Financial empowerment is split between financial health and financial inclusion.





Customer experience and satisfaction; green finance and socially responsible investment; environmental and social risk management and culture, conduct, and ethical behaviour saw no change in relevance.

We explain further minor amendments to nomenclature and topic definitions in [5.2 materiality assessment](#) section of this chapter.

2.2 Risk and opportunities

GRI 3-1

The assessment identified four areas which are highly relevant to Santander in term of both risk and opportunity.

	Risk and opportunities	Real and potential impacts
Environmental		
 <p>Climate change</p>	<p>The environmental, economic and social effects of climate change can potentially lead to financial loss.</p> <ul style="list-style-type: none"> • Physical risk of customers' assets and businesses being damaged due to their location. • Transition risk that stems from how customers react to policies, new technology, market shifts and our climate change response. 	<p>Physical risk impact:</p> <ul style="list-style-type: none"> → High impact: Rising costs if customers' assets are damaged or lose value as a result of hurricanes, floods, heatwaves and other extreme weather events. → Chronic impact: Customers' potential loss of income in the long-term due to rising sea levels, higher average temperatures and other consequences of climate change. <p>Transition risk impact:</p> <ul style="list-style-type: none"> → Carbon pricing: Rising costs of emissions that cause operating costs to rocket for customers in CO2-intensive industries. → Shift in demand for our products and services, which would affect our bottom line.
	<p>The transition to a low-carbon economy opens up opportunities in "green" products, sustainable finance and customer advisory services.</p> <p>For more details see 3.6 Supporting the green transition section in this chapter; and 10. Climate and environmental risk section in Risk management and compliance chapter.</p>	<ul style="list-style-type: none"> → Offer sustainable finance and create products to meet the current needs of our customers and attract new ones. → Position Santander as a sustainable and responsible bank.
Social		
 <p>Financial health & inclusion</p>	<p>Customers' lower purchasing power could lead to greater risk of default.</p>	<ul style="list-style-type: none"> → Losses due to debtors' inability to pay. → Drop in profits if customers feel the bank is not doing enough to tackle social issues.
	<p>Financial inclusion initiatives developed to make our services available to underserved communities and boost economic and social progress.</p> <p>For more details see 3.8 Financial inclusion and empowerment section in this chapter</p>	<ul style="list-style-type: none"> → Tailor-made financial products and services to help people prosper. → A sound strategy and social purpose that positions Santander as a bank people can trust.
 <p>Quality employment</p>	<p>Failure to adapt to new ways of working and poor management of our people could lead to a loss of talent or a disengaged workforce.</p>	<ul style="list-style-type: none"> → Lack of pride to be part of Santander can harm profitability. → Need to boost knowledge and skills amid constant changes to the environment and ways of working. → Questionable succession plans and leadership due to a failure to attract and retain talented professionals.
	<p>A skilled and motivated team boosts business performance and customer service.</p> <p>For more details see 3.3 A talented and motivated team section in this chapter</p>	<ul style="list-style-type: none"> → An engaged workforce can increase customer loyalty and help attract new customers. → Retaining diverse talent makes overcoming challenges easier and leads to better results. → Santander's scale means we can develop top employees in all the markets where we operate.
Governance		
 <p>Responsible management and business development</p>	<p>Market instability, current competitive environment, more regulation and higher cybersecurity risk can hamper Santander's operations and performance.</p>	<ul style="list-style-type: none"> → Less capacity to generate liquidity and capital and to enhance our operations in a testing environment. → Losses on the back of breaches of information due to cyberattacks and fraud. → Fines for malfeasance.
	<p>Good governance and proper adaptation to a changing environment to ensure business continuity and stakeholder loyalty.</p> <p>For more details see Business model and strategy, Corporate governance and Risk management and compliance chapters</p>	<ul style="list-style-type: none"> → Business continuity and sustainable profit generation with a strong balance sheet. → Positive stakeholder perception of Santander to avoid reputational risk.

Additional details on how we ran this exercise see [5.3 Risk and opportunities analysis](#) section in this chapter.

2.3 Our ESG agenda

GRI 2-22, 2-23

Our ESG agenda focuses on Santander most material issues. The aim is to minimize associated risk and maximize commercial opportunities. Our agenda should be viewed alongside the Group's approach to topics such as customer experience and satisfaction or privacy, data protection and cybersecurity, that are also covered in this report

Our ESG agenda contributes to several United Nations' Sustainable Development Goals¹ and to the Paris Climate Agreement.

Our ambition	Our goals	Priority action plans
E		
Support the transition to a low carbon economy	Deliver our net zero ambition by 2050.	Set targets in our portfolios to align with pathways to net zero while taking into consideration other environmental goals as Nature. Support customers in accelerating their transition, engaging with them and developing a best-in-class sustainable finance and investment proposition.
S		
Promote inclusive Growth	Support inclusive growth across our main stakeholders: employees, customers and communities.	Diverse and inclusive workplace that fosters employees' well-being. Support financial inclusion and financial health promoting access to financial products and services and offering financial Education. Support communities, with focus on Education, Employability and Entrepreneurship.
G		
Strong governance and culture across the organization	Incorporate ESG in behaviours, policies, processes and governance throughout the Group.	Drive culture, conduct and ethical behaviour. Integrate ESG into strategic processes, Risk Management & rest of relevant units and build capabilities.



We drive our responsible banking agenda through a number of local and international initiatives and working groups, including:

- UNEP Finance Initiative;
- United Nations Global Compact;
- Glasgow Financial Alliance for Net Zero, Net Zero Banking Alliance (NZBA) and Net Zero Asset Managers (NZAMi);
- World Business Council for Sustainable Development (WBCSD);
- Banking Environment Initiative (BEI);
- CEO Partnership for Economic Inclusion.



The complete list can be found on [5.1 Stakeholder engagement](#) section of this chapter.

¹ An analysis of the contribution of our activity an investments can be found on [SDGs contribution content index](#) section of this chapter



2.4 Policies

GRI 2-23, 2-24, 3-3, FS1

In 2022, we continued to simplify and implement best practices in our internal regulations to ensure we have suitable responsible banking guidelines in place and; and to embed responsible banking and ESG standards in all Group processes and our day to day operations.

Core policies that integrate ESG criteria into our business model to make us a more responsible bank

General code of conduct ^{A,B,C}	Corporate culture policy ^{A,B,C,D}	Responsible Banking and Sustainability policy ^{A,B,C}	Environmental, Social and Climate Change Risk Management policy ^{A,B,C}	Financing for Sensitive Sectors Policy ^{A,B}
Brings together the ethical principles our employees must follow and is central to our compliance function.	Establishes the guidelines and standards to ensure a consistent group culture.	Outlines our Responsible Banking and Sustainability principles, commitments, objectives and strategy with regard to our stakeholders including human rights protection.	Details how we identify and manage risks from activities that require special attention and prohibited activities: oil and gas, energy, mining and metals, and soft commodities.	Provides guidelines for our involvement in industries that are considered sensitive and carry reputational risk.

Other policies that support our responsible banking strategy

Conduct Risk with Customers Management Model ^{B,E}	Code of conduct in security markets ^{A,C}	Cybersecurity Framework ^A	Third-party certification policy ^F	Tax policy ^{A,B,G}
Conflicts of interest policy ^{B,C}	Financing of political parties policy ^C	Policy on contributions for a social purpose ^C	Global health, safety and wellbeing policy ^C	Global mobility policy ^B

A. Policies approved by board of directors.

B. Updated in 2022 (or 2023)

C. Available on our corporate website.

D. Includes Banco Santander's Diversity & Inclusion Principles and the Corporate Volunteering Standard.

E. Includes principles for managing conduct risk with customers. These principles are publicly available on our corporate website.

F. Includes principles on the responsible behaviour of suppliers. These principles are publicly available on our corporate website.

G. Our tax strategy and an extract of our Tax policy are available on our corporate website.



2.5 Governance

GRI 2-9, 2-12, 2-13, 2-14, 3-3, FS1, FS2, FS3



Board of directors

Approves and supervises the implementation of general policies and strategies related to our corporate culture, values, responsible business practices and sustainability; makes sure all the Group's employees are aware of codes of conduct and act ethically; and ensures compliance with the laws, customs and good practices of the industries and countries where we operate.

Responsible banking, sustainability & culture committee ("RBSCC")

Supports the board and oversees the Group's responsible banking agenda and strategy.

For more details, see [4.9 'Responsible banking, sustainability and culture committee activities in 2022'](#) in the Corporate governance chapter

Management meeting

Chaired by the CEO, it discusses our progress on the responsible banking agenda, especially as regards to climate change, TCFD and ESG business opportunities.

In 2022, the committee was informed four times on progress made with the responsible banking agenda.

Responsible banking forum²

Executes the responsible banking agenda across the Group; drives decision-making on responsible banking issues; ensures the execution of any mandates from the RBSCC, other board committees and the board of directors; and ensures alignment with key issues, including the review and escalation of reports to the RBSCC.

Our management focus in 2022

In 2022, in line with our ESG agenda, our management focused on: 1) Our climate strategy, including our pledge to be net zero by 2050; 2) Our sustainable finance and investment value proposition and transition plans to a low-carbon economy; 3) the integration of climate and social criteria into risk management; 4) the extension of our financial empowerment proposition; and 5) the mobilization and use of enablers to integrate ESG criteria into everything we do in the Group.

The Group's responsible banking corporate unit and RB network work jointly to deliver on our strategy in a co-ordinated way across the Group:

Group responsible banking unit

Coordinates and drives the responsible banking agenda, with support from a senior adviser on responsible business practices who reports directly to the executive chair.

Responsible banking network

Our subsidiaries' Responsible banking teams execute the agenda according to our corporate strategy and policies. They are led by a senior manager in the group-wide Responsible banking network, which meets every two months.

We issue guiding principles for subsidiaries and global business units to embed our responsible banking agenda across the Group.

Corporate and subsidiary responsible banking units hold regular bilateral meetings.

Working groups on financial education, training, sustainable finance, microfinance and climate change help agree actions and align efforts.

In 2022, the network held six virtual meetings to discuss progress on the Group's agenda. The network also ran the fourth Responsible Banking workshop, which representatives from all businesses and geographies attended over two days.

² The Forum's 11 permanent members are the regional head of Europe (rotating chair); the regional head of North America (rotating chair); the Regional head of South America (rotating chair); Group Head of Strategy, Corporate Development & Financial Planning; Group Head of Human Resources; Group Chief Risk Officer; Group Chief Compliance Officer; Global Head of Wealth Management & Insurance; Global Head of Santander Corporate and Investment Banking; Group Head of Communications, Corporate Marketing and Research; and the senior adviser to the executive Chair on responsible business practices.



2.6 Shareholder value

GRI 2-29, F55

Shareholder remuneration

On September 2022, the board agreed to pay an interim cash dividend of 5.83 euro cents per share entitled to receive dividends, against 2022 results, which was paid on 2 November 2022. It also agreed to implement a first buyback programme worth approximately 979 million euros as maximum, approved by the ECB.

On 27 February 2023 the board decided to submit a resolution at the 2023 AGM to approve a final cash dividend in the gross amount of 5.95 euro cents per share entitled to receive dividends and a Second 2022 Buyback Programme worth 921 million euros and for which the regulatory approval has already been obtained.

Once the above mentioned actions are completed, the shareholder remuneration for 2022 will have been EUR 3,842 million (approximately 40% of the underlying profit in 2022) split in approximately equal parts in cash dividends (EUR 1,942 million) and share buybacks (EUR 1,900 million).

Shareholder engagement

As a responsible bank, we earn the trust and loyalty of our almost 4 million shareholders, and prioritize:

- maximizing value;
- upholding shareholder rights;
- encourage them to participate in the bank's management and general shareholders' meetings, with several ways for them to get involved;
- ensure information is fully transparent, promote direct engagement and dialogue with stakeholders through our channels, and enhance our digital channels with cutting-edge technology;
- giving efficient and timely personal assistance at all times;
- facilitating mutually enriching relations between Santander's shareholders and top management;
- boosting the Group's image in bond and equity markets; and
- reporting on the financial and non-financial benefits of being a Santander shareholder.

We have the highest rating in AENOR's Good Corporate Governance Index.

The shareholder remuneration policy the board has approved for the 2023 results is to pay out a shareholder remuneration of approximately 50% of the Group reported profit (excluding non-cash, non-capital ratios impact items), distributed in approximately 50% in cash dividend and 50% in share buybacks.

The implementation of the shareholder remuneration policy is subject to future corporate and regulatory approvals.



For more details, see sections [2.1. 'Share capital'](#), ['2.6 "Stock market information"](#), and ['3.3 Dividends and shareholder remuneration'](#) in the Corporate Governance chapter.

Communication with shareholders, investors and analysts

GRI F55

- 276,198 responses from shareholders and investors through studies and qualitative surveys
- 862 engagements with institutional investors (including 73 meetings focused on ESG)
- >800 communications (mainly on digital channels) and 163,761 queries answered by digital channels and telephone.
- 201 events with shareholders



For more details on Santander's shareholder engagement, see sections ['1.4 Engagement with our shareholders'](#) and ['3. Shareholder Engagement and general meeting'](#) in the Corporate Governance chapter.



ESG ratings

We engage with ESG ratings to signal our progress and keep improving with their feedback.

Highlights in 2022:

- We maintained our positioning on the **MSCI World Index**. And we've consecutively featured in the **S&P DJSI World and Europe indices** since 2002 and in the **FTSE4Good** since 2003.
- **CDP**. We were placed in the highest score band (Climate Change A List - Leadership level), improving on governance, risk disclosure, targets and portfolio impact.
- **Sustainalytics** We improved to 22.4 points, maintaining on "medium risk", improving on business ethics, ESG integration, data privacy and human capital.
- **ESG Corporate Rating by ISS**. We improved to 55.6 points, maintaining the ESG performance on "C", above the sector-specific "Prime" threshold;
- **Bloomberg Gender Equality Index (BGEI)**. We improved to 92.87 points, above the financial sector average (74.11). Highest ranked among banks and second company overall.

Positioning in ESG ratings

	2022	2021	evol.
MSCI ^A	MSCI Index AA	MSCI Index AA	=
Sustainalytics ^B	22.4	23.9	▲
CDP	A	A-	▲
S&P DJSI ^C	World & Europe Index 83	World & Europe Index 86	=
ISS-ESG	C (55.6)	C (51.8)	=
Moody's ^D	61 (Advanced)	61 (Advanced)	=
FTSE4Good	FTSE4Good Index 4.2	FTSE4Good Index 4.5	=
BGEI	92.87	90.26	▲
Shareaction	92	89	▲

A. Read the MSCI disclaimer on page [19](#).

B. Sustainalytics risk rating: the lower, the better.

C. Top scores in environmental and social reporting, financial inclusion and tax strategy. We improved our scores in corporate governance; business ethics; policy influence; sustainable finance; climate strategy; labor practice; talent attraction & retention; corporate citizenship; customer relationship and privacy protection.

D. Not rated in 2022



3. Building a more responsible bank

<p>3.1 A strong and inclusive culture: The Santander Way</p> 	<p>Our strong corporate culture is critical to succeeding in today's competitive, fast-moving environment.</p>
<p>3.2 Conduct and ethical behaviour</p> 	<p>Our business complies with the highest standards of conduct and ethical behaviour.</p>
<p>3.3 A talented and motivated team</p> 	<p>To succeed in the new business environment, and to earn and keep our customers' loyalty, we need a diverse workforce that is both talented and engaged.</p>
<p>3.4 Acting responsibly towards customers</p> 	<p>We develop our products and services responsibly, and aspire to deliver excellent customer service.</p>
<p>3.5 Responsible procurement</p> 	<p>We integrate environmental, social and governance criteria into our supply chain, supporting our suppliers in their sustainable transition.</p>
<p>3.6 Supporting the green transition</p> 	<p>We're fully committed to helping meet Paris agreement goals while supporting our customers' transition to a low-carbon economy</p>
<p>3.7 Socially responsible investment</p> 	<p>We embed ESG in our decision-making, offering a sustainable value proposition for customers, and an active ESG engagement.</p>
<p>3.8 Financial inclusion and empowerment</p> 	<p>We help people access the financial system, set up and grow micro-businesses, and learn how to manage their finances.</p>
<p>3.9 Support for higher education and other local initiatives</p> 	<p>We support the communities where we operate, with a special focus on higher education as the driving force behind society's progress.</p>

3.1 A strong and inclusive culture: The Santander Way

3.1.1 Our corporate culture

GRI 3-3

The Santander Way is our approach to business.

In 2022, we launched new corporate behaviours that we call "TEAMS": Think customer, Embrace change, Act now, Move together and Speak up. To promote TEAMS, we ran employee workshops and other events with our Executive Chair, CEO and country heads across our footprint.

More details about our corporate behaviours are available on our corporate website: www.santander.com/en/about-us/corporate-culture

9 (out of 10)

Employees are fully aware of our TEAMS behaviours^A

A. Workday-Peakon, aggregated results for the last 12 months.

Risk Pro: our risk culture

SASB FN-CF-230a.2, FN-CF-230a.3

The Group's risk culture, Risk Pro, is central to the Santander Way and to our purpose of helping people and businesses prosper. It makes risk management the responsibility of all employees. Our performance review system, MyContribution, assigns all Santander employees a common risk objective that is 10% of their review. In 2022, we made risk training a mandatory part of Corporate Centre employees' and unit directors' risk objective.

Risk Pro is part of all stages of the employee cycle. We impart Risk Pro through constant communication, leading by example, support from senior management and speaking up.

In 2022, we made further headway in rolling out our risk culture target operating model, which is mainly based on the best practices identified in the different subsidiaries where we operate. Its main target is consolidate the risk culture across the Group. In November, we celebrated Risk Pro Month at the Corporate Centre. And we had our second global Risk Pro Week to raise employees' awareness of why they should manage risk in their day-to-day.

Our Way is the Santander Way...

Living our Values of
Simple | Personal | Fair

Daily, through our Corporate Behaviours:



And, through our solid culture
of Risk Management:



We also ran developmental training in the behaviours of our risk culture. We continued to develop courses on our learning digital ecosystem according to employees' skills gaps.

We ran initiatives to enhance how we measure adherence to our risk culture. We revised risk culture questions in our new continuous listening survey, Your Voice, as well as Risk Pro scorecard indicators, with thresholds set for most metrics to monitor them across our footprint more consistently.



3.2 Conduct and ethical behaviour

3.2.1 General code of conduct

GRI 2-15, 2-25, 3-3, 205-2, 205-3, 406-1, 415-1, FS1

Our new General code of conduct (GCC), approved by the board in July 2022, is now simpler and more accessible for our employees and stakeholders, with easy-to-understand, inclusive language set out in an appealing, digital format to enhance user experience.

The GCC promotes such values as equal opportunity, diversity and non-discrimination, zero tolerance for sexual or work-related harassment, respect for others, work-life balance, and human rights. Its guidelines address day to day situations. It is also one of the core elements to prevent penal Risk (more details, see section [7.2. 'Compliance and conduct risk management'](#) in the 'Risk management and compliance' chapter).

The Internal Audit area regularly reviews compliance with the GCC, with autonomy to check that it and subsidiary-level versions are appropriate and effective.

Core initiatives

We ran these initiatives to strengthen our corporate culture of ethical conduct and compliance:

- #yourconductmatters: campaigns via email, Intranet and other media to boost employees' awareness of the GCC and related policy.
- Services to answer employees' queries on ethics and rules in the GCC.
- Recommendations to prevent conflicts of interest between employees and the Group, and to review and manage conflicts.
- A whistleblowing channel, Canal Abierto, to handle complaints and enhance processes based on lessons learned.
- Common action plans for receiving courtesies or invitations from third parties, and require they be recorded for due diligence.

Training

Our employees undergo mandatory training to refresh their understanding of the GCC's guidelines; why every employee's conduct matters in shielding the Group from liability; and how to handle conflicts of interest, or gifts and invitations from people outside Grupo Santander.

In 2022, units ran information sessions with core vendors to explain the compliance culture and ethical behaviours that we hold all business partners to.

Procurement management policy

Our procurement management policy dictates how employees negotiating with suppliers should conduct themselves to prevent conflict of interest and keep information confidential while procuring goods and services (see the Group's policy on conflict of interest, available on the corporate website www.santander.com).

Code of Conduct in Securities Markets (CCMV)

Approved by the board in 2020, it sets out the standards that board members and employees must abide by when handling sensitive information or trading in securities markets on their own behalf. It outlines the necessary controls and transparency to safeguard the interests of the Group's investors as well as market integrity.

Our core units have tools to help detect potential market abuse and ensure the consistent management of those risks across the Group.

Anyone bound to the CCMV must do regular training on market abuse. Once a year, they demonstrate their understanding of Santander and its employees' key obligations and penalties for failing to fulfil them.



For more details, see section [7.2. 'Compliance and conduct risk management'](#) in the 'Risk management and compliance' chapter



3.2.2 Financial crime compliance (FCC)

GRI 205-2

SASB FN-AC-510a.1, FN-CB-510a.1, FN-IB-510a.1

FCC for vulnerable customers

Introduced in 2021, FCC due diligence of customer life cycle has a special section for vulnerable customers. It supports the Group's commitment to "reducing the stigma in providing financial services to vulnerable customers", with a compliance framework for business units to mitigate financial crime risk in a responsible manner. In 2022, we demonstrated our commitment by welcoming refugees from Ukraine, who came to the EU with little information and most of their money in cash. Early in the crisis, the Group's FCC area published special guidelines for branches to set up accounts for refugees in line with regulation, as smoothly as possible (More information on our support for Ukrainian refugees see section [3.4 Acting responsibly towards customers](#) and [3.9 Support to higher education and other local initiatives](#) of this chapter).

FCC for anti-bribery and corruption

The updated Corporate Framework on Financial Crime Prevention that the board approved in 2021 addresses bribery and corruption as a financial crime risk. It describes core aspects of the Group's programme to fight bribery and corruption. In

particular, it requires core processes and control to deal with the risk of bribery and corruption with third parties; and in sponsorship, charity, campaign donations, joint ventures, main investment, travel, courtesies, marketing, employment and worker relations. In 2022, we updated our policy on preventing bribery and corruption and reintroduced it to subsidiaries, with guidelines and special training to handle the risk of bribery and corruption.

FCC for training

We advanced our strategic plan and training to transform our financial crime and conduct area in 2022. In particular, our post-pandemic programme at the Corporate Centre was entirely in person, with intensive monthly courses, mini-working groups and experts from Santander and elsewhere to talk about terrorism financing, bribery, corruption, fraud, major regulation reform and other important topics. We have a yearly program to train our board of directors on this topic.



For more details on financial crime compliance, see section [7.2. 'Compliance and conduct risk management'](#) in the 'Risk management and compliance' chapter

3.2.3 Environmental, social and climate change risk management

GRI 2-23, 2-24, 2-25, 3-3, 411-1, 413-2, FS2, FS3, FS10, FS11

We embed environmental and social standards in risk management, in accordance with a sectorial prioritization, to support sustainable and inclusive growth, uphold human rights, preserve the environment and aid the transition to a low-carbon economy.

Our Environmental, Social and Climate Change (ESCC) risk management policy sets out standards for investing in, and providing financial products and services³ to, companies and customers who engage in sensitive activities in the oil and gas, power generation and transmission, mining and metals, and soft commodities industries (especially retail customers involved in farming and ranching in the Amazon). We analyse customers subject to the policy with a detailed questionnaire that their assigned banker completes before a team of analysts conducts an overall assessment of their ESCC risks (which we update every year). We also analyse one-off, project-related transactions in accordance with the Equator Principles and such international regulations as the International Finance Corporation Performance Standards. Following our environmental and social (including human rights) due diligence of projects, we set out corrective measures based on their risk rating.

We apply our ESCC risk management policy in conjunction with our Responsible banking and sustainability policy. In addition, the ESCC risk and compliance departments carry out extra due diligence on cases with red flags. The findings, which provide further input for decision-making, are submitted to risk approval committees.

In 2022, we developed a methodology to analyze client's climate transition plans. During the annual analysis of environmental, social and climate change risks in selected sectors (Oil&Gas; Power Generation; Automakers; Steel; Cement and Airlines) clients were tiered according to current GHG emissions, governance of climate transition risks and future emissions targets.

The Group follows the precautionary principle, analysing and managing key environmental and social risks throughout the value chain as well as considering the direct impact on the assets where we operate and the indirect impact stemming from our activity.

In 2022, the ESCC Risk and Compliance departments (in coordination with the Business) have also worked on strengthening the ESCC risk governance and the management of ESCC risks in sustainable finance transactions, and continue enhancing the integration of environmental, social and climate change risk factors in market and operational risk management.



For more details on environmental, social and climate change risk management, see ['Risk management and compliance'](#) chapter of this report.



Our Environmental, Social and Climate Change risk management, and sustainability policies are available on our corporate website www.santander.com.

³ Defined as transactions giving rise to credit risk, insurance, asset management, equity and advisory services



Equator Principles

We have applied the Equator Principles to project-related transactions (especially project finance) since 2009.

In 2022, we analysed 45 projects that fall within the scope of the Equator Principles (see table 35. Equator Principles in '4. [Our progress in figure](#)' section of this chapter).

Tackling environmental crime

The principle of nature conservation extends to all the Group's units. The Financial crime compliance function understands the importance of recognizing that "behind every environmental crime there is a financial network", not only because of the large sources of revenue that organized crime draw from these activities, but because crimes like illegal deforestation have a significant impact on carbon sequestration. Industries we consider "restricted" due to exposure to environmental crime risk include (but are not limited to) logging, pulp and paper mills, palm plantations, commercial fishing, trapping and transport of live animals and waste management. Given their "restricted" status, Santander entities that provide services to companies in those industries must respond to their elevated financial crime risk by implementing enhanced controls. Furthermore, our customer screening tools include specific terms on environmental crimes to help us flag issues and conduct assessments, and our global and in-person senior management training also includes environmental crime case studies and trends.

We **engage in various public-private partnerships** as part of our commitment to detect, disrupt and deter environmental crime. In 2022, our Head of Financial Crime Compliance Framework & Policies remained the chair of the quarterly United Nations Office on Drugs and Crime's (UNODC) Private Sector Dialogue on the Disruption of Financial Crimes Related to Forestry Crimes, which continued to bring together financial institutions, authorities, investigative law enforcement units and supranational governmental bodies to discuss intelligence sharing, typologies and policy strategies on disrupting the financial crime networks behind illegal deforestation. Santander also remains an active member of the United for Wildlife's Financial Taskforce against illegal wildlife trade.

Protection of human rights

Our board-approved Responsible banking and sustainability policy illustrates ESG Santander's commitments including human rights protection of our employees, customers, suppliers and the communities we serve.

- We run initiatives to combat discrimination, forced labour, child exploitation and other affronts to people's dignity, as well as to preserve freedom of association and collective bargaining, our employees' health, and decent employment (see the contents relating to Diversity, equity and inclusion; Employees' health and well-being; and Social dialogue at [3.3 A talented and motivated team](#) section in this chapter).
- We protect our customers' human rights through responsible business practices, and grating their data protection (see [3.4 Acting responsibly towards customers](#) section in this chapter).
- We improved our vendors questionnaires to ensure respect for human rights along our supply chain (see section '[3.5 Responsible procurement](#)' in this chapter).
- We're also enhancing human rights questionnaires including risks in the supply chain to clients under Environmental, Social and Climate Change Risk Management policy. As a result, a strengthened analysis of client's exposure to social risks was achieved.
- We assess Human Rights impacts over transactions under the scope of Equator Principles

In 2022, we included awareness on human rights into Global Mandatory Training. We also added human rights into Environmental, social and climate change risk management in our refreshed material topics for greater focus (see section '[5.2 Materiality assessment](#)' in this chapter).

> Complaints

In 2022 none attributed human rights violations to any Group entities has been reported on our whistleblowing channel, (see section on Ethical channels in next page).



3.2.4 Principles of action in tax matters

GRI 207-1, 207-2, 207-3

The board of directors approves Santander's tax strategy and revises it regularly. This strategy sets tax principles that the entire Group must follow. In October, the board updated the tax strategy, which can be found on our website (www.santander.com).

The Group's tax risk management and control, which draws on our internal control model, must be consistent with the principles in the tax strategy.

Since 2010, we've abided by Spain's Code of Good Tax Practices and the UK's Code of Practice on Taxation for Banks. Furthermore, we participate in cooperative compliance initiatives led by tax authorities. Since 2015, we've voluntarily submitted an annual tax transparency report to Spain's Tax Authority.

Total tax contribution data is available in [4. Our progress in figures](#) section.

Core principles of Santander's tax strategy

- Satisfy our tax obligations based on a reasonable interpretation of tax laws, grounded on their spirit and intention.
- Respect the rules on transfer pricing and pay taxes in each jurisdiction in accordance with our functions, assumed risks and profits.
- Not give tax advice or planning strategies when marketing and selling financial products and services. Not engage in transactions or activities that facilitate unlawful avoidance of taxes by our customers
- Communicate Santander's total tax contribution clearly, distinguishing between taxes borne by the Group and by third parties for each jurisdiction as well as any other information necessary to comply with generally accepted reporting standards on sustainability.
- Not create or acquire entities registered in offshore jurisdictions without board approval; and adequately monitor the Group's operations in such territories.^A
- Maintain a good working relationship with tax authorities based on the principles of transparency and mutual trust to avoid disputes and minimize litigation.

A. By the end of 2022, we had one subsidiary and three branches in offshore jurisdictions. See detailed information on offshore entities in note [3.c](#) to the consolidated financial statements.

3.2.5 Ethical channels

GRI 2-26, 205-3, 406-1

Canal Abierto is our global ethical, anonymous and confidential, channel for reporting misconduct. It protects whistleblowers by expressly prohibiting reprisals or any negative consequence against them. Every unit in the Group administers its own ethical channel in its local language according to the common standards of the corporate *Canal Abierto*.

Minimum standards include: subsidiary CEOs' endorsement of the ethical channel; employees' awareness of the importance of using the channel; reporting to the Group about management, action and improvement plans; guarantee of easy platform access and anonymity (if desired); use of external platforms to receive reports according to best practice; mechanisms in place to manage conflicts of interest in internal investigations of reported cases; and internal audits of the channel. These standards are included in our *Canal Abierto* policy, which we approved in 2020.

Canal Abierto is mainly set up to receive reports from employees; however, it's open in some subsidiaries to third parties (e.g. suppliers, customers, investors and other interest groups), who cannot use it to submit complaints or queries.

All incidents reported through *Canal Abierto* are handled appropriately, even if they are found to be unsubstantiated.

The average processing time was 34 days.

3.2.6 Relations with political parties

GRI 3-3, 415-1

Santander is committed to principles of transparency, honesty and impartiality in its interactions with political parties and other entities with public and social purposes that are also political in nature. These principles reject any act of corruption by Santander's employees and managers.

In 2016, our board executive committee-approved Santander's policy on financing political parties (available on our corporate website) that has been applied to all our subsidiaries worldwide. It prohibits making monetary or in-kind election donations and contributions. However, it allows sponsorship by subsidiaries of special events or activities, provided they have been approved by the Group's executive committee and are consistent with Santander's objectives and operations. Santander US participates in a *US Political Action Committee* compliant with US law and with full transparency.

Grupo Santander may only finance political parties on exceptional and limited terms approved by the Group's executive committee and on an arm's length basis. The policy prohibits total or partial debt forgiveness to political parties and their affiliates. While the terms of the debt may be negotiated, the interest rate charged may never be below the market rate. In addition, this policy applies to electoral candidates of political parties to the extent provided by local law.

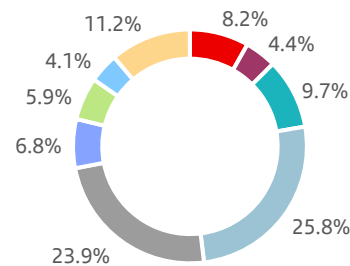
	2022	2021
Issues received	3,935	4,338
Issues deemed well-founded for investigation	3,477	3,628
Disciplinary actions	907	1,196
which led to dismissal	387	312

By category, the main concerns reported related to issues of workplace harassment, breaches of corporate behaviour (SPF) and labour regulations, as well as internal fraud and marketing of products and services.

In 2022, 93 equal opportunity and non-discrimination complaints were received in the Group, 11 of which resulted in disciplinary action, including 8 dismissals. We are not aware of any complaints initiated by any employee or their representative in relation to incidents of discrimination or violation of fundamental rights in Banco Santander, S.A.⁴.

We also received reports of 18 alleged cases of corruption in the year, resulting in 1 dismissal.

TYPES OF ISSUES RECEIVED

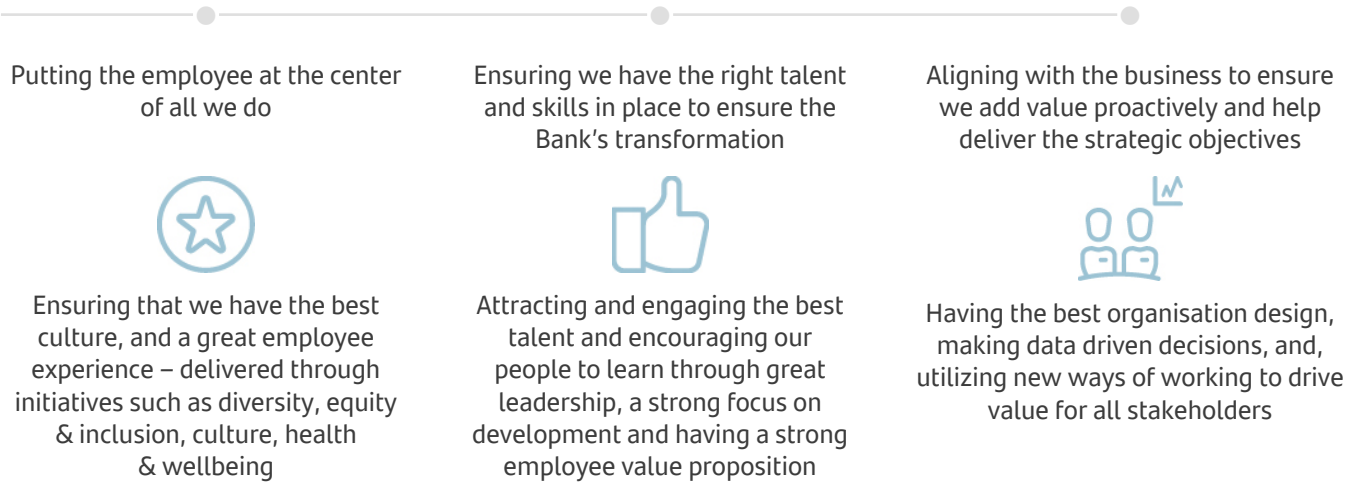


- Marketing of products and services
- Privacy/security and confidentiality of information
- Internal fraud
- Workplace harassment
- SPF + labour regulations
- Money laundering and terrorist financing and sanctions
- Conflicts of interest/non-group activities
- Cybersecurity
- Other typologies

⁴ More details on fines and sanctions received in section 6.4 '[Global Reporting Initiative \(GRI\) content index](#)' (2-27)

3.3 A talented and motivated team

We want to be an employer of choice. Our approach strategy is based on three pillars.



3.3.1 Putting the employee at the centre

GRI 2-7, 2-30, 3-3, 401-1, 401-2, 403-2, 403-3, 403-5, 403-6, 403-9, 403-10, 405-1, 405-2

Diversity, equity and inclusion

SASB FN-AC-330a.1, FN-IB-330a.1

We continue to cultivate a workplace where our people can be themselves and reflect the diverse society we live in.

We do so via following Group networks:

- Global executive DE&I working group, which brings together senior positions from our geographies regularly to review results, propose initiatives and drive internal change.
- Global DE&I team, which draws up global initiatives, coordinates the teams involved and acts as liaison for the subsidiaries and businesses.
- Local DE&I teams in each subsidiary and business, which are responsible for implementing strategic plans and initiatives locally sharing best practice.

In 2022, important highlights were:

- Holding the first global DEI awards to recognize best inclusive behaviours within the Group.
- Mandatory training for top managers⁵, including the two e-workouts, “Cultural connection” and “Listening to everyone”, to continue to raise awareness.
- Creating the role of Bias Champion across the Group to fix implicit bias in the calibration of people’s potential and performance. The Bias Champions were previously trained on implicit bias.

- We included questions in our engagement survey about inclusion, to be aware and take action if any underrepresented group is not feeling equally considered and part of Santander.

38.4
Average age of the workforce, -0.2 pp vs 2021

54%
of employees are women equal vs 2021

Data at year end.

2.0%
of employees have a disability, +0,1 pp vs. 2021

8.8 (out of 10)
Employees' assessment of whether Santander supports Diversity and Inclusion (in terms of gender, ethnic diversity, disability, socio-economic status, etc.)^A

A. Workday-Peakon, aggregated results for the last 12 months.

⁵ Promontorio, Faro and Solaruco level



Gender equity

Santander fosters equal opportunity between all genders. While women make up 54% of our workforce, their presence in senior positions is less. In 2022, 29.3% of the Group's management positions are held by women, which represents an increase of 3 percentage points compared to 2021 and 5.6 compared to 2020.

We're taking action to have more women at all levels of senior positions.

- We focus on equal consideration of both genders in hiring and promotion, in learning and development programmes, and especially, in senior-level succession plans.
- We have minimum standards for parental leave of 14 weeks for primary leave and 4 for secondary leave.

Our Santander Women's Network grew year-on-year.

LGTBI+

In 2022, we prioritized spreading awareness and inclusive communication and building up our Embrace network.

We commemorate LGTBI+ Pride Day, with several events to share stories and experiences inside the Group and out.

Some highlights from the year are:

- In the UK, we increased our Evolving Minds LGTBI+ library. It includes "Pride stories" by colleagues, as well as an LGTBI+ calendar and alphabet, to better understand little known or misunderstood LGTBI+ identities. We also take part in Tent and Stonewall's mentorship programme for LGTBI+ refugees, aiming at supporting more than 50 LGTBI+ refugees by 2024.
- In Spain, we ran an anonymous survey to understand needs and expectations and take concrete measures in terms of awareness, inclusive communication and protocol to assist LGTBI+ people.

Ethnic and cultural diversity

In 2022, we promoted visibility and awareness of cultural diversity and the influence of implicit bias on people's actions and decisions. Top management undertook a mandatory training session, called "Cultural connection" to help teams look past cultural differences and get the best from all backgrounds.

Key local initiatives:

- In Brazil, we held workshops on ethnic awareness for mid-level managers. We also launched the anti-racist Black Allies initiative and saw an increase in the hiring, satisfaction and retention of black employees.
- In the UK, we participated in Solaris, an external development programme for black women executives. We held ethnicity listening circles with our Ethnicity@Work network to hear the stories of people belonging to ethnic minorities from all over the Group. We also wrapped up the first "Accelerating You: Black Talent Programme" to drive black talent.

% of women in top management and other senior positions

Women members on our board	Our target: 40-60%	Our progress: 40%
----------------------------	------------------------------	-----------------------------

Women in senior positions ^D	Our target: 30%	Our progress: 29.3%
--	---------------------------	-------------------------------

D. Senior positions are 1% of total headcount.



Grupo Santander features in the Bloomberg Gender-Equality Index and is its highest-scoring bank

Persons with disabilities

Our diversity, equality and inclusion strategy has a specific focus on the inclusion of persons with disabilities.

In Argentina, Brazil, Mexico, Spain, the UK and the US, Santander has networks for employees with disabilities to share ideas, point out needs and areas for improvement and promote active listening as the way to root out stereotypes and biases that undermine inclusion.

Access to employment and education are two major obstacles for persons with disabilities. Santander's main ally in changing that reality is Fundación Universia.

In 2022, we held local and global events to celebrate International day of persons with disabilities.

Santander is part of Valuable 500, a cause that puts disability on the agenda of business leadership, striving for full accessibility at work, in communications and in the awareness of everyone in the countries where it operates.



for more details see [3.9 Support to higher education and other local initiatives](#) section in this chapter or go to www.fundacionuniversia.net



Equal pay

Gender pay gap: 30.2%

What it measures:

The gender pay gap measures differences in compensation between women and men in an organization, business, industry or the broader economy, irrespective of the type of work. At Santander, fewer women hold senior and business management roles than men (something we are focused on addressing), while more women work in retail banking and support roles.

We calculate the gender pay gap as the difference in the median remuneration paid to male and female employees, expressed as a percentage of the male remuneration. Our remuneration schemes factor in base salary and variable pay, but not corporate benefits/in-kind compensation or local allowances.

Our progress:

Santander addresses the gender pay gap with a methodology based on best practices and common guidelines for the Group. We maintain rigorous standards for hiring, promotions, succession planning, and talent pipelines to strengthen diversity. We also promote implicit bias training, communications from executives as well as mentoring, networking and other actions aimed at achieving greater balance in the organization. Local units have action plans in place based on their own characteristics and conditions.

The pay gap has decreased significantly compared to the previous year (32.3% in 2021) showing the effect of the structural measures taken in the Group.

Equal pay gap: 1%

What it measures:

The equal pay gap measures the "equal pay for equal work" for women and men in the same job at the same level. Our comparison does not consider such factors as tenure, length of service, previous experience and background.

Our progress:

Santander set up fair pay programmes to reduce the equal pay gap (our target is 0% in 2025). They include systematic reviews tied to remuneration cycles (merit-based promotions and bonuses), work reorganization and career development plans to recruit, engage and retain diverse talent.

Gender and equal pay gap figures match 2021 trends, on the back of a firm commitment and ambitious action plans assumed throughout the Group.

We continued to make progress in standardizing the criteria of our approach in all geographies and increasing the headcount of the segment we analysed. We will continue to conduct robust reviews and analyses of pay data to detect, understand and act on any gaps.



Employees' health and well-being

Our health and well-being strategy sets out how we protect the health, safety and well-being of all employees, associates and customers; promote a healthy lifestyle; and create long-term value.

It includes a set of common guidelines to ensure a consistent, group-wide approach to mental and emotional health, digital downtime, nutrition and obesity and other matters. In 2022, we published our Global Health, Safety and Well-being policy, which can be found on our corporate website.

We regularly check our employees' satisfaction with internal surveys that ask them about general health and well-being, physical health, mental and emotional health, social care and Santander's support.

Covid-19

In 2022, we adapted our Covid-19 strategy to address the severity of the Omicron variant early in the year before the pandemic began to subside.

We continued to develop a response based on protocols and prevention measures to ensuring the health of our employees, consistent with domestic and international guidelines and recommendations on public health and safety.

We undertook a gradual process to normalize our operations and return to the office, cutting back our COVID-related measures strictly within the labour laws in each country.

8.1 (out of 10)

Average rating from employees about the statement "Employees' health and well-being is a priority at Santander" — 0.2 above the finance industry benchmark^A

A. 2022 Peakon survey

Occupational health

We have collective agreements at bank and sector level, under which employee health and occupational risk prevention are considered. We offer employees check-ups either regularly or after extended absence. We cooperate with competent local institutions on public health initiatives.

We also revise occupational risk prevention plans regularly with employees' legal counsel. We implement them through:

- regular workplace assessments of health and safety risks and preventative measures to handle or eliminate them;
- prevention measures when designing, procuring or acquiring offices, furniture, equipment, products and IT equipment;
- procedures to guarantee safe working conditions. The Occupational Risk Prevention area draws up the plans with other units, with measures to prevent or minimize the risks they detect and review;
- employee awareness and continuous training; and
- occupational risk prevention in all operations that may impact on employees' health and safety.

Our offices have achieved several security, quality and sustainability certifications, such as LEED O+M, Gold Level in the US, or ISO 14001 in Brazil. In 2022, our corporate centre, the Santander Group City, obtained ISO 45001 certification.



For more details on absenteeism data, see the [Our progress in figures](#) section in this chapter.



BeHealthy

We're committed to being one of the world's healthiest companies. We foster our employees' health and wellness, raising awareness through our global health and wellness benefits. We also raise awareness through our global BeHealthy programme, which celebrated its sixth year in 2022.

Its four pillars are: know your numbers; eat well; move; and be balanced. Throughout 2022, hundreds of initiatives and events have taken place around the world, involving thousands of employees. In April, we held BeHealthy Week, with daily, in-person and virtual events that covered the programme's four pillars.

At the same time, we launched an online campaign, #SantanderBeHealthy, which encouraged employees from Banco Santander's country units and divisions to share their own healthy habits, achieving 3 million impacts.

We also joined global initiatives run by the World Health Organization, including Global Mental Health Week, Women's Health Month and Men's Health Month. Pau Gasol joined us for a global event to celebrate World Nutrition Day with some 1,500 employees.

All Group employees can access health-related platforms (like "Gympass" to use gyms) and apps for nutrition, mental health, physical health, exercise, meditation and other services free of charge or at bargain rates.



BeHealthy

Live fit, reach your potential



Our listening strategy

SASB FN-AC-510a.2, FN-CB-510a.2, FN-IB-510a.2

In 2022 we set out a new strategy to listen to employees on a more frequent basis. We changed our annual employee listening survey to a more regular listening model called “Your Voice”, with cutting-edge technology.

We ran Your Voice three times in the year, gaining more regular and deeper insights.

- Managers can access Your Voice results in real time and review qualitative opinions and sensitive observations to pinpoint areas with a high risk of employees leaving and the drivers to boost higher engagement. It helps managers promote dialogue, trust and transparency to raise employees' performance and reduce resignation and absenteeism.

- Employees can give feedback more often and leave comments on every question while preserving anonymity at all times. Your Voice surveys only take a few minutes to complete.

The surveys we ran in 2022 showed positive results overall.



For more details, see ‘Ethical channels’ in [‘3.2 Conduct and ethical behaviour’](#) section in this chapter.

Santander Group - 2022 Your Voice result in a nutshell

8.3

Engagement

In line with benchmark for Finance, and all sector companies
Stable across all three rounds in 2022

Strengths

- Meaningful work
- Peer and team relationships
- Goal-alignment and feedback
- Diversity and inclusiveness

Opportunities

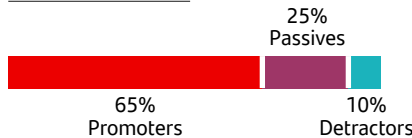
- Autonomy
- Simplification

54

eNPS^A

14 above Finance benchmark
16 above all companies benchmark
Top 10% of the Finance sector

eNPS distribution



89%

Aggregated participation

1.9Mn

Comments provided

A. eNPS (employee Net Promoter Score) is a method of measuring employees' satisfaction levels

Volunteering

Santander has a volunteering programme in every country where we operate. We focus on:

- Promoting financial education.
- Preventing early school-leaving and boosting the job skills of young people at risk of social exclusion.
- Supporting people with disabilities, women and children in difficulty, and other vulnerable groups.

Subsidiaries' also develop programmes based on local needs.

> Programmes for children in Latin America

In Brazil, volunteers took part in financial education initiatives. The Bank also held the 20th edition of the Amigo de Valor program.

In Mexico, we supported Fideicomiso Por los Niños de México (FPNM) (employees donate part of their salary to help disadvantaged children) and Fundación QUIERA to boost young people's financial skills and to improve their emotional health.

In Chile, volunteers helped children through tutorials, school-based support, sporting and cultural activities, and camps.

> Europe and Ukrainian refugees

In Poland, numerous volunteers took part in project relief programmes that benefited over 1,000 people.

In the UK, employees joined customers in donating money to the Red Cross and UNHCR. Some employees volunteered to fundraise and shelter refugees in their homes.

In Spain, volunteers helped Ukrainian refugees at our Corporate Centre. They taught Spanish and ran activities for children.

In Germany, volunteers collaborated to collect refugees at the border with Poland. Some employees also took refugees into their homes.

+25,000

employees participating in community activities

+77,400

hours volunteered



For more details on our social contribution to communities, see the [‘3.9 Support to higher education and other local initiatives’](#) section in this chapter



3.3.2 Ensuring we have the right talent and skills

GRI 2-17, 3-3, 404-1, 404-2, 404-3, FS4

Our talent strategy focus on talent attraction and retention. Strategy Workforce Planning exercises helps us to understand our current skills base and future needs (aligned to the business strategy).

Talent attraction & acquisition

Talent attraction

Our talent attraction strategy is focused on positioning the Santander Group as one of the world's leading technology financial groups, one of the BigFinTech, ensuring a great candidate experience, and moving fast.

In 2022 we focused on digital transformation. We embedded a Acquisitions Tracking System (ATS) in all our core units for faster selection, a sound experience for candidates and managers, and efficiency, group-wide. We also began a pilot scheme to help us quickly screen applications for mass vacancies. Moving forward, we plan to roll out candidate screening technology to more areas as well as machine learning solutions to assist with candidate selection. Digitalization will also remain a priority.

Attracting and retaining

We implemented a strategy based on a strong employee value proposition (EVP) for STEM talent. It includes:

1. Global BeTech! programme, to develop Santander's image as a tech company with a market leading proposition of flexible work, meaningful projects, DE&I, agile work, etc. We reinforced our EVP with hybrid working models for tech teams and more agile ways of working, as well as running these initiatives:

- "Women in Tech", which aims to enhance the visibility and leadership of women in the tech field through roundtables and event sponsorship.
- "DiverTechies", to help people with disabilities enter the job market and build a more inclusive tech industry.
- We reinforced our EVP with hybrid working models for tech teams and more agile ways of working.

A global careers strategy we have implemented offers talented STEM professionals the option of working in the gig economy on

short-term, project-based assignments, plus swap programmes where they and a colleague switch roles for a set period.

2. The Community of digital professionals.

A key part of the Global BeTech! strategy was to create a community of digital professionals who act as Santander ambassadors online. Since our employees are the most effective champions of our culture and work environment, their role as "micro-influencers" is helping us get our message out and attract new talent.

3. The new Global landing page

A new landing page has been launched in December 2022 for digital & tech talent to apply in the different open positions in most of our units (www.betechwithsantander.com). This way we show the candidates the strength of our global presence, our many opportunities, and the international careers that could be available by joining us.

4. New Learning program to join technology and business

Under our learning and development strategy, we worked with some of the world's leading universities and with such technical schools as Ironhack, The Bridge and Immune Institute, to launch upskilling and reskilling programmes. We also implemented the new Be Tech & Business programme to help gifted STEM professionals gain an interdisciplinary knowledge in tech and business, with an emphasis on artificial intelligence, market places, DeFi and emerging technology. We also fine-tuned compensation schemes to better attract and retain our STEM talent and launched an innovative value creation plan for PagoNxt based on best practice in FinTech.

Talent retention

Mobility

Our global career strategy sets out the principles to generate purpose-driven mobility, unlock the Group's talent and provide clear standards for our managers and employees.

We have simplified the internal mobility offering with four simple and transparent forms of mobility that align with business and employee needs:

1. International assignments (EXPATS)
2. Permanent movements
3. Project-based assignments (Mundo Santander)
4. SWAP programme

We promote internal mobility as the best way to meet business needs and offer real opportunities to our employees, with internal vacancies posted on our Global Job Posting site. We refreshed our first global project marketplace, Mundo Santander, to offer employees temporary mobility and development opportunities: any business or support area may propose a project, which will be posted in Job Posting, and any employee from the Group who meets the requirements may apply. We also developed the SWAP programme for professionals with similar backgrounds to change roles for a short period as a way to share best practices and new ways of working and gain global perspective.

In 2022 we reviewed the Global international mobility policy and created a separate guide for each mobility type.



Learning and development

Our Global learning and development policy sets the standards for designing, reviewing, launching, overseeing and enhancing training and development programmes. We are developing a common catalogue of learning solutions that focuses on the most critical skills our business demands, based on input from strategic workforce planning tool, the employees' skills gap assessment and the business challenges identified with subsidiaries' L&D teams and business stakeholders through the learning needs assessment.

We encourage our employees to take the lead in their own learning development and we ensure that their skills and knowledge stay relevant. We promote employee learning on our digital ecosystem for lifelong learning, with a vast array of study plans and "roadmaps" for employees to upskill and reskill and be in charge of their training and personal development.

Present and Future Leaders

Our development programmes for employees include:

- **Young Leaders**, a global programme for young, talented employees to continue developing to meet the demands of a changing world. We launched its third iteration in 2022, with a focus on cultural intelligence, "think customer" and future design.

Global training

We build skills from the ground up with on-demand and sequential learning. We use proven, easy-to-follow, self-paced learning paths so employees can form a knowledge base, build proficiencies and develop new skills — their way.

Our main focus is on :

- **Fostering innovation:** We carry out expert programmes and bootcamps focused on data analytics, programming, computational thinking, cybersecurity, futures design, hyper-personalization, innovation and service design, which are key disciplines in employee upskilling and reskilling.
- **New ways of working:** The Agile Academy umbrella provides us an extensive catalogue of contents and certifications on agile culture and roles.
- **IT skills:** Our learning plans cover different technologies, with a specific website for cloud-related issues.
- **Core banking skills:** We continue to develop core knowledge through our Global Risk and Internal Audit schools.
- **Global mandatory training:** According to our Risk culture and strategy, we deliver required pills and e-learning courses quickly to impart knowledge on regulation, risk, cybersecurity, code of conduct, responsible banking, and financial crime. In addition, each subsidiary has mandatory courses on the law and regulation of its jurisdiction.

- **Elevate:** our global executive learning ecosystem for senior officers to participate in a 14-week hybrid learning experience on "evolving customer", "caring leadership", "responsible banking" and "building the future of Santander".

Talent Management

Our learning and development strategy strengthens talent management across our footprint to select candidates for leadership initiatives. In 2022, our talent management included:

- **Succession planning:** We enhanced our succession planning by focusing on diversity, ensuring cross-pollination and using more data-driven analytics.
- **Skills model:** We designed and launched a skills model that helps us reskill and upskill employees (which we've already rolled out to most units).
- **Potential assessment:** We created a Common Potential Model and implemented a technology solution to assess our employees' potential. We assessed our senior officers in 2022 and will extend the model to all employees in 2023.

- **Responsible banking:** We have progressed on the 3 level training strategy we defined in 2021:

- We launched the first global mandatory training in ESG for all employees, "Sustainability for all".
- We created ESG Talks, a series of online recordings available on our learning digital ecosystem, with internal experts from SCIB, Risk, Human Resources, Consumer Finance and Retail Banking for the areas involved in our sustainability agenda.
- We provided the contents for employees to obtain Santander ESG Commitment Fundamentals, International Sustainable Finance Specialist-IASE level II and other ESG expert certifications.

Some subsidiaries and global businesses provided additional training on climate change, sustainability, sustainable finance, sustainable investment, diversity and inclusion.

In 2022, the Board of Directors completed training programmes on climate change, with modules on the Paris Agreement, net zero, portfolio alignment, climate risk management, transition plans, regulation and reporting, and biodiversity.

We also trained our employees on diversity and inclusion, health and safety, customer and supplier relations, the environment and anti-corruption.



3.3.3 Supporting to the needs of the teams

GRI 2-17, 2-19, 3-3, 404-1, 404-2, 404-3

Performance review and remuneration

Our comprehensive remuneration framework combines fixed and variable pay schemes based on targets for employees and the Group. Short- and long-term variable remuneration reflects what we have accomplished and how, according to group-wide quantitative and qualitative targets as well as individual and team targets, behaviour, leadership, sustainability, commitment, growth and risk management. It includes pension plans, banking products and services, life insurance, medical insurance and other corporate benefits our employees can choose.

Fixed remuneration schemes reflect local market conditions. To set pay, we strictly abide by the practices, regulations and collective agreements in force in each jurisdiction where we operate.

Our remuneration policy for all Group employees forbids differential treatment that is not based on a review of performance and corporate behaviours. It also promotes equal pay between men and women.

To comply with EU regulations on remuneration, we identified 1,039 employees subject to a deferred variable pay scheme because their decisions can have a material impact on equity. The policy defers a significant amount of their variable pay (40%-60% depending on remit) for four to seven years, in accordance with internal and local regulation. 50% of variable pay is delivered to them in shares and subject to potential reduction ("malus") or recovery ("clawback"). However, executive directors receive 50% in instruments (25% in shares and 25% in share options), unless they choose to receive options only.

Key initiatives in 2022

- The executive director remuneration policy for 2022 included variable, multi-year remuneration (2023-2025) based on relative total shareholder return, return on tangible equity and ESG metrics. We measure our progress in ESG against these four lines of action and their related metrics: (1) percentage of women in senior positions; (2) financial inclusion; (3) green finance and socially responsible investment; and (4) exposure to thermal coal.
- In 2022 we began developing a new variable pay platform as part of our commitment to better employee experience and best market practice.
- We made progress with gender pay gap monitoring and analysis.
- Our remuneration policy outlines our commitment to avoiding gender bias and removing inequality.



For more details on board remuneration, see [section 6 of the 'Corporate governance chapter'](#).

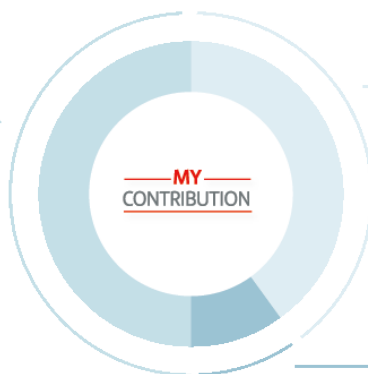
MyContribution

MyContribution is our common performance management model. We update it regularly, and it applies to all employees.

50%
What

Individual goals that link to the organisational strategy.

"What I do day to day" to achieve business results, demonstration of how I contribute to the Group's Purpose and Aim.



40%
How

Common key elements that demonstrate "how" I go about achieving my "what" – The Santander Way

10%
Risk

Common risk goal for all levels and roles, to show how I manage my risks in my day to day. **risk pro**



Corporate benefits

We offer several benefits to our employees in all geographies. Each subsidiary has programmes that adapt to local circumstances. Benefits range from free services for employees and their families to discounts on products and services.

We focus on well-being to help employees stay in sound physical and mental shape, to support their families and to adapt health cover to new circumstances and needs. In Spain, our *Santander Contigo* programme provides assistance with daily tasks, legal and computer support, and other services.

In other geographies, services and financial aid for childcare and support for elderly relatives in their charge are also substantial.

Transforming the way we work

From early 2022, with different Covid infection and vaccination rates in our markets, we had to remain responsible, vigilant and flexible to rollout a "post-pandemic" work model. We focused on two key areas:

1. Return to office, with the objective of gradually bringing everyone back as the pandemic subsided.
2. A flexible working model that is fit for the future and responds to business needs.

We also continue to promote our employee's work-life balance through flexible working, health & well-being programmes and office safety measures.

A new way of working

We implemented a global framework for managing hybrid working based on productivity, engagement and attractiveness. It enabled each subsidiary to deliver a consistent model to employees that they could adapt to local needs:

- For productivity, we created a new dashboard to measure the new ways of working across the Group and measured KPIs for contact centres and operations.
- For engagement, we asked employees to provide feedback on the new ways of working.
- For attractiveness, we followed up with job applicants to learn their views on our new ways of working.

Agile Way of Working

We have been implementing agile methodologies and organizational structures across the business to ensure a strong customer focus and promote a more collaborative and multidisciplinary way of working. To enable change, we created an Agile Transformation Blueprint and practices to help subsidiaries facilitate business agility.

And we have boosted our Agile Training Academy with several learning modules available for all levels and specializations of employees.



For more details on our initiatives promoting employees' wellbeing, see "Employee wellbeing" in this section

8.4 (out of 10)

Employees' assessment of whether they believed they had the necessary flexibility to be able to balance work and family life.^A

A. Workday-peakon survey 2022

We set out five "ways of working" principles



→ **The customer comes first.** Behind any Way of Working arrangement customer and business impact **MUST** be considered at the first place.



→ **Managers** are playing critical role in the organizing teams work. **Productivity of the teams and individuals** are key decision's factors when building the models of work.



→ **Office is our main place to work. Workspaces are no longer just a place of work** but a social destination bringing people business together, and supporting different working needs, with the best opportunity for collaboration, innovation and creativity. **Building critical social mass** at the premises is key for our culture.



→ **Testing and learn approach through constant listening** evolving over the time with the focus on customer, individual performance, productivity outputs, and employer branding.



→ **Flexibility, fairness, inclusion and equal opportunity** are guiding principles in decision-making.



Enabling the business

Enabling the business to take key decisions and manage human capital, was a key human strategy and objective for us in 2022 and will continue to be in the future. We want our people to make smarter, faster decisions about their teams and their needs. We are contributing value with our global technology platforms and giving the business data at their fingertips through::

- Enhance user experience through new solutions such as OneHR portal, OneHR Support, chatbots and mobile first technology.
- Maximize the potential of our platforms, having added such end-to-end processes to them in 2022 as the skill model, talent review, succession planning and time tracking.

Social dialogue

In 2022, we continued to guarantee freedom of association and the right to collective bargaining. Our Responsible Banking and Sustainability policy considers forming or joining unions and other representative bodies a basic right of workers, in accordance with Article 10 of our General code of conduct.

We also ensured respect for freedom of association, trade unions, collective bargaining and protections for employees' representatives under the laws of each country where we operate.

We continued to promote and comply with the International Labour Organization's Fundamental Conventions.

We also remained in constant dialogue with employees' legal representatives in bilateral and special committee meetings where all parties could discuss reporting, queries and negotiations about work conditions and employee benefits.

- Create global data and data quality governance and new reporting dashboards, and used analytical and predictive models to harness HR Analytics for more insightful people management.
- Simplify and automate back-end processes by moving towards more global shared service centres in Human Resources.

Meetings we held in 2022:

- Occupational health and safety committees
- Equality plan follow-up committee
- Santander employees pension plan control committee
- Training committee
- Other meetings
 - Employee listening
 - Banco Santander mass redundancy agreement follow-up committee
 - Registration of working hours
 - Corporate behaviors
 - Flexiworking policy
 - Capitalization of pension supplements agreement follow-up meetings
 - Meetings with subsidiaries' union committees
 - Bilateral meetings with trade union representatives



3.4 Acting responsibly towards customers



Our customers are at the centre of everything we do



3.4.1 Customer experience and satisfaction

GRI 2-29, 3-3, FS5, FS6

Transforming customer experience

Our aim is to offer customers a great service and experience that produces optimal business outcomes.

We created local and global opportunities to transform customer experience (CX), with the oversight of our management committees.

In 2022 we focused on:

- 1) CX strategy: Develop skills, processes and tools to manage CX within our Global CX management framework, which our core country units helped create.
- 2) Create a Centre of Excellence for Behavioural Economics to better understand people's choices.
- 3) Customer-centric culture: A community to share know-how and innovation to develop subsidiary-level CX plans to raise NPS. We have a monthly newsletter and hold special workshops and training sessions.

Customer satisfaction

In 2022, we conducted over five million surveys to monitor customer feedback about Santander and find out how we can improve our products and services and, ultimately, their experience.

In 2022, we ranked in the top 3 in NPS in 8 of our markets (For more detail see tables 27, 28 and 29 on [4. Our progress in figures](#) section in this chapter).

In 2022, among others, we ran these initiatives:

- “Serve from the heart” (SFTH), which brought us closer to customers' real needs and problems. It is running at branches, contact centres and central offices in the US, Brazil, Chile, Argentina, Uruguay and Portugal, and includes videos and podcasts.
- Also, in the US, we ran digital interaction initiatives and created a customer ombudsman programme to enhance claims and complaint resolution, which boosted CX.
- In the UK, we use customer voice analyses to perform quick tactical testing. Initiatives also include gamified communication, proactive apology messages for unsatisfactory service and calls to detractors.
- In Poland, the COMPASS methodology ensures that new products and solutions will prove useful to both the business and the customer, mitigating risks and boosting customer satisfaction. Also, our plain language communication policy boosts CX, our reputation for transparency, honesty, and straightforward terms of service.
- In Brazil, we developed an AI-driven “speech-to-text” (STT) program that leverages our ability to listen to our customers, bringing insights that allow us to improve our customers experience.

We also continue working on the accessibility of our products and services, including our channels as branches, App y Webs.



Top 3

in NPS in 8 countries^A

A. Santander US has a differentiated objective and does not compute.



3.4.2 Product governance and consumer protection

GRI 2-26, 3-3, 416-1, 417-1, FS15

Customer conduct risk model

Being responsible means offering our customers products and services that are Simple, Personal and Fair (SPF). Our daily operations must be brilliant, and do more than what the law requires, to give our customers an exceptional experience.

Our customer conduct risk model sets out the lines of action and standards for managing and mitigating conduct risk in service design, sales, post-sales and execution.

The Product Governance & Consumer Protection area pinpoints risk from banking regulation and good practice. It also conducts thematic reviews to avoid problems that might affect our customers and to ensure excellence. 2022 thematic reviews focused on pricing, account closure, services for elderly customers, care for victims of fraud, and payment protection insurance. We found over 100 areas of improvement.

Product governance

Santander's governance structure enables it to safeguard customers' interests.

Our product governance forum ensures the products and services we market meet the needs of specific target segments and are reasonably and clearly priced.

Transforming sales culture

Training is central to Group Santander's strategy for a strong risk culture and sound risk management. All our employees complete a mandatory course on conduct risk management. We also run special training programmes for our sales teams to learn skills to sell our products and services properly.

Those programmes, plus the practices and controls we promote, ensure we offer products and services that are consistent with customers' needs and preferences. We avoid pressure selling and other inappropriate practices, and only offer product and service bundles if they add value for customers, who always sign up to them at their own discretion.

We explain products and services to customers in a clear and thorough manner throughout the customer cycle, with quality and conduct controls for marketing and sales material, brochures and contracts according to Santander's standards.

We design customer-focused remuneration models to ensure quality sales processes and to promote sustainable business.

In 2022, we verified that at least 40% of sales units' variable pay was based on customer satisfaction and quality metrics. We drew up plans to enhance pay schemes that promote suitable fixed and variable pay ratios and linear business objectives that will help avoid conflicts of interest and ensure sales will meet customers' needs and profiles.

We continued implementing Rating de Oficina project to give branches a customer conduct and quality rating that impacts on employees' pay, with technology to review real-time metrics for greater awareness and management of conduct-related risk.

In 2022, we reviewed the pay schemes of call centre employees involved in sales and customer engagement, in addition to others working in credit approval, loan monitoring, recoveries and collections, to make sure good conduct and service quality were engrained in their objectives.

Vulnerable customers

In 2022 we made headway with the management of vulnerable customers and prevention of over-indebtedness in all our core markets. Each subsidiary has a roadmap to roll out a Group-wide model for training customer-facing employees to recognize vulnerable customers, escalate cases, and design products and services in such high-impact procedures as collections, fraud management and services for senior citizens.

We focused heavily on vulnerable customer identification through internal awareness campaigns and metrics.

In 2022:

- We implemented protocols for elderly customers to avoid exclusion and improve the experience of these customers.
- We were awarded in UK to be certificated by International Standard on Consumer Vulnerability and the Inclusive Service (ISO 22458).

Conduct in collections and recoveries

In 2022, we used customer conduct metrics to monitor recoveries in all our markets every month. We also checked employee training and quality control.

Customer complaints regarding recoveries fell 26% against the previous year (despite the Covid crisis and the war in Ukraine) on the back of the ethical standards we continued to implement and oversee since 2021.

Conduct in fraud management

Santander invests in advanced systems to protect itself and its customers from the devastating effects of fraud.

In 2022, we conducted a Group-wide analysis of how we manage fraud with customers. We reviewed regulatory trends, as well as our end-to-end processes, product and service design, claims handled, customer communications and control. Our findings helped us draw up action plans to boost our fraud management in 2023.

Complaints management

Handling customer issues and complaints proactively and effectively, analysing disgruntlement and applying lessons learned are vital to continuous improvement, innovation, and to strong customer satisfaction and loyalty.

Our complaints analysis and management are consistent with the Group's Simple, Personal and Fair strategy, with standards for all units to properly handle complaints and offer the best customer service. We use analyses to enhance products and services, with an early warning system to identify risks.

In 2022 we reviewed complaints management and root-cause analysis in all our core markets to identify common workstreams, good practice and areas of improvement. In 2023 we will run initiatives on customer service excellence.

We continued our holistic analysis of customer surveys and consumer protection, with artificial intelligence to report root cause, maximize oversight (e.g. pilot schemes in Brazil and Mexico with over 27 million sets of data), avoid issues reoccurring and follow best practice.

Our methodology harnesses the benefits of customer survey algorithms to get the most out of structured and unstructured data on our systems.

In 2022 we received few complaints from senior citizens and new customers in our core markets relative to our total customer base.

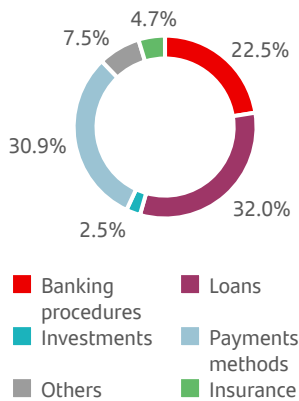
We also use special taxonomies to track fraud-related complaints in all geographies. In Mexico, cases of fraud, which account for c.50% complaints there, have been falling significantly, thanks to a new task force and the measures we're taking.

In 2022, the average time taken to resolve complaints was 10.5 days.

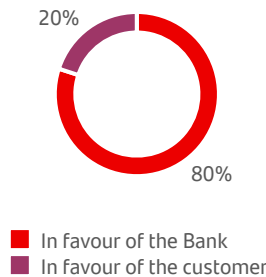


For more details on complaints management, see section 7.2. 'Compliance and conduct risk management' in the 'Risk management and compliance' chapter and our Culture report in our corporate website.

Type of complaints^{A,B} (%)



Resolution^{A,B} (%)



A. Personal Protection Insurance (PPI) Complaints excluded from the volume, distribution by product and resolution term figures. Regarding the uphold ratio, the UK has been fully excluded.

B. Complaints metric follows the criteria established by the Group (homogeneous in all geographies).



3.4.3 Privacy, data protection and cybersecurity

GRI 418-1

Privacy and data protection

Our standards afford people greater control over their data, ensuring we only use their data strictly necessary and for the specific and fully informed purposes for which it is collected. That's why we only process personal data that are appropriate, relevant and necessary to the purpose for which they've been collected, throughout the data's entire life cycle and in accordance with the law. We apply all reasonable measures to erase or rectify data that are impertinent, inaccurate or incomplete. We only store personal data for as long as strictly necessary for their legitimate use. Our security measures ensure the unwavering confidentiality, integrity, availability and resilience of our data processing systems and services.

Our compliance programme guarantees robust management of data protection risks. It includes:

- corporate-based **criteria as general lines of action** to meet regulatory requirements.
- **local subsidiaries' responsibility** to abide by the General Data Protection Regulation (GDPR) and local regulation on data protection.
- **a solid governance model** consisting of:
 - corporate and local policies;
 - a data protection officer (DPO) and managers in each unit. We formally disclosed appointees to local authorities;
 - a corporate oversight programme based on management KPIs; annual reviews; and an annual monitoring forum chaired by the Group Chief Compliance Officer, where subsidiaries report on compliance status and other key data protection matters.

Other items that bolster our commitment to personal data protection are:

- a homogeneous monitoring and reporting model among units that includes performance indicators;
- work with third-party service providers that must comply with data protection regulation;
- data protection compliance embedded in the annual internal audit programme;
- data protection management tools to maintain a group-wide register of processing activities (some 6,000), regular KPI reports and security incidents management;
- promotion of corporate initiatives and the exchange of best practices among units, including workshops and online training courses;
- special training on data protection for DPOs and data controllers;
- constant monitoring of regulatory developments to update and consolidate criteria, methodologies and documents; and
- employee training and awareness

Cybersecurity

Our culture promotes behaviours to protect customers' information and the Group. We help our customers and broader society stay safe and prosper online. We're working with public- and private-sector organizations to combat cybercrime through knowledge sharing on cybersecurity.

At Santander cybersecurity is embedded in our culture. It is a part of our employee performance reviews.

In 2022, we made our teams more aware of cybersecurity, with:

- an update to our mandatory cybersecurity course;
- special or extra cybersecurity training for payment agents, IT professionals and developers, board members and executives;
- awareness campaigns about new hacking techniques; and
- regular phishing testing that helps us become more resilient to threats and encourages employees to report incidents or suspicious messages through the relevant channels.

We ran initiatives to help our customers and society stay safe online:

- "Cyber Heroes" interactive training, where our employees and the general public can test their knowledge of online safety. Available in Argentina, Brazil, Portugal, Spain and the UK, it has a rating of 9 out of 10.
- Awareness workshops for retail and corporate customers at our branches to explain online threats and how they can reduce them.
- Por una vida online y corriente ("An ordinary life online"), a new global cybersecurity awareness campaign about healthy online habits and protection against fraud. As part of our corporate sponsorship of Rafael Nadal, it consists of special websites, social media content, targeted announcements and online workshops to reach the widest possible audience.

We also cooperated on cybersecurity matters with public and private organizations, helping combat cybercrime:

- Santander played a pivotal role in creating the Financial Services Information Sharing and Analysis Center (FS-ISAC) for intelligence sharing in Europe. Headquartered in The Hague, it has over 1,000 members from 174 entities that include leading banks, Swift and Europol.
- Santander is part of the leadership team of the US Ransomware Task Force, whose aim is to bolster the prevention of, and response to, ransomware attacks at all stages of the supply chain.
- Santander supports the World Economic Forum's (WEF) Cybercrime Atlas initiative to clamp down on cybercriminal networks.






For more details on our cybersecurity initiatives in 2022, see 'Cybersecurity' in section 5 '[Research, development and innovation \(R+D+i\)](#)'.



3.5 Responsible procurement

GRI 3-3, 204-1, 308-1, 308-2, 414-1, 414-2

Being responsible also involves our suppliers

-  Third-party certification policy
-  Responsible behaviour principles for suppliers
-  Risk control

Our **corporate third-party certification policy** provides a methodology for all subsidiaries to select, approve and evaluate vendors. In addition to traditional criteria such as price and quality of service, it includes sustainability criteria as human rights or diversity and inclusion, for suppliers providing risk services to the Group. Risk services refer to those that manage very sensitive data or disruption in their services could severely damage the business.

ESG standards in procurement

We continued to review the adoption of ESG standards along our supply chain.

- During 2022, 3,222 vendors which represent 52% of those providing risk services were approved under ESG standards. These standards assess the adherence to the UN Global Compact, codes of conduct, anti-corruption policies and freedom of association.
- In addition, for those most critical suppliers providing risk services, we assessed 482 according to whether they include ESG criteria in their processes. The scope of this included Colombia, Peru and Uruguay for the first time, in addition to the core markets.

The assessment consists of a questionnaire on carbon footprint, gender and disability inclusion, flexible working, minimum wage, good corporate governance and other factors.

The response rate grew 2% year on year and we found significantly better use of whistleblowing channels, as well as more gender diversity, health and safety policies. However, there is still a significant number of suppliers with room for improvement in the integration of ESG criteria. We are jointly working with them on remediation plans and specific training on the subjects.

ESG supplier standards

We identified ESG best practices from some key vendors in product categories who have the greatest environmental and social impact to gain a better idea of ESG positioning and performance along our supply chain. Our tender questionnaires require information from vendors on their environmental, social and ethical behaviour.

We're setting sustainability standards for each product and service category to include them in the selection requirements.

As part of our support to the local economy, 60% of our vendors are based in the same location where we procure services; they account for 85%⁶ of our total turnover procurement.

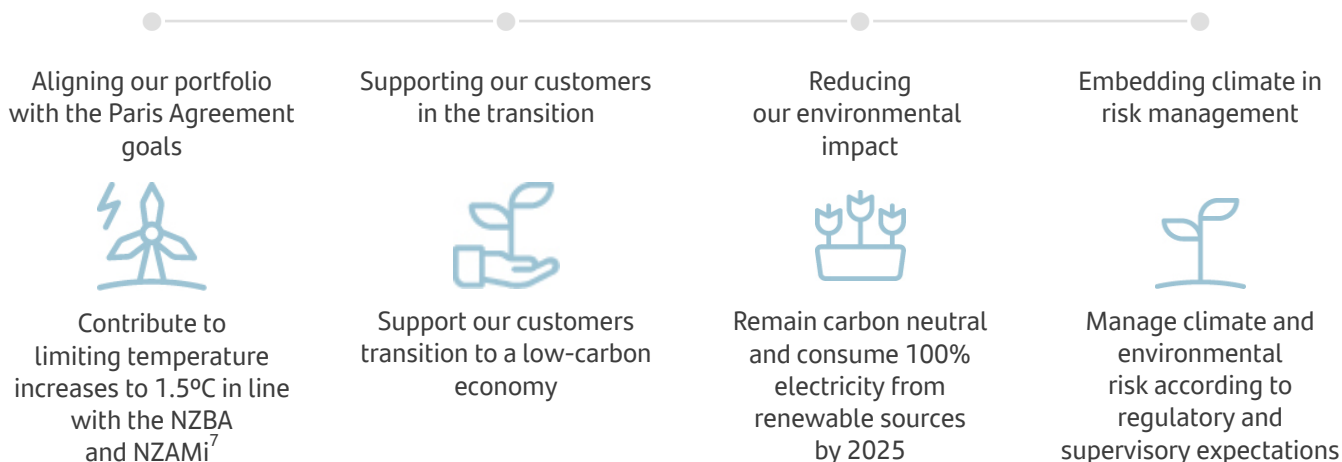
Risk control

- In 2022, we finished rolling out our supplier risk management platform in our core markets. Designed to rationalize vendor management and critical reporting, it enables us to consolidate certification information for all vendors.
- We implemented a new corporate tool to homogenize risk services vendor certification in all our core markets as well as to review such key risks as cybersecurity, business continuity, physical security, facilities and data protection. We also included Anti-Bribery and Corruption, data integrity and other additional risks.
- We created specialized regional teams to issue ESG certification to our selected vendors for providing the most critical services for the Group.
- We work on roll out our ethical channels for vendors to the rest of our core markets next year.

⁶ The reduction in turnover at local suppliers (-11 p.p.) is due to a reduction in the number of local suppliers (-34 p.p.) because of the inclusion of new suppliers in the reporting scope.

3.6 Supporting the green transition

Tackling climate change is a key priority at Santander. We support the Paris Agreement goals. Our ambition is to achieve net zero carbon emissions by 2050. We will do this, and support the green transition, in four ways:



Our targets:

	2018	2019	2020	2021	2022	2025/2030 target
Electricity from renewable sources	43%	50%	57%	75%	88%	100%
Carbon neutral in our own operations			✓	✓	✓	Every year
Green finance raised and facilitated (EUR)⁸		19 bn	33.8 bn	65.7 bn	94.5 bn	120 bn by 2025 220 bn by 2030
AuMs in Socially Responsible Investments (EUR)				27.1 bn	53.2 bn	100 bn by 2025
Thermal coal-related power & mining phase out (EUR)				7 bn	5.9 bn	0 by 2030
Emissions intensity of power generation portfolio⁹		0.21	0.17			0.11 tCO ₂ e / MWh in 2030
Absolute emissions of energy (oil & gas) portfolio⁹		23.84				16.98 mtCO ₂ e in 2030
Emissions intensity of aviation portfolio⁹		92.47				61.71 grCO ₂ e / RPK in 2030
Emissions intensity of steel portfolio⁹		1.58				1.07 tCO ₂ e / tS in 2030

New in 2022

From...To Cumulative target Commitment Achieved

⁷ NZBA: Net Zero Banking Alliance. NZAMi: Net Zero Asset Managers initiative.

⁸ In 2022, SCIB contributed EUR 28.8 billion to the green finance target, including EUR 4.8 bn in Project Finance (MLA); EUR 7.2 bn in financial advice; EUR 5 bn in green bonds (DCM); EUR 21 mn in project bonds; EUR 1.5 bn in export finance (ECAs); EUR 8.5 bn in M&A; and EUR 1.8 bn from equity capital markets, according to Dealogic, Infraction news, TXF and Mergermarket league tables. This refers to all roles undertaken by Banco Santander in the same project. It does not include financial inclusion and entrepreneurship. Green Finance raised and facilitated is not a synonym of EU Taxonomy. Please refer to specific section on EU taxonomy-related requirements for further details in this regard.

⁹ Given limited data availability from customers to assess financed emission, we plan to provide target progress update in the "June 2023 – Climate Finance Report"



3.6.1 Our ambition and strategy

GRI 2-24, 2-25, 3-3

Santander aims to be net zero in carbon emissions by 2050. This applies to the Group's operations (which have been carbon neutral since 2020) and emissions from our lending, advisory and investment services.

We are a founding member of the **Net Zero Banking Alliance** (NZBA, under the United Nations Environment Programme Finance Initiative), committing the Group to:

- transition operational and attributable greenhouse gas (GHG) emissions from lending and investment portfolios towards pathways to net zero by mid-century;
- set intermediate targets for priority GHG emitting sectors for 2030 (or sooner); and
- prioritize client engagement with products and services that facilitate the necessary transition in the real economy.

Santander Asset Management (SAM) aims to achieve net zero greenhouse gas emissions with its assets under management by 2050. SAM joined the global Net Zero Asset Managers initiative (NZAMi) as part of its commitment to fighting climate change, and set an interim target to halve net emissions for 50% of its AUM in scope by 2030.

Our approach

Our approach to decarbonization is to focus on the most material, high-emitting sectors portfolios. The methodologies we have developed inform our plans to decarbonize our credit portfolios, especially ones directly related to fossil fuels.

The Group's climate risk management performs a climate transition assessment for wholesale corporate customers in the oil and gas, power generation, metals and mining, auto manufacturing, aviation and cement sectors, which are highly prone to transition risk.

We have a four-pronged climate strategy to support the green transitions and achieve net zero carbon emissions by 2050:

- 1) align our portfolio with the Paris Agreement goals and set sector- portfolio alignment targets in line with the NZBA and with NZAMi to help limit warming to a 1.5°C rise above pre-industrial levels.
- 2) help customers transition to a low-carbon economy, with the target to raise or facilitate EUR 120 bn in green finance between 2019 and 2025 and EUR 220 bn by 2030; offer our customers guidance, advice and specific business solutions; and enable them to invest in a wide-range of products according to their sustainability preferences, with the target of reaching EUR 100 bn AuM ESG Socially Responsible Investment by 2025.
- 3) reduce our impact on the environment, implementing efficiency measures, sourcing all our electricity from renewable energy by 2025¹⁰ and remaining carbon neutral in our operational footprint.
- 4) embed climate in risk management; understand and manage the sources of climate change risks in our portfolios.



More details on our Climate Report 2021-June 2022 and the net zero announcement press release, available on our corporate website



See more details of the SAM strategy under 'Our net zero strategy' in the [Sustainable Investment](#) section.

Progress in our three climate-related projects (portfolio alignment, sustainable finance classification system and climate risk management) is reviewed regularly at key governance bodies as detailed below.

Disclosing our approach is key to helping markets and other stakeholders assess how we embed climate in our processes and policies. We use the TCFD as reference. See our latest update on the TCFD's four-pillar framework (Strategy, Governance, Risk management and Metrics & Targets) below.

¹⁰ In countries where we can verify electricity from renewable sources at Banco Santander properties



2022 highlights

- We raised or facilitated EUR 28.8 bn (EUR 94.5bn since 2019) and took advantage of climate finance opportunities to progress on our green finance target (See 'Supporting our customers in the transition').
 - The greenfield renewable energy projects we financed or advised on will have enough installed capacity to power 10.1 million homes a year and avoid 152 million tons of CO₂ emissions^A during their useful life.
- We're expanding our range of ESG products in Wealth Management. As of December 2022, we had over EUR 53.2bn Socially Responsible Investment (SRI) AuM: EUR 37.5bn in Santander Asset Management and EUR 15.5bn from third party funds in Private Banking.
- We set decarbonization targets for 2030 against 2019, for energy - oil & gas (-29% absolute emissions), aviation (-33% emissions intensity) and steel (-32% emissions intensity). In 2021 we set a target for 2030 against 2019, for power generation (-46% emissions intensity).
- We disclosed the financed emissions (absolute and emissions intensity) for the power generation, energy (oil and gas), aviation and steel sectors.
- We have put in place our climate customer engagement framework to facilitate the achievement of our emissions target for the power generation sector. This is based on our customers' greenhouse gas emissions profile alignment and a quality assessment of their transition plans.
- We began to implement action plans to decarbonize power generation and thermal coal credit portfolios. They include special risk appetite limits and customer engagement on climate goals and planning.
- Climate change risk and opportunity assessments, which inform our three-year financial planning and five-year strategizing, enable us to measure three-year projections including the decarbonization targets, green finance and AuM from sustainable funds.
- Santander's employee pension funds managers took action needed to align funds with the net zero target.
- Santander launched key strategic initiatives on nature-based solutions in the Amazon in Brazil. Biomass aims to protect and restore 4 million hectares; and IFACC Alliance aims to accelerate financing for sustainable production and bring together complementary capabilities to design and scale up such mechanisms.
- We continued to implement our plan to curb deforestation and protect biodiversity (especially in the Amazon), which is critical to tackle climate change (See our webpage on 'Santander and the Brazilian Amazon').
- Santander joined the Taskforce for Nature-related Financial Disclosures (TNFD) forum and is assessing the impacts and dependencies on our portfolio for nature-related impacts.

A. Emissions to be avoided over the estimated lifetime of projects that we financed or advised on in 2022. Emission factors and household consumption data from the International Energy Agency (source updated in 2022 with 2020 data) have been used. The estimated share attributed to Santander is 51.6 million tons of CO₂.

3.6.2 Governance

201-2, FS1, FS2, FS3

Climate change and green transition oversight bodies:

- The Board of directors, the Board risk committee and the executive committee discuss and oversee climate change and green transition. In 2022 these topics were discussed by the Board in four of its meetings, and discussed by the Board risk committee in six of its meetings, including disclosure reports, new alignment targets, or the Climate Risk Stress Test Update. Additionally, business units and global businesses report annually to the Board including their main ESG initiatives.
- The Responsible Banking, Sustainability and Culture Committee (RBSCC) discussed climate change at the five meetings it held in 2022. It reviewed the climate change projects: progress on power generation and thermal coal portfolio alignment targets; latest targets for disclosure of energy (oil & gas), steel and aviation and progress on other sectors; the organizational model, key priorities, and next steps of the Green Finance unit and its progress; main results, lessons learnt and expected developments from the supervisory activity (including the ECB 2022 Climate Stress Test and Thematic Review); data disclosure on the Green bond report; and future developments and ideas on better climate reporting.

- The Responsible Banking Forum (RBF) discussed climate change and green finance in five of its six meetings in 2022. As this body ensures alignment on key issues, it reviewed and escalated the above-mentioned topics, among other such as, the environmental risk policy revision, and carbon footprint and offsetting process.
- The management meeting, chaired by the CEO, received four status reports on the responsible banking agenda regarding climate change and green finance.
- These bodies, along with the audit, risk, and other Board committees discuss climate-related matters which arise from the work carried out by the different areas, detailed below



For more details on the RBSCC and RBF discussed topics and actions taken, see section 4.9 '[Responsible banking, sustainability and culture committee](#)' in the Corporate governance chapter.



For more details on climate Governance bodies, and its composition, see our Climate Report 2021-June 2022 available on our corporate website.



For additional information on ESG training, see the Global Training section on 3.3 '[A talented and motivated team](#)'

Main areas involved in the implementation of the climate change strategy



Pillar of the climate change strategy	Aligning our portfolio with the Paris Agreement goals	Supporting our customers in the transition	Reducing our environmental impact	Embedding climate in risk management
Main areas	Responsible banking, global businesses and local units set alignment targets	SCIB (Green finance and ESG solutions), Santander Consumer Finance and Wealth management.	Facilities, General services and Responsible banking	Global and local teams across all areas of Risk and Compliance

- In 2022 we continued to embed climate management in business-as-usual across SCIB, Risk and Responsible Banking. We created two new positions: Risks Head of ESG & New Business (who reports directly to the CRO), and Global Head of Green finance (who reports directly to the CEO). For detail, please see Global Green Finance unit in Retail and Commercial Banking.
- Other corporate-level initiatives and groups, which support governance, meet regularly to implement or advise on our climate change agenda. For example, our public policy sustainability working group advises on regulation, the environmental footprint working group measures our footprint and reviews ways to reduce it. The sustainable bonds working group oversees sustainable bonds issues.

- Annual risk assessment and internal audit planning touch on climate risk. In 2022, our Internal Audit area audited climate risk management, verifying that the Group's initiatives are progressing according to plan. It also suggested some improvements to strengthen governance and controls, and to roll out initiatives in subsidiaries. It will continue to monitor this in 2023.
- A board resolution to add ESG metrics covering green finance, decarbonization and other ESG targets to senior executives' long-term incentives passed at the 2022 AGM. This is consistent with our targets (see section 6.4 'Directors' remuneration policy').



For more details on ESG in remuneration schemes, see section 6.4 '[Directors' remuneration policy](#)'.

3.6.3 Risk management

GRI 2-25, 201-2

- In 2022, we made progress in embedding climate and environmental risk in our core risk management. We designed an additional quantitative metric related to the power generation sector that complements our metric for thermal coal, which will be included in our risk appetite statement in 2023.
- The Risk area developed a target operating model (TOM), which aligns our credit approval processes with our strategy and regulatory requirements regarding climate and environmental risk.
- In 2022, the European Central Bank tightened its supervision with a thematic review, stress testing and on-site inspections. We expect the regulatory and supervisory agenda to continue to get bigger.
- Grupo Santander has completed satisfactorily the European Central Bank's climate stress test for the banking industry. The climate stress test was a valuable lesson to the sector, having prompted banks to adopt more advanced management models.
- We evolved our control environment questionnaire (Risk Profile Assessment) related to climate risk bearing in mind the latest regulatory and management developments. Results helped us identify gaps and areas for improvement.
- We conducted materiality assessments every quarter to identify the most climate material portfolios. They cover more than 80% of our balance sheet. Advances in the level of granularity, covering most segments of our portfolio.
- We also identified credit portfolios with major biodiversity risk in our preliminary materiality assessment of environmental risk (going beyond climate).
- Our first ESG Pillar III disclosures covered the new sustainability requirements for greater transparency between financial institutions.

The tools for assessing climate risks and their impact on our portfolio are the following:

- **KLIMA:** Tool for climate and environmental risk detection and assessment, featuring our risk taxonomy and heat maps to review and manage transition and physical risk exposures uniformly in the short, mid and long term. Additionally, it includes scenario analysis to visualize portfolio evolution.
- **Advanced models:** We performed internal climate scenario analysis and stress testing through internal models and a platform acquired from an external vendor, which is based on the UNEP FI methodology, incorporating external and internal information to complete models. This platform has been embedded into the credit risk management of our portfolios prospectively through sensitivity analysis and quantitative materiality assessment bearing in mind sectors and geographies.

MATERIALITY ASSESSMENT - CLIMATE RISK ANALYSIS AND HEAT MAPPING OF PORTFOLIOS

September 2022 - EUR billion

	TR	PR	SCIB	Other segments
Power (conventional)	High	Medium	27	2
of which power generation clients with > 10% of revenues coming from coal	Very high	Medium	4	0
Power (Renewables - Project Finance)	Moderately low	Medium	11	0
Oil & gas	High	Moderately low	25	1
Mining & metals	High	Moderately low	15	8
of which clients with thermal coal mining	Very high	Moderately low	3	0
Transport	High	Moderately low	30	105
Real estate	Moderately low	Medium	8	398
Agriculture	Medium	Medium	3	8
Construction	Moderately low	Moderately low	18	14
Manufacturing	Medium	Moderately low	50	29
Water supply	Medium	Medium	3	1
Climate sectors			190	566
Other sectors			55	224
Total portfolio			245	790

■ Low
 ■ Moderately low
 ■ Medium
 ■ High
 ■ Very high

TR: Transition Risk. PR: Physical Risk

SCIB : REC (on and off-balance sheet lending + guarantees + derivatives PFE),

Other segments : Drawn amount

Other sectors= SCIB and Corporate NACES outside of risk taxonomy perimeter // Individuals and SCF: Cards and Other Consumer

Other segments include Individuals, SCF, Corporates and Institutions and, since 2022, some SMEs.

0 exposure amounts to exposures below EUR 500 mn.



For more details on our risk management approach and progress, see section 10. 'Climate and Environmental risk' of the Risk management and compliance chapter.



For more details on our Climate Report 2021-June2022, see our corporate website.



3.6.4 Metrics and targets

GRI 2-24, 3-3, 201-2

Santander aims to be net zero in carbon emissions by 2050. Our initial focus is on the most material sectors and on lending, which is our most material financial activity.

We disclose scope 1, 2 and 3 emissions performance data (see 'Environmental footprint') and other climate relevant metrics (e.g. energy consumption). We report on our renewable energy and carbon neutrality targets. We also began to disclose financed scope 3 emissions (category 15) in 2021, following the standard of the Partnership for Carbon Accounting Financials (PCAF, of which we are a member).

Portfolio alignment

Santander publicly supports the Paris Agreement on climate change. We joined the UN Collective Commitment to Climate Action (CCCA) when it was launched in September 2019. We announced our ambition to be net zero in carbon emissions by 2050 in our 2020 Annual Report. We're a founding member of the UNEP FI Net Zero Banking Alliance (NZBA) as a key initiative to help us drive progress with our net zero ambition.

We fulfilled the first round of target-setting as part of our UNEP FI NZBA commitments. We addressed most of the material and high-emitting sectors we financed, provided data and methodologies were available.

We base our work on NZBA guidelines and recommendations, the PCAF standard, GFANZ (Glasgow Financial Alliance for Net Zero) publications, SBTi (Science Based Targets initiative) recommendations and other standards that enrich our internal methodologies.

We rely on financial information from our customers (total equity, total debt, total assets, company valuation, etc.), as well as emissions and production data. Where no public emissions data exist, we estimate them based on a proxy (average emissions by industry, country, etc.). Once we have an idea of our customers' total emissions, we can apply our attribution factor in line with the PCAF approach to determine the emissions Santander finances.

We're setting alignment strategies and decarbonization targets based on customer emissions data, which are accurate to monitor real progress. We're improving data with external databases and models.

We're also working to gauge financed emissions for our balance sheet, but with lower-quality emissions data to meet certain disclosure requirements.

> Roadmap for delivery on net zero

- Our materiality assessment of physical and transition risks enabled us to focus on high GHG emission intensity sectors and start developing specific decarbonization strategies for sectors defined within NZBA.
- We aim to set decarbonization targets for mortgages, auto-loans, auto-manufacturing, cement, commercial real estate, agriculture and other NZBA sub-sectors by March 2024 or before. Action plans will be published 12 months after target disclosure.
- We'll also update set targets as needed, as new methodologies and more precise and timely information become available in the market.

The decarbonization of portfolios (especially retail) will require advanced scenarios, Nationally Determined Contributions (NDCs) that will limit warming to 1.5°C, and effective policy for an orderly transition.



Decarbonization targets

We have decarbonization targets for five climate material sectors, according to the internal roadmap in our Climate Finance Report from 2021. The targets were presented to our key climate governance bodies and approved by our board of directors.

Emissions accounting and science-based decarbonization target methodologies are new areas that are advancing quickly to meet climate ambitions. We will update and reinforce our methodologies and processes to include these future enhancements.

Santander's activities covered by our targets: According to the PCAF's global GHG accounting and reporting standard, we assess the financed emissions of the sectors our targets cover based on on-balance credit exposure.

Sector boundaries: We focus on where the significant share of emissions come from along each sector's value chain, which are the upstream/generation business in power generation; upstream companies and integrated companies producing their own upstream oil and gas in energy; steel producers; and commercial airlines.

Given financial institutions with strong climate commitments can help industries decarbonize, we find emissions intensity to be the best metric for every sector but energy (for which we use absolute emissions). Our climate strategy to help customers transition to a low-carbon economy prioritizes engagement over divestment.

As published in our "June 2022 Climate finance report", the estimated exposure to power generation, thermal coal, energy (oil & gas), aviation and steel sectors is 3.5% of on-balance-sheet credit and 74% of SCIB's credit risk from climate-material sectors.¹¹

Sector	Scenario	Emissions	Metric	2019 baseline	2030 targets
Power generation	IEA Net Zero 2050	Scope 1	tCO ₂ e/MWh	0.21*	0.11 (-46%)
Energy (Oil & Gas)	IEA Net Zero 2050	Scope 1 + 2 + 3**	mtCO ₂ e	23.84	16.98 (-29%)
Aviation	IEA Net Zero 2050	Scope 1 + 2	grCO ₂ e/RPK	92.47	61.71 (-33%)
Steel	IEA Net Zero 2050	Scope 1 + 2	tCO ₂ e/tS	1.58	1.07 (-32%)
Thermal coal	Phase-out targets to eliminate exposure by 2030 to: <ul style="list-style-type: none"> Power generation customers with a revenue dependency on coal of over 10% coal mining 				

* In 2021 Annual report and Climate Finance report, we assessed the 2019 financed emissions of our power generation portfolio, including guarantees and other types of off-balance exposure to our customers that do not entail current funding. Because, according to the PCAF standard, such exposure should not be calculated if its attribution factor is "outstanding", we were over-attributed with our corporate customers' emissions. Therefore, the 2019 baseline emissions intensity has been updated from 0.23 to 0.21. The target and climate ambition remains for this sector.

** Use of sold products.

2019 financed emissions*:

Sector	Absolute emissions (mtCO ₂ e)	Physical emissions intensity	Financial emissions intensity (mtCO ₂ e/EUR bn lent)	Overall PCAF score**
Power generation	5.41	0.21 tCO ₂ e/MWh	0.51	2.67
Energy (Oil & Gas)	23.84	73.80 tCO ₂ e/TJ	3.1	3.4
Aviation	1.81	92.47 grCO ₂ e/RPK	1.17	3.3
Steel	2.62	1.58 tCO ₂ e/tS	1.74	3

* In the case of corporate business loans, Banco Santander calculates the Total Value of the Company (used to obtain the emission attribution factor) by adding the total equity and debt of the company (PCAF exception scenario), in order to avoid the high volatility in market capitalization.

**Obtaining emissions data from our customers is a challenge. As they disclose more non-financial information worldwide, the quality of our reporting on financed emissions will improve. The PCAF scores illustrate the data quality used to calculate the financed emissions (with 1 being the best).

Financed emissions information comes from a wide range of sources on emissions, physical intensity and production data. Trucost is the main source for fossil fuels emission and production. We used Asset Resolution and annual report filings as secondary sources to cover information gaps. As well as the Transition Pathway as a third option to measure physical emission intensity for certain sectors, including O&G and Steel.

¹¹ "Exposure to sectors with decarbonization targets" metric measured in terms of drawn amounts as of June 2021. "Concerning sectors exposure in the SCIB segment" measured in credit risk exposure, in line with the Climate materiality assessment, as of June 2021. As it was published in our June 2022 Climate Finance Report.

Energy

The world needs to ramp up renewable energy capacity and act now to decarbonize the economy. But for the global energy sector to decarbonize, all energy-intensive sectors and activities must be transformed. Our role is to support our customers' transition and, as one of the world's top lenders in renewable energy, we're increasing the volume of green finance to support this transformation.

Energy security is key to an orderly transition. While we increase renewable capacity, energy prices must be affordable and reliable. As the IEA states, oil and gas will continue to play a role in powering the world's economy during the transition.

Across the Group's footprint, economies are at different stages on the path to net zero. We aim to ensure the transition is fair for all communities.

During 2022 we have temporarily increased our overall exposure to the energy sector (oil and gas) due to the liquidity needs arising from the volatility of energy commodities prices; exchange rates; and the energy crisis. Our long-term climate ambition remains and a significant part of our lending exposure has a short-term maturity.



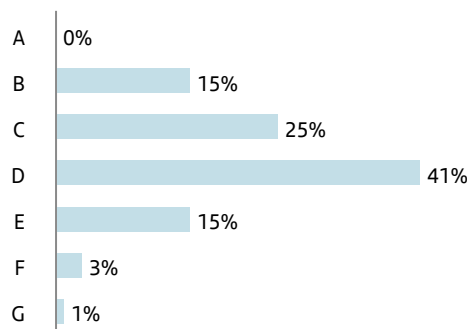
To know more about our position regarding the energy sector see our Climate Report 2021 - June 2022, in our corporate website.

Mortgages

We're working with our most material mortgage portfolios in the Group, which are in the UK and Spain and respectively make up over 60% and 17% of the Group's mortgage exposure.

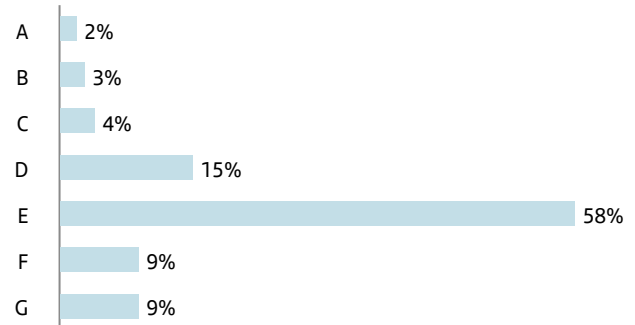
To obtain the best possible measurement of financed emissions from residential properties, we need specific data on each type of collateral. In some countries, where it is required by regulation, it is possible to have the energy performance certifications (EPCs). When data is not available for specific properties, there are models that allow for an EPC to be assigned to the remaining assets in our portfolio based on existing data. EPCs are not comparable across geographies as measurement scales are defined locally, depending on local policy, weather conditions and other variables.

On the UK EPC scale of A ("best performing") to G ("worst performing"), the estimate 2022 energy efficiency labels (EPCs) for our mortgage collateral in the UK as a percentage of the total number of mortgages are:



Source: Landmark

For Santander España, the estimate of the 2022 portfolio EPC distribution weighted by energy consumption, according to Spain's EPCs local scale, is:



Our mortgage portfolios in the UK and Spain are broadly consistent with each country's general EPC profile.

Based on EPC data models for the UK and Spain, we're assessing financed emissions and decarbonization strategies for mortgage portfolios to achieve net zero. We can already affirm that if banks are to achieve the net zero ambition stronger national regulation is needed to ensure countries meet their climate targets, such as the greening of the grid and the availability of EPCs.

Agriculture

In 2022, we contributed with other banks to the "Introductory Guide for Net Zero Target Setting for Farm-Based Agricultural Emissions", as part of the Banking for Impact on Climate in Agriculture initiative launched by WBCSD, UNEP FI and PCAF. Agriculture in Brazil is vital to the national economy and central to Santander's net zero plan. Our first challenge was collecting tangible data on farms to establish a baseline. Other challenges included finding realistic paths to decarbonization, getting producers willing to decarbonize, adopting better, less costly practices and finding additionality.



Customer engagement in SCIB

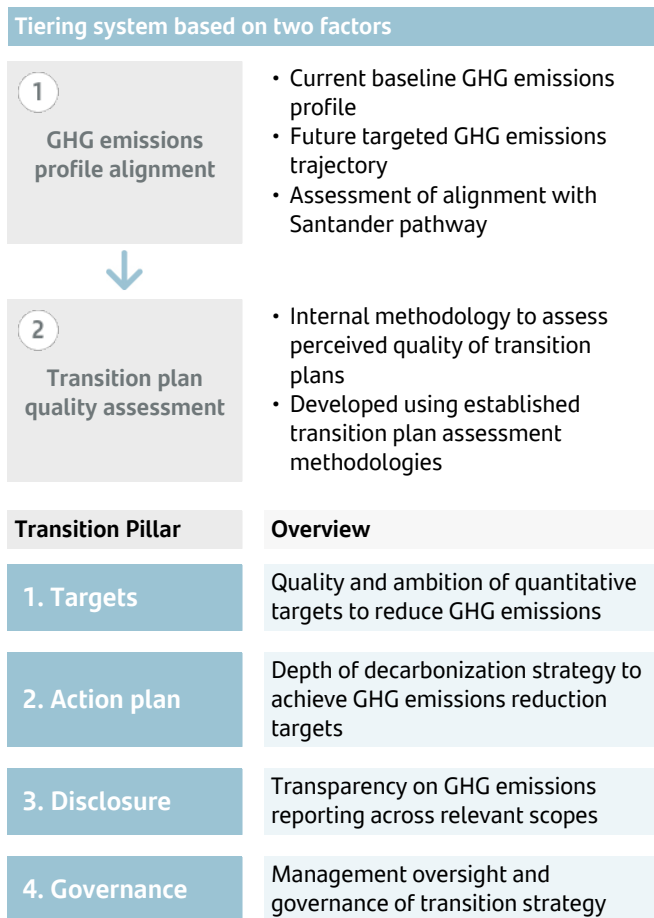
Our customer engagement approach aims to facilitate the achievement of our emissions targets while enabling us to develop a deep understanding of our customers' transition strategies and support their transition to low carbon business models.

For our power generation portfolio we have defined a customer engagement approach, which will form the basis for subsequent engagement plans for sectors where we set decarbonization targets. For our power generation portfolio we have established a two-step approach to categorize our customers according to both their emissions pathway and perceived quality of their transition plans.

Our first step assesses how our customers' emissions trajectory aligns with our current and future alignment targets for each sector. The second step to assess transition plan quality focuses on four pillars: Targets, Action Plan, Disclosure and Governance. Our methodology draws on established transition plan assessment frameworks¹². How strong we perceive each customer's transition plan to be across each pillar will influence how we ultimately tier them.

The output tiering system has four categories (Leader, Strong, Moderate and Weak) that will inform how we prioritize engagement topics and enrich dialogue with our customers, while contributing to meeting our own portfolio emissions targets.

Tiering will allow for tailored, meaningful transition dialogue and support to help our clients navigate the low carbon transition, with the expectation that initially lower-tiered customers will migrate to higher tiers and therefore alignment with net zero over time.



Tier Categories		Description
Tier 1	Leader	<ul style="list-style-type: none"> • Emissions profile fully aligned with Santander pathway • Strong transition plan
Tier 2	Strong	<ul style="list-style-type: none"> • Emissions profile fully aligned with Santander pathway but improvement needed in transition plan; or • Strong transition plan but emissions profile partially aligned with Santander pathway
Tier 3	Moderate	<ul style="list-style-type: none"> • Emissions profile partially aligned with Santander pathway, but improvement needed in transition plan; or • Emissions profile not aligned with Santander pathway, but strong transition plan
Tier 4	Weak	<ul style="list-style-type: none"> • Emissions profile not aligned with Santander pathway • Weak transition plan

¹² Such as TPI (Transition Pathway Initiative), CDP, ACT (Assessing Low Carbon Transition), Climate Action 100+, as well as other climate risk disclosure frameworks such as the TCFD

3.6.5 Supporting our customers in the transition

GRI 3-3, 306-1, 306-2, FS8, SASB FN-IB-410a.2, FN-IB-410a.3

As one of the world's largest banks, we have a responsibility and an opportunity to encourage more people and businesses to go green. Enhancing our sustainable finance and advisory proposition in all our divisions and regions is critical to meeting our climate and green transition.

Corporate and Investment Banking (SCIB)

In 2022, SCIB continued building its ESG platform and embedding ESG in the organization. We integrated ESG experts within business, risk, portfolio management and compliance areas.

We implemented the sustainable finance classification system (SFCS), as well as governance to check that our sustainable finance activity was consistent with our core integrity principles.

We trained 300 senior employees on ESG and client engagement.

A global leader in renewable energy finance

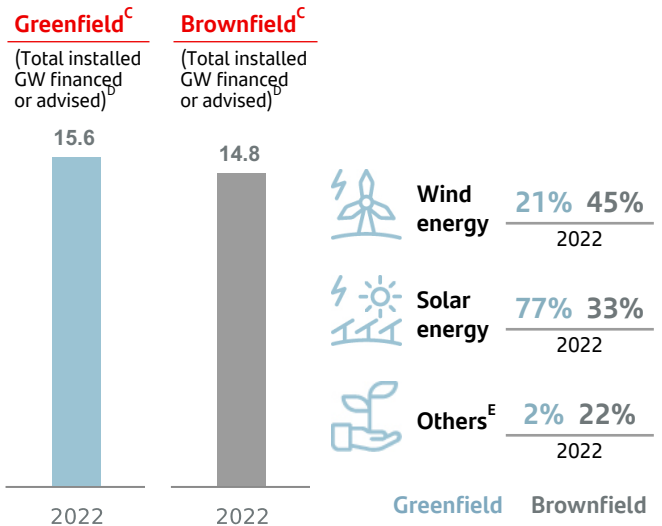
Santander has been a leader in renewable energy finance for more than past 10 years. We're among the top 2 banks in number of deals and deal value globally.

The greenfield renewable energy projects we financed or advised on in 2022 have a total installed capacity of 15.6 GW and prevent the emission of 152 million tons of CO₂.^A We also helped expand, enhance and sustain renewable energy brownfield projects with a total installed capacity of 14.8 GW.

GLOBAL RENEWABLE ENERGY PROJECT FINANCE VOLUME BY MLA - FY 2022^A

Rank	Mandated Arranger	Vol. (EURm)	Nº.	%share
1	Bank 1	5,868	81	4.87%
2	Banco Santander	5,161	78	4.38%
3	Bank 2	4,797	58	3.97%
4	Bank 3	3,171	56	2.63%
5	Bank 4	3,078	37	2.57%
6	Peer 1 ^B	2,947	41	2.49%
7	Bank 5	2,719	28	2.26%
8	Bank 6	2,712	45	2.24%
9	Bank 7	2,634	33	2.18%
10	Bank 8	2,457	34	2.06%

A. In the lead arranger category of Infralogic league tables for project finance
 B. Peers are BBVA, BNP Paribas, Citi, HSBC, ING, Itaú, Scotia Bank and UniCredit, which are similar in size to Santander.



The renewable energy projects we financed or advised on in 2022 could power 10.1 million households per year.^B

A. Emissions prevented during the projects' estimated useful lifespans, based on emissions factors figures from the International Energy Agency (updated in 2022 with data from 2020). The estimated allocation to the amount financed by Santander is 51.6 million tons of CO₂.
 B. Based on final electricity consumption data published by the International Energy Agency (updated in 2022 with data from 2020).
 C. Greenfield = new projects to be built. Brownfield = projects already existing and producing electricity at the financing date. Installed capacity based on Infralogic and complemented by internal data.
 D. Of the megawatts attributable to Banco Santander in 2022, 70% were from Greenfield finance and 30% were from Brownfield finance.
 E. Includes, among others, hydropower, battery energy storage, mix solar-biomass and energy from waste

Partnerships and inorganic initiatives that add unique ESG capabilities

- Partnership with InnoEnergy to accelerate the energy transition.
- Collaboration with Enel to support its clean energy transition.
- Acquisition of 80% of WayCarbon, a leading ESG consultancy firm from Brazil.
- Santander signed a partnership with Ecovadis as an alternative to structure Sustainability-linked Supply Chain Finance transactions for our SCIB Clients.
- Santander is an active member of the Core Working Group that has produced the new "Standards for Sustainable Trade and Trade Finance" published by the ICC (International Chamber of Commerce).

SCIB highlights

>Project Finance (PF)

Santander acted as mandated lead arranger, financial model coordinator and insurance bank for Eoliennes Flottantes du Golf de Lyon (EFL), a 30 MW pilot offshore floating wind project, supporting project sponsors OceanWinds and Caisse des Dépôts et Consignations.

Santander was coordinating lead arranger in the USD 2.3-billion construction financing of energy storage projects for Intersect Power, a clean energy company that offers innovative and scalable low-carbon solutions.

Santander recently acted as Exclusive Financial Advisor, as well as Bookrunner, Mandated Lead Arranger and Hedge Provider in the financing of Project Gauss, the 2.3 bn EUR refinancing of the c. 1,600 MW wind portfolio in Iberia of Finerge, a renewables platform owned by funds managed by Igneo Infrastructure. The first-of-a-kind innovative financial structure includes a variable amortization feature which modulates debt repayment as a function of the electricity produced – which is primarily linked to wind variation.

>Debt Capital Markets (DCM)

Santander has continued to be active in helping clients develop their sustainable financing capacity in 2022, executing 122 ESG-labelled bond issuances totalling over EUR 72bn equivalent, and assisting issuers to structure their ESG funding frameworks. Amongst these are a number of landmark transactions, in particular our bookrunner and ESG Structuring roles for the USD 1.5bn 12-year sustainability-linked bond from the Oriental Republic of Uruguay, who issued the first of this type with a coupon step-up and step-down structure seen in international USD, EUR or GBP markets; the USD 1.75bn dual-tranche sustainability bonds from Comisión Federal de Electricidad (CFE), the largest ESG transaction to date by a non-sovereign Latin American issuer, followed by their local currency four-tranche green and social bonds deal; and the inaugural ESG transaction out of the new 'Santander Group Green, Social & Sustainability Funding Global Framework', that aligns to best practices in the sustainable capital markets and facilitates issuance of a wider scope of instruments for all Santander entities globally: the USD 500m 4NC3 sustainability bond from Santander Holdings USA (SHUSA).

Retail and commercial banking

Building on the Green and Social Book offering of ESG-oriented products we launched in 2019, we continue to enhance dedicated purpose lending and sustainability-linked loans in our sustainable finance proposition.

Playing our part in supporting the global economy to be net zero by 2050, as a bank we must take advantage of our global presence and provide the right advice, services and products to help our customers go green, from individuals to bigger enterprises, covering the entire value chain.

The global Green Finance team we formed in April 2022 aims at embedding green finance and implementing complete value proposition for our Retail and Commercial banking customers, leveraging on the Group's best practices, transferring intra-Group synergies and scale. The major focus of the unit is the implementation of complete value Green Finance proposition

>Global Transaction Banking (GTB)

Santander continued to embed sustainability in its Global Transaction Banking products. In Export Finance, we issued Iberdrola's largest green loan worth EUR 1 billion (backed by a European Export Credit Agency). Iberdrola will use the proceeds to finance turbines for offshore and onshore wind farm projects in Germany, Greece, Poland, Spain and the UK.

Our innovative solution for supply chain finance for Sonae Portugal, based on Ecovadis's supplier assessment, won two awards in 2022 from the Supply Chain Finance (SCF) Community, including Best ESG Supply Chain Finance transaction of the Year.

We also structured a novel, sustainability-linked pre-delivery payment facility for Mexican airline Volaris's fleet renewal programme to develop its sustainability strategy with more fuel-efficient aircrafts.

>Mergers & Acquisitions (M&A)

In 2022 Santander was adviser to 15 M&A deals in the renewable energy sector. This cemented our leadership on the Iberian Peninsula and in Poland in offshore wind as an asset class.

We were sell side advisor to Hornsea One, the largest offshore M&A to date; and to Wikinger, the largest offshore M&A in the Baltic Sea.

We advised Global Infrastructure Partners on the acquisition of New Suez, a carved-out water and waste management company in France.

The ESG Sustainable Tech team advised BioTech Foods in the sale of a majority stake to Brazilian group JBS. This key deal was the first one in the cultured meat sector whereby an industrial group acquired a majority stake, positioning Santander as a key advisor in the alternative protein sector. BioTech Foods is southern Europe's only dedicated cultured meat producer. Its technology to generate meat protein from animal cells produces an ecological and sustainable product without intensive livestock farming. JBS's investment will enable BioTech Foods to build an industrial plant that will bring its products to the final consumer.

for our clients and Retail and Commercial banking customers, leveraging on the Group's best practices, transferring intra-Group synergies and scale. It keeps our green finance proposition under the same umbrella, making sure it stays consistent and thriving upon the Group's scale.

As well, we have set up a direct line of reporting of the Global Head of Green Finance to the Group CEO to promote green finance objectives.

Global Green Finance unit in Retail and Commercial Banking and its priorities:

1. Green finance value proposition

Growing green finance, with a group-wide strategy of end-to-end solutions and well-trained retail and commercial banking teams to meet customers' and client's needs.

→ Several strategic projects with focus on business, data and infrastructure have been launched and business enablers required to operationalize the commercial strategy have been articulated.

2. Infrastructure

Building common infrastructure that will support green finance across the Group, with the sustainable finance classification system (SFCS) enhanced value proposition, reporting capabilities and stronger controls against greenwashing risk.

→ The Group is developing a common layer to manage Green Finance necessities in a unique IT infrastructure ensuring efficiency, homogeneous criterion and data quality. Both business and regulatory reporting needs will be contemplated in the IT solution.

3. Data and control

Developing an exhaustive control policy as we strive to be a high-integrity provider. The Green Finance unit assists subsidiary-level panels with highly green finance transactions of diverse structure. We continuously work on data strategy development to measure and track performance.

→ As part of a transversal initiative, the Green finance team along with other corporate areas, has launched Green Dashboard and ESG Data Hub, allowing us to track the evolution of the business and the integrity of the data measured.

We will help our customers' — big and small — in their transition to a low-carbon economy, with solutions, capital and advice.

Green solutions for our individual, SME and corporate customers

	What do we finance?	What do our customers need?	Key geographies
<p>Green buildings</p>	Purchase, construction and renovation of energy-efficient buildings. Renewable power system installation and refurbishments that use 30% less energy.	Developer loans, private solar panel installation, smart meters, energy-efficient lighting, mortgages with an A or B energy rating.	
<p>Clean mobility</p>	Clean transport and infrastructure.	Leasing of electric and hybrid vehicles (<50 g CO ₂ per passenger-km) and financing of charging stations and bicycle lanes.	
<p>Renewables</p>	Renewable energy production and transportation. Energy storage.	Financing of solar panels, wind farms and battery and storage battery production.	
<p>Sustainable agro</p>	Sustainable and protected agriculture. Land and forest conservation. Sustainable farming.	Financing of greenhouses, reduced irrigation systems, efficient machinery, reforestation and reduced fertilizer use.	
<p>Circular economy</p>	Activities to adapt to, or mitigate, climate change, preserve biodiversity, boost the circular economy and waste & water management.	Financing of water, waste and soil treatment, greater energy efficiency, lower emissions and conservation.	

Other global initiatives

>Carbon footprint calculator

We are pledging to support our customers' transition to a low-carbon economy a step further. A new feature launched in May on our website and app enables retail customers in Spain to measure the carbon footprint of their direct debits and purchases with Santander cards and offers practical guidance on how to reduce it. This in-house developed service is also available in Santander Chile since 2019 and will go live as well in Poland, Portugal and the UK.

>Strategic partnerships to drive transition

Santander continues to actively collaborate with Multilateral Development Banks to finance the investment and liquidity needs of the Group's clients in Latin America and Europe.

12 out of 19 new financing agreements signed in 2022 will contribute to provide competitive financing for an amount up to €1.535 million to projects that target low-carbon economy and environmental sustainability, including among others, renewable energy generation, water and energy efficiency investments, green mortgages, or clean mobility.



3.6.6 Our approach to nature and biodiversity

GRI 3-3, 304-2

Biodiversity underpins the provision of food and raw materials, water, air quality and climate regulation, pollination, and genetic resources for food security, medicines and virus prevention.

Biodiversity is vulnerable to significant damage from climate change but key to mitigating it.

The financial sector influences the sustainable use, protection and restoration of nature. Santander must understand and assess how our financing impacts on nature and how our business depends on it.

We follow various initiatives and frameworks closely and consider them for future implementation and mapping tools

Santander and the Amazon in Brazil

Santander is committed to protecting the Amazon rainforest and promoting sustainable development, which is critical to tackling climate change and conserving biodiversity. While we need economic growth, it must be green.

For decades, deforestation has been destroying the Amazon in Brazil. Property speculation, lack of clear land titles, cattle ranching, agriculture, logging, mining, and large infrastructure projects have all played a role.

Given the growing concerns about climate change and biodiversity conservation, in addition to our global policy on environmental, social and climate change risk management and our commitment to the Equator Principles, are examples of how we take extra care when lending to customers in Brazil with operations in the Amazon:

- All loan requests by farmers and ranchers (not just those in the Amazon) are checked for embargoes issued by the government because of illegal deforestation, not only on the property financed but also on nearby properties. Since Q1 2022, we've been running daily checks for recent deforestation on farms and ranches we have lent to (throughout the entire loan term), even before the government has imposed fines. We also screen properties to make sure they don't encroach on officially recognized indigenous land.
- We review clients' practices in Brazil regularly. We conduct annual ESG reviews of more than 2,000 customers, including beef processors, soy traders and logging companies.
- In addition to the Plano Amazônia coalition, we are collaborating with Brazil's banking federation, Febraban, in setting best practices for the financing of the meat sector so that it does not contribute to deforestation.

and approaches to continue acting responsibly. We are also part of the Task force on Nature-related Financial Disclosures (TNFD) Forum and other working groups.

Aligned with the target 15 from recent Global Biodiversity Framework adopted in COP15 we're conducting a biodiversity and nature impact and dependencies assessment to identify interactions between business and nature forms, enabling us to understand how the drivers of biodiversity loss relate to our lending portfolio. This will help us pinpoint the regions and sectors we should focus on, and eventually perform more detailed analysis. It will also help us respond to the growing awareness that nature must form an integral part of corporate decision making.

IFACC Alliance

In December 2022, Santander became the first bank to join the Innovative Finance for the Amazon, Cerrado and Chaco (IFACC) initiative. IFACC is supported by The Nature Conservancy, the Tropical Forest Alliance, the World Economic Forum, and the United Nations Environment Programme. Launched in Glasgow in November 2021, it seeks to accelerate financing for sustainable production and bring together complementary capabilities to design and scale up such mechanisms as farm loans, farmland investment funds, corporate debt instruments and capital market offerings. IFACC also shares lessons learned among members, who have committed USD 3 billion in disbursements so far.

Amazon Journey Platform

The forest bioeconomy has great potential for changing the tide of deforestation, increasing the value of standing forests and creating jobs, sources of income and development. Nevertheless, very few businesses can realize that potential at speed and at scale. Alongside the Amazon Plan coalition, the Certi Foundation and the Vale Fund, Santander launched the Amazon Journey Platform in November 2022 to strengthen the innovation ecosystem associated with the forest bioeconomy. It poised to mobilize 20,000 skilled professionals from the region, with training on entrepreneurship, innovation and the bioeconomy. We expect at least 3,000 people will complete the training. We will select the 200 most promising professionals for financial, mentoring, and technical support to create start-ups. From that ecosystem, we will identify 100 to help strengthen their business models and products and reach market actors and investors. We will also create a micro-corporate venture structure to assist companies interested in investing in and scaling up the start-ups. Finally, we will enhance ten entities, including venture builders, accelerators, and incubators, so they will be able support a growing number of bioeconomy start-ups from the region. The Certi Foundation, the implementing partner, was named "Top Innovator" in the Amazon Bioeconomy Challenge 2022 at the World Economic Forum.



For more details on "Santander and the Brazilian Amazon", visit www.santander.com; and the Climate Finance Report 2021-June 2022



3.6.7 Reducing our environmental footprint

GRI 3-3, 301-1, 302-1, 302-2, 302-3, 302-4, 303-5, 305-1, 305-2, 305-3, 305-5, 306-1, 306-2, 306-3

Santander's group-wide strategy to lessen the environmental impact of our operations involves: reducing and offsetting CO₂e emissions; reducing and handling waste responsibly; and raising employees' and other stakeholders' awareness of environmental issues.

We've been measuring our environmental footprint (energy consumption, paper and water consumption, waste generation and emissions) since 2001. Since 2011, our energy efficiency and sustainability initiatives have helped to reduce significantly our impact on the environment, cutting down:

- electricity by 33%;
- CO₂e emissions by 71%; and
- paper by 80%.

Our 2022-2025 Energy efficiency and sustainability plan includes more than 100 measures that will enable us to reduce our electricity consumption by 2.6% and our absolute CO₂e emissions by 35.4%. Some of them are:

- installing 8 MW solar panels in our buildings in Spain to generate our own renewable energy for self-consumption;
- purchasing renewable electricity in every country where it's possible to certify its origin;
- using new technologies and implementing more practices to reduce paper consumption and waste;
- obtaining ISO14001, ISO 50001, LEED, BREEAM and WEALTH certifications for our buildings;

- installing 1,250 free EV charging stations in our buildings in various countries and shifting to hybrid and electric vehicles and making them more available to employees to reduce our emissions from business travel and commuting;
- and raising awareness among employees.

Our measures are consistent with Santander's public target to remain carbon neutral: sourcing all our electricity from renewable energy sources¹³ in addition to other measures to reduce emissions, which remains being our main goal, and remaining carbon neutral offsetting whatever emissions we're unable to reduce.

We follow a strict selection process that includes due diligence on compliance and consistency with our environmental policies. The offset projects we chose are certified under some of the industry's most well-known standards, like Gold Standard for the Global Goals (GS), Verified Carbon Standard (VCS) or Kyoto Protocol's Clean Development Mechanism (CDM). Country standards, such as MITECO in Spain, are also considered.

We're monitoring the voluntary carbon credit market closely to adapt our offset strategy to best practices.

Using energy from renewable sources

88% of the energy our buildings consume comes from renewable sources; in Germany, Mexico, Portugal, Spain and the UK, that figure is 100%. We continue to work on reaching 100% group-wide by 2025¹³.

Buying renewable energy reduced our emissions from electricity consumption by 83% and total emissions by 58% compared to pre-pandemic levels.

2022 Environmental footprint¹⁴

	Diff. 2021-2022 (%)	Comparative with pre-Covid: 2019-2022 (%) ¹⁵
1,887,857 m ³ water consumed from the supply system	4.4%	134,419 t CO ₂ e total emissions (market based) -58.1%
843 million kWh total electricity	88% renewable energy -5.2%	Scope 1 21,967 t CO ₂ e direct emissions
5,849 t total paper consumption	83% recycled or certified paper -20.4%	Scope 2 30,917 t CO ₂ e indirect emissions from electricity (market based)
4,124 t paper and card waste	-34.8%	Scope 3 81,535 t CO ₂ e indirect emissions from employee travel
3,431,272 GJ total internal energy consumption	-6.5%	

¹³ In countries where we can verify electricity from renewable sources at Banco Santander properties

¹⁴ A two-year environmental footprint table, showing employee consumption and emissions is available under [Our progress in figures](#) section in this chapter. Scope 3 - Category 15 Investments (Financed emissions) is also disclosed in this section.

¹⁵ Group's total emissions increased in 2022 by 18%, due to the employee travel emissions. In the last two years the Covid-19 pandemic caused these emissions to plummet. Comparing these emissions with 2019 annual report data, prior to this exceptional situation, employee travel emissions have been reduced by 33%, and total emissions have been reduced by 58%. A 2021-2022 comparative is available under the [Our progress in figures](#) section in this chapter.

**Implementation and certification of environmental management systems**

The Group aims to have ISO 14001¹⁶ certification for all the primary buildings it occupies. Over 30% of our employees already work in ISO 14001 or ISO 50001-certified buildings. Under our 2022-2025 Energy efficiency and sustainability plan, we aim to increase this percentage to 36%.

Some buildings in Brazil, Germany, Poland and Spain are LEED Gold or Platinum-certified, while the Santander Group City and Santander España's central services buildings have 'Zero waste' certification.

Single-use plastics

Since 2021, our offices and buildings in our core markets have been free of single-use plastics in fulfilment of our public target.

Climate awareness

Santander runs local and global employee awareness campaigns on the importance of reducing consumption and waste. Each subsidiary posts news and feature articles on the environment and the Group's ESG initiatives on its internal portal. In 2022, for the thirteenth consecutive year, we have observed Earth Hour, switching off the lights at the Group's most emblematic buildings.

Other Santander initiatives to mitigate climate change

Apart from those offsets we use to compensate our own carbon footprint, we're also running several other offsetting initiatives:

- At the COP 27 in Egypt, Santander announced the creation of Biomás, a new forest company with shareholders Vale, Marfrig, Suzano, Itaú and Rabobank. With the planting of 2 billion native trees, Biomás aims to protect and restore 4 million hectares in Brazil over the next 20 years and to reduce around 900 million tonnes of CO₂e from the atmosphere. It will generate high-quality carbon credits and employment in the regions most in need. The first stage of the project will be to prospect areas, scale up native tree nurseries, engage local communities, discuss the use of public concessions as project development sites, and implement pilot projects. Each shareholder is initially providing BRL 20 million in equity to set up operations.
- Santander España through Motor Verde initiative will finance three new Santander forests stretching over 300 hectares, offsetting 82,000 tons of CO₂e. This work will receive the highest standard certification of the Spanish Climate Change Office (OECC), the certifying body of Spain's Ministry for the Ecological Transition and Demographic Challenge.
- Santander UK is a founder member of the National Parks UK 'Net Zero With Nature' initiative to attract private financing for restoring peatland to prevent carbon emissions. The bank will be financing a pilot restoration project in the Cairngorms National Park in Scotland.

¹⁶ We have ISO 14001 certification on our buildings in Argentina, Brazil, Chile, Mexico, Spain and the UK.

3.7 Socially responsible investment

SASB FN-CB-240a.1, FN-CB-240a.3, FN-CB-240a.4,

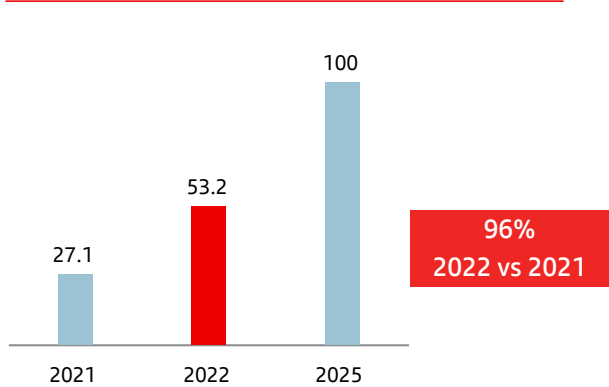
3.7.1 Sustainability in investments

GRI FS8, FS11

We redoubled efforts to reach our goal of EUR 100 billion of AUM in socially responsible investments (SRI) by 2025.

Our SRI AUM¹⁷ grew +96% YoY to EUR 53.2 billion¹⁸ at YE2022 on the back of our successful product strategy, which drew on the Sustainable Finance Disclosure Regulation (SFDR) and Green MiFID regulation in the European Union. We also launched innovative investment solutions in different asset classes; continued work on Net Zero Asset Managers (NZAMi) initiative and Climate Action 100+; and more than doubled our dedicated ESG teams.

WMI SRI AUM (€ bn)¹⁸



3.7.2 Santander Asset Management

GRI FS8, FS11

We widened our SRI product offering and services, enhanced our ESG strategy and methodologies, designed net zero plans, and strengthened our leadership in the ESG investment community. We transformed and launched products and bolstered our voting policies and reporting on stewardship. Also, we were leading sponsors of the Principles for Responsible Investment event in Barcelona in November, where over 2,500 asset owners, asset managers and sustainable data providers from all over the world gathered to hear some 150 speakers.



Innovating and transforming SRI products

We have EUR 37,5 billion in SRI AUM (+232% YoY) in 76 products and 85 mandates in seven countries. During the year, we raised our SFDR-compliant product offering (Article 8 and 9 funds) mostly through fund transformation and embedded ESG in our pension plans in Spain.

We launched the Prosperity Fund with the (RED) foundation, a global multisector equity fund with a social objective, investing in companies that create financial value while contribute to society's well-being. It will also donate money for healthcare projects for vulnerable communities in Latin America and adds to our solidarity funds, which have given over EUR 24 million since inception to more than 25 NGOs working in the social economy, employment training, health and financial education. In 2022, these funds made special donations to support Ukrainian refugees as part of Grupo Santander's cooperation with the Red Cross and UNHCR.

We also launched a venture capital climate tech fund with EIT Innoenergy, which invests in start ups accelerating the energy transition.

SAM's SRI products

Core SRI products in our geographies



San Sostenible RF 1-3
San Sostenible Bonos
3 Pension Funds

San Respons Solidario
Inveractivo Confianza
San Sostenible 1
San Sostenible 2
6 Pension Funds

San Sost. Acciones
San Equality Acciones
San Indice Euro ESG
4 Pension Funds
San Iberia renewable energy

85 Mandates



San Ethical Ações
Go Global Equity ESG



SAM RV Global ESG
SAM ESG



Acciones Global
Desarrollado



San Sustentável



San Sostenible RF 1-3
Go Global Equity ESG



Go Global Equity ESG

■ Fixed income ■ Balanced ■ Equity ■ Portfolios

¹⁷ Funds registered under article 8 and 9 (SFDR) in the EU, including third-party funds and SAM's Latin American funds that meet equivalent criteria.

¹⁸ AuM exclude SAM funds distributed by Private Banking to avoid double counting.

Team, methodology and policies

We've more than doubled the size of our global, fully dedicated ESG team. We're enhancing our ESG methodology (shared with our Private Banking and Insurance businesses) and tools to integrate ESG factors in our processes and optimize the impact of our investment products, covering +25,000 companies and 190 governments.

We strengthened our engagement and voting strategies. We promoted global bilateral actions to increase transparency through Climate Action 100+ as a lead investor and published our first stewardship report. We designed a plan to engage with companies that represent 70% of our portfolio emissions to deliver on our NZAMi commitment¹⁹.



For more details on our ESG approach, see www.santanderassetmanagement.com/sustainability



For more details see our stewardship activities report: www.santanderassetmanagement.com/content/view/8573/file/2021_Stewardship_Report_010926_vFin.pdf

3.7.3 Private Banking

GRI FS8, FS11

Our SAM and third-party funds SRI AUM amounted to EUR 24.9 billion by the end of 2022 (+42% YoY). We steered our global list of funds under advisory towards a mix of mostly article 8 and 9 funds (c.80% of the total). We also increased Art 8 and 9 alternative investment options on our platform.

We held sustainability conferences with clients at our Wealth Talks. In 2023, we will introduce client reports with key metrics of environmental and social outcomes and outputs from their portfolios in the first countries. By 2025, we aim to offer ESG reporting in portfolio management and advisory services in eight geographies.

In 2022 we were named Best Private Bank in ESG & Sustainable Investing by Euromoney in Latam and also at local level in Spain, Portugal, Poland, Mexico and Chile. Also Global finance named us Best Private Bank for Sustainable Investing in Latin America.



For more details, see www.santanderprivatebanking.com

3.7.4 Insurance

At the end of 2022, we offered protection for sustainable assets, activities and vulnerable individuals in 6 countries, based on the Group's sustainable finance classification system (SFCS)²⁰.

In 2023, we're working to extend that offer to all our countries. We are also collaborating with partners to develop products that adapt to sustainability trends, meet clients' needs and cover risks associated with:

- assets and activities that the Group classifies as sustainable;
- new and existing social challenges;
- clients' well-being; and
- insurance-based investment products that comply with SFDR.

Insurance products aligned with SFCS^c

Core insurance products in our geographies

	Personal accident insurance for Seniors ECO Auto Insurance Dependency Insurance Senior Home Insurance		Life Insurance for low income Health Insurance for self employed or low income
	Life Insurance for low income Personal accident insurance for low income		Life Insurance for low income women Life Insurance for micro-entrepreneurs
	Micro mobility Insurance		Life Insurance for low income




¹⁹ We are committed to halve emissions from 50% of our in scope AUM that have a net-zero methodology by 2030. This target could be scaled up based on increased data availability. More detailed information see www.santanderassetmanagement.com/sustainability

²⁰ C. For more details on our SFCS see section [5.5 Sustainable Finance Classification System \(SFCS\)](#) of this chapter

3.8 Financial inclusion and empowerment

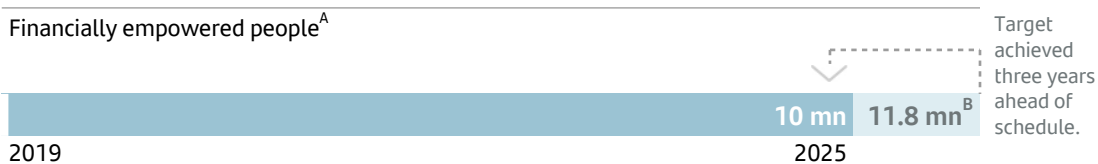
GRI 3-3, 203-1, 203-2, 413-1, FS7, FS13, FS14, FS16

Santander Finance for All is our initiative to support financial inclusion and empowerment. We financially empower people in three ways:

 <p>Access</p>	 <p>Finance</p>	 <p>Financial Education</p>
<p>We help people access and use basic financial services through simple payment platforms and cash-in/cash-out services in remote and small communities.</p>	<p>We provide tailored finance to individuals and SMEs with difficulty accessing credit or that are in financial distress.</p>	<p>We help people gain financial knowledge, making economic concepts more understandable and enabling them to make better financial decisions.</p>
<p>1.0 mn people financially empowered in 2022</p>	<p>1.8 mn people financially empowered in 2022</p>	<p>2.7 mn people financially empowered in 2022</p>

Our goal

Financially empowered people^A



Since 2019, we have financially empowered: 3.1 mn people through access initiatives; 3.6 mn people through finance initiatives; and 5.1 mn people through financial education initiatives.

A. Calculated with customer data about our products and services; with certified data from third parties that we work with on access and financial education initiatives; and with conservative estimates based on recognized conversion factors, according to the Group Responsible Banking area's internal methodology. This methodology considers international best practice, has been ratified by an independent third party, and includes the Group's common principles, definitions and standards to count the number of people that our initiatives, products and services have empowered financially.
 B. Cumulative since 2019.

We aim to address the financial inclusion challenges of the markets where we have a presence. In Latin America, we focus on giving people access to the financial system. In mature markets, we seek to ensure that no one needs to leave it.

In 2022 our efforts were recognized by:

- Euromoney, who named Santander "**Best Bank for Financial Inclusion**" for second year in a row.
- The Banker, who awarded Santander "**Bank of the Year in financial inclusion**" in 2022.



3.8.1 Access

GRI FS7, FS13, FS14

Promoting access to cash & transactions

We aim to ensure underserved communities can get cash anywhere, through our remote branches and agreements with private and state-run entities that widen our footprint.

Branches in underbanked and remote regions^A



Partnerships to reach underserved communities^B



Promoting digital access

We help people access the banking system so they can make payments; use basic, tailored financial services; take greater control of their finances; and make faster and more secure transactions.

Digital wallets and points of sales^C



Basic bank accounts^D



Financial support to special groups

We offer financial support to special groups so customers will not only have access to basic products, but will also know how to use them.

Support to our senior customers^E



We also have global initiatives such as GetNet to support merchants. It provides payment services improving the simplicity, speed, and safety.

3.8.2 Finance

GRI 203-1, 203-2, 413-1, FS7, FS13. SASB FN-CB-240a.1, FN-CB-240a.3, FN-CB-240a.4.

Microfinance

We aim to foster social mobility by helping low-income and underbanked entrepreneurs set up and grow their businesses.

Microfinance programmes



Supporting customers in financial distress

We have debt relief programmes that include payment deferrals and LOC extensions.

Supporting customers in financial distress^F



Financing low-income households' basic needs

We offer products and services that enable low-income households to access housing and meet other basic financial needs.

Affordable housing programmes^G



Credit support for low income/ people with difficulties accessing credit^H



A. In Spain, branches in sparsely populated regions to provide access to finance and fight social exclusion in communities with under 10k inhabitants. In Portugal, branches in low income, small or isolated regions such as Azores and Madeira. In Argentina we have financial inclusion branches and remote agents

B. Agreements with Correos Cash in Spain and partnerships with retailers such as Oxxo/ 7Eleven in Mexico

C. Digital wallets such as Superdigital. Only Superdigital customers with a reported income below the country's minimum wage are considered financially empowered. In Poland we include the Cashless Poland program to promote the usage of points of sales in locations where usage of digital means is low

D. In some countries, we have in place basic bank accounts that go beyond regulation aiming to serve the base of the pyramid. EG: Cuenta Life in Chile or in Spain the account with no fees for vulnerable customers

E. In several countries we have in place value propositions targeting the seniors. Eg: tailored products for retirees in Mexico, services such as "Here & Now" in Portugal to support elderly with low digital capabilities.

F. We have programs in place across many countries to give support to people with debt stress. In Portugal, we have the program Iris, to help customers manage impairments. In the UK, we help vulnerable customers get out of arrears with self-service tools and direct financially and lend them a hand.

G. Banco Santander participates in "Fondo Social de Viviendas", in Spain to rent to low-income individuals. In addition, Banco Santander has homes to rent at affordable rate. In the US, as part of its Inclusive Communities plan, Santander supports people through low interest mortgages and paid mortgage insurance for low-income homebuyers

H. We have initiatives to help collectives with difficulties in accessing credit, including: in Spain, loans to SMEs at their risk limit, in the US, we grant loans to small businesses operating in low- to moderate income communities, or in Argentina we give loans to entrepreneurs with low credit history.

Our micro-finance programmes in Latin America

Our microfinance programmes provide services to help unbanked and underbanked micro-entrepreneurs set up and grow their businesses.

The programmes include tailor-made micro-loans to finance working capital needs, as well as saving products, accounts, cards and micro-insurance. A large part of our lending goes to women. The programmes' Net Promoter Score of around 80 shows how highly regarded they are.

1.6 million

micro-entrepreneurs supported in 2022

EUR 950 million

total credit disbursed to micro-entrepreneurs in 2022 (EUR 517 million in outstanding credit at the end of 2022)

70.7%

of micro-entrepreneurs supported in 2022 are women



3.8.3 Promoting financial education

GRI FS7 y FS16

Financial education is fundamental to the financial inclusion and empowerment of society's most vulnerable. We aim to help people better understand finance, banking products and risks and make the right decisions for their financial health, while promoting market stability.

In 2022, we ran financial literacy programmes and initiatives across our markets. We apply our financial education guideline with:

- the Group's common action principles on financial education, which are consistent with OCDE principles.
- Criteria for identifying and classifying initiatives based on:
 - content, i.e., basic concepts, better use of banking products and services; better personal finance management; use of digital banking; responsible consumption and fraud prevention; entrepreneurship/advice for SMEs; sustainable finance; and behavioural economics; and
 - target audience, i.e., the general public; children (aged 13 years and under); adolescents and young adults (aged 14 to 20 years); university students; elderly people (aged 65 years and up); unbanked people; SMEs; and self-employed workers.
- The methodology for counting digital non-digital users whom we financially empower through financial education initiatives.

We use applications and digital channels to ensure greater access and impact. Our website provides a space with:

- articles on five topics, basic concepts, financial management, digital banking, behavioural economics and sustainable finance;
- news and highlights about Santander's financial education initiatives; and
- links to all the Group's initiatives by unit.

For more details on financial education, visit <https://www.santander.com/en/our-approach/inclusive-and-sustainable-growth/financial-education>



3.9 Support for higher education and other local initiatives

2022 progress

GRI 3-3, 203-1, 203-2, 413-1

More than **163** million euros
in total community investment in 2022²¹

Support for higher education, employability and entrepreneurship



100 million
euros invested

Other community support programmes



63 million
euros invested²¹

Santander remains firmly committed to building an inclusive, equitable and sustainable society. Santander Universities, Universia and Fundación Universia represent Santander's unique global initiative to support education, entrepreneurship and employability. For over 25 years, **Santander has invested over 2.2 billion euros** in partnerships with nearly 1,000 universities in 11 countries. Through Santander Universities alone, the bank has awarded **more than 1 million scholarships and grants** to students, professionals, entrepreneurs and SMEs.

We also support several local initiatives and programmes that improve people's well-being within our communities. We focus on childhood education, social welfare, and the arts and science.

Our response to the war in Ukraine

Since the war in Ukraine began, Santander has been promoting initiatives to support Ukrainian refugees.

- **On the ground.** Santander Polska has been supporting refugee centres with technical assistance and transport. We worked with the UN Refugee Agency (UNHCR) to develop a technological solution to enable the fast and safe distribution of financial aid.
- **Refugees corridor.** We relocated 360 refugees from Warsaw to Madrid and Lisbon.
- **Hosting.** With the support of CEAR (Spanish Commission for Refugees), Fundación Aladina and the Red Cross, the El Solaruco hotel in the Santander Group City hosted 188

Ukrainian refugees (90 minors) from March to June. Among them, 30 children with cancer or other illnesses were able to resume treatment at hospitals in Madrid.

- **Integration.** We promoted social integration through Spanish lessons, a new employability hub for refugees (6,400 job vacancies) and other initiatives.
- **Banking services.** We removed fees, set up telephone helplines and launched a current account for refugees.

We helped raise EUR 20 million in donations for NGOs^{22 23}

- EUR 17.6 million from customers
- EUR 2.9 million from Santander
- Over EUR 550,000 from employees

Euromoney has assessed our efforts and has named Santander *Central & Eastern Europe's Best Bank for Corporate Responsibility* in 2022



²¹ Includes social contributions of foundations. In addition, Banco Santander made two extraordinary donations in 2022 to Fundación Banco Santander of 36,700,000 Banco Santander shares as financial support for it to bear (at least partially) the costs of fulfilling its founding purposes with the return on the shares. For more details, see note '34. Other equity instruments and own shares' of the Consolidated financial statements.

²² EUR 1.8 additional millions in management costs (e.g. refugee accommodation, corridor, scholarships, cost of app development. ...).

²³ The funds were channelled mainly through the UNHCR and the Red Cross



3.9.1 Support for higher education, employability and entrepreneurship

GRI 3-3, 203-1, 203-2, 413-1

100

million euros

1,306

partner universities and institutions in 25 countries²⁴

266,027

beneficiaries of scholarships, internships and entrepreneurship programmes²⁵

Santander Universities, Universia and Fundación Universia represent Santander's unique global initiative to support education, entrepreneurship and employability with the aim of helping people achieve brighter career prospects.

Education & Employability



We provide unparalleled support for adult learning through a wide variety of scholarships for students and free upskilling and reskilling programmes for professionals.

Entrepreneurship



We support emerging ventures through specialized training and connections to the resources they need to grow and prosper.

Santander Universities

Santander Scholarships

In 2022, Santander Scholarships continued to offer a comprehensive selection of learning programmes to meet the employability needs of our communities. Includes scholarships to access higher education, mobility and academic research grants, upskilling and reskilling trainings for professionals, among many others programmes. With the aim to further meet the varying needs of our communities, **Learning Room** was launched to give our beneficiaries free access to learning content at scale.

Santander Scholarships focuses on eight areas of high relevance for employability:

- Santander Tech.
- Santander Skills.
- Santander Women.
- Santander Studies.
- Santander Language.
- Santander Internship.
- Santander Research.
- Santander Sustainability.

Below is a selection of some of the top programmes offered by Santander Scholarships in 2022. The 2nd edition of **Santander Scholarships Languages | Online English Courses**, a global programme to award 5,000 scholarships to study English and

improve employability, and **Santander Scholarships Languages | UK English Summer Experience** to allow 100 beneficiaries to study English in the UK. Both programmes launched in collaboration with British Council.

Santander Scholarships Sustainability | Skills for the Green Transition, a programme launched jointly with Cambridge Judge Business School, aimed at providing 1,000 beneficiaries with the knowledge and tools to grow and reorient their careers towards the field of Sustainability.

The 12th edition of **Santander Scholarships Women | SW50 Leadership - LSE**, a programme developed, in collaboration with London School of Economics, to provide high performance training and networking opportunities for women in senior management positions. Additionally, in 2022 we held the first Santander SW50 Summit in London, bringing together more than 200 women and SW50 alumni from all over the world.

For more details visit www.becas-santander.com

²⁴ This figure includes universities that have an agreement with Santander Universities, Universia and Fundación Universia. Taking Santander Universities alone, the figure is 835 universities and academic institutions in 11 countries.

²⁵ Seeking to maximise the reach of the programmes, in 2022 the number of beneficiaries has increased, especially in programmes aimed at improving employability, with the greatest increase in Brazil and Mexico.



Santander X

In 2022, Santander X continued to grow to support entrepreneurship in all its phases, from pre-incubation to scale-ups, by providing entrepreneurs with specialized training and by connecting them with the resources their ideas and companies need to scale.

We launched new editions of 'Santander X Explorer', 'Santander X Prepare to Launch' in collaboration with Babson College, and 8 local and global awards to find, support and help accelerate the best pre-incubation and early stage companies.

In partnership with Oxentia Foundation, we launched three global challenges for startups and scaleups to support the companies with the most innovative and scalable solutions to address problems relevant to society.

→ **Santander X Global Challenge | Blockchain and Beyond** seeks to find companies with the most innovative blockchain solutions.

→ **Santander X Global Challenge | Countdown to Zero**, in collaboration with Formula 1 and Ferrari, to support companies with the best solutions to combat climate change.

→ **Santander X Global Challenge | Food for the future** to seek projects that address the global food crisis.

Additionally, in 2022 we launched Santander X 100, a prime community to support the most promising startups and scaleups of Santander X, promoting the network among its members and connecting them with capital, clients, talent and other valuable resources for them to keep prospering.

For more details, visit www.santanderx.com.

Other programmes to support the employability of talented young people and the inclusion of people with disabilities

Universia

In 2022, we maintains its goal of improving the employability of junior talent, connecting them with professional opportunities and networking events with companies, through guidance to enhance their employability and connection with professional opportunities.

Through our employment platform, we created networking opportunities with events such as Metaworking, Top Talent and Novo Nordisk's ESG Challenge. Those events brought together bright minds and fresh ideas from young professionals along with HR leaders from top companies in the world.

For more details, visit www.universia.net

—
827 partner
universities
in 22 countries

Fundación Universia

In 2022, we consolidate our position as a worldwide reference entity in the field of diversity, equity and inclusion, with active participation in international forums of the United Nations, the International Labour Organization and UNESCO.

With the guarantee of the European Investment Found, Fundación Universia promotes Plan Circular, a socially responsible income-share agreement program and the support of Santander Universities, with the aim of providing access to digital specialization training with high employability ratios.

We continued working with universities through **MetaRed TiC** (more than 900 universities), the largest network of university CIOs in Ibero-America; **MetaRed X** (more than 480 universities), which promotes the growth of entrepreneurship, and **MetaRed ESG**, to accelerate the adoption of 2030 Agenda.

For more details, visit www.fundacionuniversia.net

—
6,352 people
benefiting from Fundación
Universia's support

→ **431** scholarships for university
students with disabilities

→ **111** people with disabilities
hired in companies

—
145 people
supported by Plan Circular



3.9.2 Other community support programmes

GRI 3-3, 203-1, 203-2, 413-1



63

million euros in social investment²⁶



2.3

million people helped²⁷

We aim to improve people's access to education, culture and support well-being in three ways:

Childhood education



Helping children and young people to attain a well-rounded, quality education.

Social welfare



Helping vulnerable people and those at the risk of social exclusion.

The arts and sciences



Helping people access cultural events and programmes.

We channel our investment through partnerships with NGOs and humanitarian organizations. Some partnerships are with the bank's foundations in Argentina, Spain, the US, Portugal, Poland and the UK.

In Spain, **Fundación Banco Santander** works to build a fair, inclusive and sustainable society by financing and developing various cultural, educational, social and environmental projects. In 2022, Santander made two donations to Fundación Banco Santander for a total of 36,700,000 Banco Santander shares²⁸. Those donations are intended as financial support for the Foundation, so that the return on the shares allows it to bear (at least partially) the costs of fulfilling its founding purposes. These include the management of the Bank's art collection and the financing of various literary, educational, social, cultural and environmental productions and activities, in which the new reconfiguration of the Bank's headquarters on Paseo de Pereda in Santander will play an important role, as well as relations

with Spanish universities. For more details see www.fundacionbancosantander.com/en/home

The Bank plans to continue contributing to the Foundation within the agreements adopted by the General Meeting of Shareholders and the Board of Directors in order to support the important work of the Foundation.

We also encourage employees and customers to get involved in our initiatives and programmes. Volunteering is a core element of our corporate culture and community investment strategy. For more details, see the section on volunteering under section [3.3 'A talented and motivated team'](#) in this chapter.

Links and descriptions of our main initiatives are available on our corporate website and in our local responsible banking reports (also available at www.santander.com).

²⁶ Includes social contributions of foundations.

²⁷ Calculated with partners' certified data or with conservative estimates based on recognized conversion factors, according to the Group Responsible Banking area's internal methodology. This methodology considers international best practice and has been ratified by an independent third party.

²⁸ For more details, see note '34. Other equity instruments and own shares' of the Consolidated financial statements



4. Our progress in figures

GRI 2-4

4.1 Employees	78	4.2 Customers	86
Table 1. Employees by region and gender	78	Table 25. Group customers	86
Table 2. Functional distribution by gender	78	Table 26. Dialogue by channel	86
Table 3. Workforce by age bracket	78	Table 27. Group NPS	87
Table 4. Type of employment contract	79	Table 28. Group NPS by channel	87
Table 5. Yearly average of contracts by gender	79	Table 29. Customers satisfaction	87
Table 6. Yearly average of contracts by age bracket	80	Table 30. Total complaints	88
Table 7. Yearly average of contracts by role	80		
Table 8. Employees working in their home countries	80	4.3 Tax contribution	88
Table 9. Employees with disability by region	80	Table 31. Total taxes paid	89
Table 10. Headcount covered by collective agreement	81		
Table 11. New hires by age bracket	81	4.4 Green transition	89
Table 12. New hires by gender	81	Table 32. Green finance	89
Table 13. Dismissals	82	Table 33. Financing of renewables energies	89
Table 14. External turnover rate by gender	82	Table 34. Environmental footprint	90
Table 15. External turnover rate by age bracket	82		
Table 16. Remuneration by role, gender and region	83	4.5 Equator principles	91
Table 17. Average remuneration of senior management	83	Table 35. Equator principles	91
Table 18. Ratio of the bank's minimum annual salary to the legal minimum annual salary by country and gender	84		
Table 19. Training	84	4.6 Financial inclusion	91
Table 20. Hours of training by category	85	Table 36. Financially empowered people	91
Table 21. Hours of training by gender	85	Table 37. Microfinance	91
Table 22. Absenteeism by gender and region	85		
Table 23. Accident rate	85	4.7 Community investment	92
Table 24. Occupational health and safety	85	Table 38. Community investment	92
		Table 39. Outputs and outcomes	92

The information on the number of employees and branches for the year ended 31 December 2021 has been restated for comparative purposes in accordance with the Group's homogenisation criteria.



4.1 Employees

GRI 2-7, 2-30, 202-1, 202-2, 401-1, 403-9, 403-10, 404-1, 405-1, 405-2
SASB FN-AC-330a.1, FN-IB-330a.1, FN0102-06

1. EMPLOYEES BY REGION AND GENDER^A

Region	No employees		% men		% women		% graduates	
	2022	2021	2022	2021	2022	2021	2022	2021
Spain	27,078	26,249	51	50	49	50	70	67
Brazil	54,904	52,041	44	43	56	57	60	62
Chile	9,345	9,950	44	45	56	55	70	42
Poland	10,261	10,050	32	32	68	68	75	76
Argentina	8,073	8,525	52	52	48	48	31	39
Mexico	26,845	25,957	46	46	54	54	58	38
Portugal	4,717	4,818	53	53	47	47	65	63
UK	19,566	19,153	43	43	57	57	14	7
USA	13,677	15,024	42	42	58	58	20	12
SCF	14,500	14,270	49	47	51	53	30	27
Others ^B	17,496	13,140	57	57	43	43	59	47
Total	206,462	199,177	46	46	54	54	52	45

A. At year end. Employee data is broken down according to the criteria of legal entities and cannot be compared to the figures in the 'Economic and financial review' chapter, which follow management criteria.

B. The increase in the number of employees is due to increased hiring in geographies such as Peru and Colombia and in companies such as PagoNxt.

2.1 FUNCTIONAL DISTRIBUTION BY GENDER 2022^A

	Senior managers ^B			Other managers			Other employees								
	Men	Women	Total	Men	Women	Total	Men	Women	Total						
Europe	1,093	69.6%	478	30.4%	1,571	6,779	63.5%	3,893	36.5%	10,672	33,041	44.7%	40,919	55.3%	73,960
North America	221	77.0%	66	23.0%	287	1,334	68.2%	621	31.8%	1,955	18,300	44.3%	23,055	55.7%	41,355
South America	320	70.5%	134	29.5%	454	3,147	60.0%	2,096	40.0%	5,243	31,108	43.8%	39,857	56.2%	70,965
Group total	1,634	70.7%	678	29.3%	2,312	11,260	63.0%	6,610	37.0%	17,870	82,449	44.3%	103,831	55.7%	186,280

A. At year end.

B. Includes Group Sr. Executive VP, Executive VP and Vice President.

2.2 FUNCTIONAL DISTRIBUTION BY GENDER 2021^A

	Senior managers ^B			Other managers			Other employees								
	Men	Women	Total	Men	Women	Total	Men	Women	Total						
Europe	1,039	72.7%	390	27.3%	1,429	6,865	63.6%	3,926	36.4%	10,791	30,702	44.0%	39,112	56.0%	69,814
North America	223	78.8%	60	21.2%	283	1,181	67.0%	583	33.0%	1,764	18,299	44.1%	23,226	55.9%	41,525
South America	318	73.4%	115	26.6%	433	2,955	60.4%	1,934	39.6%	4,889	29,137	42.7%	39,112	57.3%	68,249
Group total	1,580	73.7%	565	26.3%	2,145	11,001	63.1%	6,443	36.9%	17,444	78,138	43.5%	101,450	56.5%	179,588

A. At year end.

B. The higher number of women senior managers is due to the progress made on the public Responsible Banking commitment regarding women in senior positions, which aims to have women in 30% of senior management roles by 2025.

3.1. WORKFORCE BY AGE BRACKET 2022^A

Number and % of total

	aged <= 25		aged 26 - 35		aged 36 - 45		aged 46 - 50		age over 50	
Europe	4,875	5.66%	19,393	22.49%	29,500	34.22%	13,775	15.98%	18,660	21.65%
North America	5,114	11.73%	17,634	40.45%	11,430	26.22%	3,448	7.91%	5,971	13.70%
South America	12,306	16.05%	29,663	38.69%	23,034	30.05%	5,863	7.65%	5,796	7.56%
Group total	22,295	10.80%	66,690	32.30%	63,964	30.98%	23,086	11.18%	30,427	14.74%

A. At year end.

3.2. WORKFORCE BY AGE BRACKET 2021^{AB}

Number and % of total

	aged <= 25		aged 26 - 35		aged 36 - 45		aged 46 - 50		age over 50	
Europe	3,764	4.59%	17,766	21.66%	29,730	36.24%	13,316	16.23%	17,458	21.28%
North America	4,996	12.21%	22,140	40.89%	9,095	25.11%	2,739	8.04%	4,602	13.74%
South America	10,867	14.94%	29,381	39.56%	22,272	30.42%	5,591	7.63%	5,460	7.45%
Group total	19,627	9.85%	69,287	34.79%	61,097	30.67%	21,646	10.87%	27,520	13.82%

A. At year end.

4.1. TYPE OF EMPLOYMENT CONTRACT IN 2022^A

	Permanent/Full-time					Permanent/Part-time				
	Men		Women		Total	Men		Women		Total
Europe	38,361	50.7%	37,371	49.3%	75,732	783	12.8%	5,332	87.2%	6,115
North America	19,408	45.7%	23,054	54.3%	42,462	104	23.2%	345	76.8%	449
South America	33,232	46.4%	38,409	53.6%	71,641	1,074	23.5%	3,499	76.5%	4,573
Group total	91,001	47.9%	98,834	52.1%	189,835	1,961	17.6%	9,176	82.4%	11,137

	Temporary/Full-time			Temporary/Part-time						
	Men	Women	Total	Men	Women	Total				
Europe	1,608	40.4%	2,372	59.6%	3,980	161	42.8%	215	57.2%	376
United Kingdom	339	49.8%	342	50.2%	681	3	60%	2	40%	5
South America	245	61.7%	152	38.3%	397	24	47%	27	53%	51
Group total	2,192	43.3%	2,866	56.7%	5,058	188	43.5%	244	56.5%	432

A. At year end.

4.2. TYPE OF EMPLOYMENT CONTRACT IN 2021^A

	Permanent/Full-time			Permanent/Part-time						
	Men	Women	Total	Men	Women	Total				
Europe	36,233	50.5%	35,458	49.5%	71,691	826	12.6%	5,706	87.4%	6,532
North America	19,222	45.5%	23,031	54.5%	42,253	119	21.0%	448	79.0%	567
South America	31,510	45.1%	38,398	54.9%	69,908	853	23.8%	2,725	76.2%	3,578
Group total	86,965	47.3%	96,887	52.7%	183,852	1,798	16.8%	8,879	83.2%	10,677

	Temporary/Full-time			Temporary/Part-time						
	Men	Women	Total	Men	Women	Total				
Europe	1,398	42.0%	1,933	58.0%	3,331	149	31.0%	331	69.0%	480
United Kingdom	362	48.1%	390	51.9%	752	0	0.0%	0	0.0%	0
South America	47	55.3%	38	44.7%	85	0	0.0%	0	0.0%	0
Group total	1,807	43.4%	2,361	56.6%	4,168	149	31.0%	331	69.0%	480

A. At year end.

5. YEARLY AVERAGE OF CONTRACTS BY GENDER

	2022			2021		
	Men	Women	Total	Men	Women	Total
Employees with permanent/full-time contract	88,260	97,216	185,476	86,001	93,699	179,700
Employees with permanent/part-time contracts	1,924	9,199	11,123	1,803	9,645	11,448
Employees with temporary/full-time contracts	1,921	2,545	4,466	1,175	1,803	2,978
Employees with temporary/part-time contracts	176	275	451	167	296	463
Group total	92,281	109,235	201,516	89,146	105,443	194,589

**6.1. YEARLY AVERAGE OF CONTRACTS BY AGE BRACKET IN 2022**

	aged <= 25	aged 26-35	aged 36-45	aged 46-50	aged over 50	Total
Employees with permanent/full-time contract	16,667	59,627	60,092	21,592	27,498	185,476
Employees with permanent/part-time contracts	3,169	2,554	2,649	904	1,847	11,123
Employees with temporary/full-time contracts	1,153	1,966	893	208	246	4,466
Employees with temporary/part-time contracts	150	144	83	16	58	451
Group total	21,139	64,291	63,717	22,720	29,649	201,516

6.2. YEARLY AVERAGE OF CONTRACTS BY AGE BRACKET IN 2021

	aged <= 25	aged 26-35	aged 36-45	aged 46-50	aged over 50	Total
Employees with permanent/full-time contract	10,887	57,223	61,327	22,026	28,237	179,700
Employees with permanent/part-time contracts	2,682	2,968	2,774	938	2,086	11,448
Employees with temporary/full-time contracts	812	1,319	549	139	159	2,978
Employees with temporary/part-time contracts	152	162	83	13	53	463
Group total	14,533	61,672	64,733	23,116	30,535	194,589

7. YEARLY AVERAGE OF CONTRACTS BY ROLE

	2022				2021			
	Senior managers	Other managers	Other employees	Total	Senior managers	Other managers	Other employees	Total
Employees with permanent/full-time contract	2,194	16,304	166,978	185,476	2,150	17,453	160,097	179,700
Employees with permanent/part-time contracts	7	163	10,953	11,123	5	168	11,275	11,448
Employees with temporary/full-time contracts	20	104	4,342	4,466	16	83	2,879	2,978
Employees with temporary/part-time contracts	0	17	434	451	1	13	449	463
Group total	2,221	16,588	182,707	201,516	2,172	17,717	174,700	194,589

8. EMPLOYEES WORKING IN THEIR HOME COUNTRY^{A,B}

%	Managers		Other employees		Total	
	2022	2021	2022	2021	2022	2021
Europe	88.22	87.26	94.33	95.87	94.22	95.72
North America	91.29	91.52	99.69	99.74	99.63	99.69
South America	91.85	91.46	98.23	98.22	98.19	98.18
Group total	89.32	88.35	96.92	97.59	96.84	97.50

A. At year end.

B. Figures from US is not included due to confidentiality.

9.1 EMPLOYEES WITH DISABILITIES BY REGION^{A,B,C}

%	2022	2021
Europe	1.98	1.70
North America	0.67	0.24
South America	2.80	3.07
Group total	1.99	1.86

9.2. EMPLOYEES WITH DISABILITIES^{A,B,C}

Number of employees	2022	2021
Spain	564	408
Rest of the Group	3,550	3,295
Group total	4,114	3,703

A. At year end.

B. The increase in North America is mainly due to Mexico reporting for the first time and the US has increased hiring and identification of employees with disabilities in order to meet the bank's commitments.

C. In Argentina and Mexico the data collection process is not yet robust enough and does not reach the total workforce. Excluding these geographies, the Group's total percentage is 2.40%.

10. HEADCOUNT COVERED BY COLLECTIVE AGREEMENT^A

Countries	2022		2021	
	%	Employees	%	Employees
Spain	99.93	27,060	99.92	26,228
Brazil	97.05	53,284	98.66	51,345
Chile	100.00	9,345	100.00	9,950
Poland	0.00	0	0.00	0
Argentina	87.70	7,080	73.78	6,290
Mexico	30.04	8,065	30.94	8,031
Portugal	99.39	4,688	99.42	4,790
UK	100.00	19,566	100.00	19,153
US	0.00	0	0.00	0
SCF	53.82	7,804	51.73	7,382
Other business units	54.14	9,473	59.60	7,832
Total Group	70.89	146,365	70.79	141,001

A. At year end.

11.1. NEW HIRES BY AGE BRACKET IN 2022

% of total	2022				
	aged <= 25	aged 26-35	aged 36-45	aged over 45	aged > 50
Europe	31.23	39.98	19.94	4.84	4.02
North America	34.00	40.65	16.22	4.04	5.09
South America	41.69	38.02	15.59	2.54	2.15
Group total	37.01	39.20	16.88	3.52	3.39

11.2. NEW HIRES BY AGE BRACKET IN 2021^A

% of total	2021				
	aged <= 25	aged 26-35	aged 36-45	aged over 45	aged > 50
Europe	27.57	40.68	21.92	5.84	3.98
North America	30.77	41.13	17.65	4.78	5.67
South America	32.33	46.57	16.68	2.61	1.80
Group total	30.84	43.24	18.00	4.09	3.82

A. UK categorises all new employee registrations as new hires.

12. NEW HIRES BY GENDER^{A,B,C}

	2022			2021		
	Men	Women	Total	Men	Women	Total
Europe	15.10%	13.55%	14.28%	8.00%	7.12%	7.53%
North America	30.00%	26.42%	28.05%	36.95%	32.88%	34.72%
South America	28.97%	31.02%	30.10%	22.63%	17.04%	19.50%
Group total	23.23%	22.92%	23.06%	19.51%	16.55%	17.90%

A. The increase in the number of new hires in Europe and South America is due to the bank's strong performance and the return to normal activity in 2022, after two years marked by the impact of the pandemic on recruitment. In addition, the Contact Centre in Brazil, characterised by high turnover rates, reported for the first time its staff turnover data.

B. The decrease in the percentage of hiring in North America was due to the fact that in 2021 around 5,000 positions of the Bank's external workforce in Santander Mexico, mainly in operational positions, were internalised as a result of a labour reform in the country. This did not occur in 2022.

C. UK categorises all new hires as new hires.

13. DISMISSALS^{A,C}

by gender	2022						2021					
	Men	% ^B	Women	% ^B	Total	% ^B	Men	% ^B	Women	% ^B	Total	% ^B
Senior managers	58	3.55%	17	2.51%	75	3.24%	77	4.87%	18	3.19%	95	4.43%
Other managers	378	3.36%	216	3.27%	594	3.32%	719	6.54%	341	5.29%	1,060	6.08%
Other employees	5,771	7.00%	7,837	7.55%	13,608	7.31%	7,348	9.50%	9,237	9.23%	16,585	9.34%
Total Group	6,207	6.51%	8,070	7.26%	14,277	6.92%	8,144	9.05%	9,596	8.96%	17,740	9.00%

by age	2022			2021			
	Men	Women	Total	Men	Women	Total	
aged <=25		1,002	1,546	2,548	737	1,149	1,886
aged 26-35		2,025	2,719	4,744	1,961	2,535	4,496
aged 36-45		1,539	2,229	3,768	1,828	2,770	4,598
aged 46-50		558	594	1,152	743	863	1,606
aged >50		1,083	982	2,065	2,875	2,279	5,154
Total Group		6,207	8,070	14,277	8,144	9,596	17,740

A. Dismissal: termination of permanent employment determined unilaterally by the company. It includes voluntary resignations in restructuring processes.

B. Ratio of dismissals to the total number of employees in each group.

C. The reduction in dismissal is due to the restructuring process the Bank undertook in 2021 in many of its geographies, a process that has not been repeated in 2022..

14. EXTERNAL TURNOVER RATE BY GENDER^{A,B}

% of total	2022			2021		
	Men	Women	Total	Men	Women	Total
Europe	10.36	10.30	10.33	17.62	17.32	17.46
North America	31.28	28.35	29.68	25.49	24.54	24.97
South America	24.68	30.89	28.09	21.03	18.94	19.86
Group total	19.90	21.93	20.99	20.53	19.51	19.97

A. Excludes temporary leaves of absence and transfers to other Group companies.

B. The decrease in turnover in Europe is due to the restructuring process the bank undertook in 2021 in several of its geographies, mainly in Europe, a process that has not been carried out in 2022.

C. The increase in North and South America is due to the lower incidence of the 2021 restructuring processes in these geographies and the return to normal activity after two years of pandemic incidence..In addition, contact centre in Brazil, characterised by high turnover rates, reported for the first time its employee turnover data.

15.1 EXTERNAL TURNOVER RATE BY AGE BRACKET^A 2022

% of total	aged <= 25	aged 26-35	aged 36-45	aged 46-50	aged over 50	Total
	Europe	31.10	16.62	6.96	4.27	
North America	60.66	30.29	21.09	20.04	23.38	29.68
South America	51.78	27.80	20.06	16.65	22.76	28.09
Group total	49.29	25.21	14.20	9.77	14.00	20.99

A. Excludes temporary leaves of absence and transfers to other Group companies.

15.2. EXTERNAL TURNOVER RATE BY AGE BRACKET^{A,B,C} 2021

% of total	aged <= 25	aged 26-35	aged 36-45	aged 46-50	aged over 50	Total
	Europe	38.63	18.70	11.04	8.62	
North America	51.03	26.06	17.22	16.03	18.02	24.97
South America	25.73	20.87	16.90	13.51	21.36	19.86
Group total	34.87	21.67	14.18	11.00	25.45	19.97

A. Excludes temporary leaves of absence and transfers to other Group companies.

B. The decrease in turnover in Europe is due to the restructuring process the bank undertook in 2021 in several of its geographies, mainly in Europe, a process that has not been carried out in 2022.

C. The increase in North and South America is due to the lower incidence of the 2021 restructuring processes in these geographies and the return to normal activity after two years of pandemic incidence..In addition, contact centre in Brazil, characterised by high turnover rates, reported for the first time its employee turnover data.

16. REMUNERATION BY ROLE, GENDER AND REGION^A

	Senior managers ^B				Other managers ^C			
	Men	Women	GPG ratio (Median) ^D	GPG-SAB ratio (Median) ^E	Men	Women	GPG ratio (Median) ^D	GPG-SAB ratio (Median) ^E
Europe	323,602	248,978	17.9%	16.1%	92,891	65,785	26.5%	22.5%
North America	855,521	506,966	18.3%	8.3%	257,213	219,244	7.2%	4.2%
South America	457,220	285,388	34.1%	19.6%	118,126	96,472	7.2%	4.6%
Group total	522,728	337,280	25.8%	20.1%	150,181	105,005	22.9%	18.2%
2022 average remuneration	469,180			132,943				
2021 average remuneration	384,971			118,633				
Variation 2022 vs 2021 (%)	21.9%			12.1%				

	Other employees ^C				Total				
	Men	Women	Ratio GPG (Median) ^D	GPG-SAB ratio (Median) ^E	Men	Women	Ratio GPG (Median) ^D	GPG-SAB ratio (Median) ^E	Total employees
Europe	55,884	42,736	18.5%	15.9%	64,078	45,332	20.0%	17.1%	53,588
North America	49,052	36,336	19.1%	17.6%	72,070	42,263	29.4%	22.5%	55,490
South America	26,434	19,426	18.6%	21.5%	34,164	21,448	21.0%	26.0%	27,131
Group total	44,776	33,044	25.7%	26.3%	60,793	37,606	30.2%	29.8%	48,232
2022 average remuneration	38,276		60,793		37,606	30.2%	29.8%	48,232	
2021 average remuneration	34,352		53,785		33,350	32.3%	30.0%	42,628	
Variation 2022 vs 2021 (%)	11.4%		13.0 %	12.8 %	(6.4)%	(0.7)%	13.2 %		

By age bracket

	aged <= 25	aged 26-35	aged 36-45	aged 46-50	aged over 50	Total
2022 average remuneration	14,060	27,551	48,002	65,336	74,744	48,232
2021 average remuneration	11,819	23,394	42,250	59,824	66,958	42,628
Variation 2022 vs 2021 (%)	19.0 %	17.8 %	13.6 %	9.2 %	11.6 %	13.2 %

A. Data at end of October 2022. The average total remuneration of employees includes annual base salary, pensions and variable remuneration paid in the year.

B. Includes Group Sr. Executive VP, Executive VP and Vice President.

C. The variation includes the effect of internal reclassification between categories of employees carried out in different geographies.

D. GPG Ratio (median) includes annual base salary and variable remuneration paid in the year.

E. GPG Ratio - ABS (median) includes annual base salary paid in the year.

17.1 AVERAGE REMUNERATION OF SENIOR MANAGEMENT (with variable remuneration not linked to long-term objectives)

Thousand euros	2022			2021		
	Men	Women	Total	Men	Women	Total
Executive directors	9,086	11,001	10,044	9,160	11,435	10,298
Non-executive directors	285	304	292	363	293	334
Senior executives	4,365	1,574	3,767	4,137	1,411	3,592

17.2 AVERAGE VARIABLE REMUNERATION OF SENIOR MANAGEMENT LINKED TO LONG-TERM OBJECTIVES (fair value)

Thousand euros	2022			2021		
	Men	Women	Total	Men	Women	Total
Executive directors	1,436	2,128	1,782	1,563	2,316	1,940
Senior executives ^A	597	191	510	592	186	511

A. Additionally, in 2022, one senior executive received EUR 500 thousand of the Digital Transformation Award from PagoNxt S.L. Likewise, in 2021, one senior executive received EUR 348 thousand of the US Special Regulatory Incentive Plan.

**17.3 SENIOR MANAGEMENT COMPOSITION**

Number	2022			2021		
	Men	Women	Total	Men	Women	Total
Executive directors	1	1	2	1	1	2
Non-executive directors	8	5	13	7	5	12
Senior executives	11	3	14	12	3	15

18.1 RATIO OF THE BANK'S MINIMUM ANNUAL SALARY TO THE LEGAL MINIMUM ANNUAL SALARY BY COUNTRY AND GENDER, 2022

	% Legal minimum wage		
	Men	Women	% legal minimum wage
Germany	191.13%	191.13%	191.13%
Argentina	376.58%	376.58%	376.58%
Brazil	241.06%	241.06%	241.06%
Chile	159.68%	139.58%	149.63%
US	234.48%	231.86%	233.17%
Spain	153.76%	150.00%	151.88%
Mexico	145.36%	145.36%	145.36%
Poland	100.00%	100.00%	100.00%
Portugal	170.21%	170.21%	170.21%
UK	222.76%	222.76%	222.76%

18.2 RATIO OF THE BANK'S MINIMUM ANNUAL SALARY TO THE LEGAL MINIMUM ANNUAL SALARY BY COUNTRY AND GENDER, 2021

	% Legal minimum wage		
	Men	Women	% Legal minimum wage
Germany	205.45%	205.45%	205.45%
Argentina	375.62%	375.62%	375.62%
Brazil	185.62%	185.62%	185.62%
Chile	177.16%	145.36%	161.26%
US	259.78%	262.31%	261.04%
Spain	132.72%	155.44%	144.08%
Mexico	165.01%	165.01%	165.01%
Poland	100.00%	100.00%	100.00%
Portugal	181.95%	181.95%	181.95%
UK	206.58%	158.56%	182.57%

19. TRAINING

	2022	2021
Total hours of training	6,884,251	6,030,787
% employees trained ^A	100.00	98.01
Total attendees	5,748,422	5,578,255
Hours of training per employee ^A	33.34	30.28
Total investment in training ^B	71,630,151	75,138,476
Investment per employee	346.94	377.24
Cost per hour	10.40	12.46
% women participants	55.18	53.39
% of e-learning training attendees	94.71	91.42
% of e-learning hours	70.98	76.22
Employee satisfaction (up to 10)	9.81	8.46

A. Calculation based on year-end headcount.

B. The decrease in investment in training is due to Banco Santander's efforts to optimise the resources invested by increasing e-learning training.

20. HOURS OF TRAINING BY CATEGORY

	2022		2021	
	Hours	Average	Hours	Average
Senior managers	87,353	37.78	60,804	29.15
Managers	493,474	27.61	695,353	40.56
Other employees	6,303,424	33.84	5,274,630	29.31
Group total	6,884,251	33.34	6,030,787	30.28

21. HOURS OF TRAINING BY GENDER

	2022	2021
	Average	Average
Men	33.15	32.45
Women	33.51	28.46
Group total	33.34	30.28

22. ABSENTEEISM BY GENDER AND REGION^{A,B}

	2022			2021		
	Men	Women	Total	Men	Women	Total
Europe	2.68	5.36	4.11	2.50	5.12	3.90
North America	0.95	2.05	1.55	0.93	1.75	1.38
South America	1.45	3.14	2.34	1.50	2.92	2.27
Group total	1.80	3.73	2.83	1.83	3.63	2.80

A. Days missed due to occupational accidents, non-work related illness and non-work related accident for every 100 days worked.

B. Santander Brasil only considers accidents recognized as work-related and reported in a *comunicação de acidente de trabalho* (CAT, work-related accident notice) to Brazil's Instituto Nacional do Seguro Social (INSS, National Social Security Institute) following an internal expert review in 2021. This indicator only considers absences of at least 15 days due to non-work-related accidents or common illness.

23. ACCIDENT RATE^{A,B}

%	2022			2021		
	Men	Women	Total	Men	Women	Total
Europe	0.04	0.12	0.08	0.04	0.10	0.07
North America	0.01	0.04	0.02	0.00	0.02	0.01
South America	0.02	0.03	0.02	0.01	0.02	0.02
Group total	0.02	0.06	0.05	0.02	0.05	0.04

A. Ratio of hours missed due to an occupational accident involving leave to total hours worked. Hours worked are theoretical and include commute-related accidents.

B. Santander Brasil only considers accidents recognized as work-related and reported in a *comunicação de acidente de trabalho* (CAT, work-related accident notice) to Brazil's Instituto Nacional do Seguro Social (INSS, National Social Security Institute) following an internal expert review in 2021.

24. OCCUPATIONAL HEALTH AND SAFETY^{A,B}

	2022			2021		
	Men	Women	Total	Men	Women	Total
Frequency rate ^C	1	2	1	1	1	1
Severity rate ^D	0.04	0.09	0.06	0.03	0.08	0.06
No. of fatal occupational accidents	1	0	1	0	0	0
Work-related illness ^E	0	0	0	0	0	0
Total number of accidents ^{F,G}	239	477	716	183	388	571

A. Occupational injuries that can be documented are reported, without exception for serious injuries.

B. Santander Brasil only considers accidents recognized as work-related and reported in a *comunicação de acidente de trabalho* (CAT, work-related accident notice) to Brazil's Instituto Nacional do Seguro Social (INSS, National Social Security Institute) following an internal expert review in 2021.

C. Number of occupational accidents with leave for every 1,000 hours worked. Hours worked are theoretical and include commute-related accidents.

D. Days not worked due to work accident with leave for every 1,000 hours worked. Hours worked are theoretical. Commute-related accidents are included.

E. No Group employee is exposed to work-related illnesses because the activity Santander professionals carry out and the industry in which they work is not recognized in Spain's Royal Decree 1299/2006.

F. Refers to occupational accidents with sick leave and includes commute-related accidents.

G. The increase in the total number of accidents is largely due to a rise in the US compared to previous years due to an improvement in the reporting of the indicator.



4.2 Customers

GRI FS6

25. GROUP CUSTOMERS^A

	2022	2021	var.
Europe	45.564.102	45.979.129	(1)%
Spain	14.319.800	13.571.008	6%
Portugal	2.922.944	3.060.473	(4)%
United Kingdom	22.402.482	23.569.326	(5)%
Poland	5.696.983	5.427.715	5%
Others ^B	221,894	350,607	(37)%
South America	69.552.757	62.876.211	11%
Brazil ^C	60.117.327	53.445.938	12%
Chile	3.577.094	4.113.853	(13)%
Argentina	4.384.558	4.155.239	6%
Others ^D	1.473.778	1.161.181	27%
North America	24.980.442	24.649.205	1%
México	20.239.134	19.664.670	3%
United States ^F	4.523.340	4.731.155	(4)%
Others ^F	217,969	253,380	(14)%
Digital Consumer Bank	19.746.178	19.438.186	2%
Santander Consumer Bank ^G	17.793.206	17.857.599	—%
Openbank	1.952.972	1.580.587	24%
Total	159.843.480	152.942.732	5%

A. Figures corresponding to total customers. 2021 data has been redefined to accommodate 2022 reporting segments

B. Rest of Europe: BP Rest, Other SCIB Europe and PagoNXT

C. Brazil: Private Banking: Decision groups; Santander Financiamiento: Financeira's exclusive customer data.

D. Other South America: Uruguay, Peru, Colombia and PagoNXT

E. USA includes BPI Miami

F. Other North America: PagoNXT

G. SCF includes customers in all European countries, including the UK.

26. DIALOGUE BY CHANNEL

	2022	2021	Var .2022/2021 %.
Branches			
Number of branches	9,019	9,229	(2.3)%
Digital banking^A			
Digital customers ^B (millions)	51.47	47.44	8.5 %

A. Santander Consumer Finance not included.

B. Counts once for customers of both Internet and mobile banking.

27. GROUP NPS

	2022	2021	2020	2019
Argentina	1	2	3	4
Brazil	3	1	2	2
Chile	1	1	1	2
Uruguay	2	2	3	2
Spain	2	2	2	3
Poland	3	3	4	4
Portugal	2	3	1	3
UK	6	3	6	2
Mexico	3	4	4	4
USA	9	8	9	9

NPS to measure customer satisfaction, audited by Stiga/Deloitte.

Santander position vs competitors (Official Peer Group by countries). Key peers by country: Argentina: Galicia, BBVA, ICBC, HSBC, Banco Macro, Banco de la Nación; Brazil: Itaú, CEF, Bradesco, Banco do Brasil; Chile: BCI, Banco de Chile, Itaú, Scotiabank, Banco Estado; Uruguay: Brou, Itaú, BBVA, Scotiabank; Spain: BBVA, Caixabank, Sabadell, Bankia, Unicaja; Poland: ING, Millenium, MBank, Bank Polski, Bank Pekao, BNP Paribas; Portugal: BPI, Millenium BCP, CGD, Novo Banco; UK: Nationwide, Barclays, Halifax, NatWest, Lloyds, HSBC, TSB, RBS; Mexico: Scotiabank, Banorte, HSBC, Banamex; US: JP Morgan, Bank of America, Capital One, PNC, M&T Bank, TD Bank, Citigroup, Citizens, Wells Fargo.

28. GROUP NPS BY CHANNEL^A

	2022	2021	2020
Branch	66	64	56
Contact center	60	43	45
Internet ^B	62	58	60
Mobile	65	69	68

A. Internal NPS (last info available): Obtained from customer surveys issued within 48 hours of their contact with the bank via any channel. Weighted average of active Group customers.

B. Internet: Excluding the UK and Uruguay.

29. CUSTOMER SATISFACTION^A

	2022	2021	2020	2019
Argentina	93	91	90	86
Brazil	88	n/a	89	86
Chile	90	90	87	86
Uruguay	97	96	93	94
Spain	89	84	87	86
Poland	95	96	99	98
Portugal	90	90	86	86
UK	96	95	94	96
Mexico	94	94	95	95
USA	89	88	87	88
Group^B	92	92	91	90

A. Net customer satisfaction: calculation of 100% of customers minus percentage of dissatisfied customers.

B. Linear average of net satisfaction across all geographies.

30. TOTAL COMPLAINTS^A

	2022	2021	2020
Spain ^B	76,272	120,953	150,298
Portugal	3,584	3,570	4,036
United Kingdom	20,624	20,069	22,625
Poland	5,169	5,179	6,057
Brazil ^C	215,906	195,340	146,067
Mexico	70,100	82,033	80,031
Chile	7,873	8,009	8,328
Argentina ^D	5,294	5,013	3,512
US	1,717	3,205	4,292
SCF	29,777	35,215	39,064

A. Compliance metrics based on group-wide criteria, which may not match the UK's Financial Conduct Authority (FCA) or standards in Brazil, among others.

B. Decrease in Spain mainly due to mortgage set up fees' complaints, which increased in 2021 following the communication from the Ministry of Consumer Affairs, and the change in Santander One's commercial policy on commissions.

C. Increase in Brazil due to claims handled independently last year and the government's enhancement of official channels.

D. Increase in Argentina mainly due to fraudulent online purchases amid growing e-commerce since the outbreak of the pandemic.

4.3 Tax contribution

GRI 201-1

In 2022, our tax contribution totalled EUR 20,476 million, including EUR 9,734 million in taxes directly paid by the Group and the rest in collected taxes originating from our business operations with third parties. We pay taxes in the jurisdictions where we earn a profit. Thus, the profits obtained, and the taxes accrued and paid, correspond to the countries where we operate.

For every EUR 100 in total income, EUR 39 are taxed, including EUR 19 in taxes paid directly by Santander and EUR 20 in taxes collected from third parties.

The taxes Santander pays directly (see table below) are included in the cash flow statement and mainly stem from the corporate income tax paid (EUR 5,498 million, which represents an effective rate of 36.1%). They also include non-recoverable value added tax (VAT), employers' social security contributions, charges levied on banks and financial transactions in Spain, the UK, Poland, Portugal, Brazil and Argentina, and other taxes. Total taxes paid directly by the Group amount to 64% of the profit before tax.

The taxes we accrue and the amounts we pay do not usually match because the laws in some countries dictate a different payment date than when income was generated or an operation was taxed. Therefore, the corporate income tax accrued during the accounting period is EUR 4,486 million, which represents an effective rate of 29.4% (see note [27](#) of the consolidated annual accounts).

31. Total taxes paid

EUR million

Jurisdiction	2022				
	Corporate income tax ^A	Other taxes paid	Total taxes paid by the Group ^B	Third-party taxes ^C	Total contribution
Spain	1,652	1,240	2,892	1,366	4,258
UK	553	482	1,035	455	1,490
Portugal	135	187	322	235	557
Poland	182	247	429	177	606
Germany	167	94	261	134	395
Rest of Europe	454	292	746	(65)	681
Total Europe	3,143	2,542	5,685	2,302	7,987
Brazil	1,295	517	1,812	3,029	4,841
Mexico	331	381	712	620	1,332
Chile	(2)	75	73	334	407
Argentina	34	494	528	3,525	4,053
Uruguay	38	94	132	36	168
Rest of Latin America	38	11	49	12	61
Total Latin America	1,734	1,572	3,306	7,556	10,862
United States	610	118	728	874	1,602
Other	11	4	15	10	25
TOTAL	5,498	4,236	9,734	10,742	20,476

A. The Group's income tax for the year 2021 amounted to EUR 4,012 million

B. Total own taxes paid for all these concepts amounted to EUR 9,734 mn, broken down as EUR 5,498 mn in corporate income tax, EUR 992 mn in non-recoverable VAT and other sales taxes, EUR 1,647 mn in employer-paid payroll taxes, EUR 112 mn in property taxes, EUR 366 mn in bank levies and EUR 1,119 mn in other taxes.

C. Total third-party taxes amounted to EUR 10,742 mn, broken down as EUR 2,725 mn in salary withholdings and employees' social security contributions, EUR 509 mn in recoverable VAT, EUR 1,889 mn in tax deducted at source on capital, EUR 324 mn in non-resident taxes, EUR 444 mn in property taxes, EUR 300 mn in stamp taxes, EUR 2,695 mn in taxes related to the financial activity and EUR 1,856 mn in other taxes

4.4 Green transition

GRI 301-1, 302-1, 302-2, 302-3, 303-5, 305-1, 305-2, 305-3, 305-4, 305-5, 306-3, 306-4, 306-5, FS8, FS10, FS11

32. Green finance

EUR bn	2022	2021	2020	2019
Raised and facilitated	28.8	31.9	14.8	19.0
Accumulated since 2019	94.5	65.7	33.8	19.0

33. Financing of renewables energies

MW financed	2022	2021	2020
Greenfield	15,614	13,604	13,765
Wind energy	21 %	58 %	26 %
Solar energy	77 %	39 %	64 %
Others	2 %	3 %	10 %
Brownfield^A	14,843	1,776	8,106
Wind energy	45 %	77 %	46 %
Solar energy	33 %	18 %	33 %
Others	22 %	5 %	21 %

A. Activity recovered from COVID-induced lows in 2021

34. ENVIRONMENTAL FOOTPRINT 2021-2022^A

	2022	2021	Var. 2022-2021 (%)
Consumption			
Water (m ³) ^B	1,887,857	1,808,668	4.4
Water (m ³ /employee)	9.75	9.76	-0.1
Normal electricity (millions of kwh) ^C	97.42	213.87	-54.4
Green electricity (millions of kwh)	745.82	675.78	10.4
Total electricity (millions of kwh) ^C	843.24	889.66	-5.2
Total internal energy consumption (GJ) ^C	3,431,272	3,667,872	-6.5
Total internal energy consumption (GJ/employee) ^C	17.73	18.95	-6.5
Total paper (t) ^D	5,849	7,345	-20.4
Recycled or certified paper (t) ^D	4,860	6,020	-19.3
Total paper (t/employee) ^D	0.03	0.04	-23.7
Waste			
Paper and cardboard waste (kg) ^D	4,123,740	6,323,866	-34.8
Paper and cardboard waste (kg/employee) ^D	21.30	34.11	-37.5
Greenhouse gas emissions			
Direct emissions (CO ₂ teq) ^E	21,967	25,672	-14.4
Indirect electricity emissions (CO ₂ teq)-MARKET BASED ^{C,F,G}	30,917	52,904	-41.6
Indirect electricity emissions (CO ₂ teq)-LOCATION BASED ^{C,F}	217,906	265,095	-17.8
Indirect emissions from displacement of employees (CO ₂ teq) ^{H,I}	81,535	35,420	130.2
Total emissions (CO ₂ teq)- MARKET BASED ^{C,I}	134,419	113,996	17.9
Total emissions (CO ₂ teq/employee)	0.69	0.61	12.9
Average number of employees	193,573	185,379	4.4

A. Refers to Argentina, Brazil, Chile, Germany, Mexico, Poland, Portugal, Spain, the UK and the US (minus Puerto Rico and Miami).

B. Refers to water withdrawal from public sources.

C. Energy consumption and GHG emissions data for Argentina for the year 2021 have been recalculated as a result of new changes in the calculation methodology.

D. The reduction in paper consumption and waste is due to the Group's implementation of new technologies and practices in its buildings.

E. Emissions are from the direct consumption of energy (natural gas, diesel and, in Mexico, petrol and diesel for cars, and in Poland in 2020 petrol and diesel for cars). They are deemed scope 1, as defined by the GHG Protocol standard. To calculate them, emission factors DEFRA 2022 for 2022 and DEFRA 2021 for 2021 were applied.

F. Emissions are from electricity consumption. They are considered scope 2, as defined by the GHG Protocol standard. In 2021 we used the International Energy Agency (IEA) emission factors from 2017. For 2022, we used the 2021 IEA emission factors.

- Indirect electricity emissions (market-based): no emissions were considered for green electricity consumed in Germany, Spain, Mexico, Portugal and UK; also, in Argentina, Brazil, Chile, Poland and the US, some consumed electricity was green energy. The IEA emission factor for each country applied to the remaining electrical energy consumed.

- Indirect emissions of electricity (location-based): the IEA emission factor for each country applied to renewable and non-renewable electricity consumption.





G. Indirect electricity emissions fell, mainly because we purchased more green energy in 2022, and reduce electricity consumption by 5.2%.

H. Emissions from employees travelling from central services to the workplace by personal car, mass transport and rail; and from employees' business travel by air and car. The distribution of employees by type of travel is based on surveys or other estimates. Conversion factors DEFRA 2022 for 2022 and DEFRA 2021 for 2021 were used to calculate emissions from employee travel. The number of employees travelling to work in personal vehicles was estimated only with the number of parking spaces at central service buildings and with diesel/petrol consumption by the vehicle fleet. Personal vehicle use by employees in Argentina, Poland and the UK is not reported, as such information is unavailable. Mass transport use by employees was calculated with the average distance travelled by vehicles Grupo Santander rents to transport its employees in Germany, Brazil, the US, Spain, Mexico, Poland and Portugal and at SCF, and at the Santander Group City in Spain. Business trips by car from Santander Consumer USA are not reported, as the information is unavailable. Emissions from courier services, the transport of funds, any purchase of products or services or indirectly from financial services are not reported.

I. Group's total emissions increased in 2022 by 17.9%, due to the employee travel emissions. In the last two years the Covid-19 pandemic caused these emissions to plummet, and in 2022 the employee travel was almost recuperated to pre-Covid levels. Comparing these emissions with 2019 data, prior to this exceptional situation, employee travel emissions have been reduced by 33%, and total emissions have been reduced by 58%.

4.5 Equator principles

35. Equator Principles

Number of projects Category	Project Finance			Project Related Corporate Loans			Project-Related Refinance and Project-Related Acquisition for Project Finance		
	A	B	C	A	B	C	A	B	C
TOTAL	5	24	7	3	3	1	0	2	0
 Sector									
Mining	0	0	0	0	0	0	0	0	0
Infrastructure	0	3	1	3	1	0	0	1	0
Oil & Gas	1	0	0	0	0	0	0	1	0
Power	3	21	6	0	1	0	0	0	0
Others	1	0	0	0	1	1	0	0	0
 Region									
Americas	2	4	2	0	0	0	0	2	0
Europe, Middle East & Africa	1	20	5	3	2	1	0	0	0
Asia pacific	2	0	0	0	1	0	0	0	0
 Type									
Designated countries ^A	5	22	6	0	0	1	0	1	0
Non-designated countries	0	2	1	3	3	0	0	1	0
 Independent review									
Yes	5	24	4	3	3	0	0	2	0
No	0	0	3	0	0	1	0	0	0

A. In accordance with the definition of designated countries included in the Equator Principles, with solid environmental and social governance, legislation and institutions to protect their inhabitants and the environment.

Category A – Projects with potential significant adverse environmental and social risks and/or impacts that are diverse, irreversible or unprecedented;

Category B – Projects with potential limited adverse environmental and social risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures²; and

Category C – Projects with minimal or no adverse environmental and social risks and/or impacts.

4.6 Financial inclusion

GRI 203-1, 203-2, 413-1

36. Financially empowered people

million people	2022	2021	2020	2019
Access	1.0	0.9	0.8	0.6
Finance	1.8	1.1	2.0	0.8
Financial education ^A	2.7	1.3	0.7	0.6
Total	5.5	3.3	3.6	2.0
Accumulated since 2019 ^B	11.8	7.5	4.9	2.0

A. The increase in the number of people empowered by financial education programmes is due, among other reasons, to the implementation of programmes and partnerships in support of refugees from the war in Ukraine.

B. Unique empowered people. Each year only new empowered people are added.

37. Microfinance^A

million euros / people	2022	2021	2020	2019
Total credit disbursed	950	571	469.3	532.4
Total micro-entrepreneurs supported	1.6	1.0	1.1	N/A

A. The increase in credit and microentrepreneurs supported is mainly due to the bank's commitment to expand its microfinance programmes in Latin America.

4.7 Community investment

GRI 203-1, 203-2, 413-1

38. Community investment

At Banco Santander, we measure our investment in community outreach according to the Business for Societal Impact (B4SI)¹ methodology, which is an international benchmark for the Global Reporting Initiative (GRI), S&P Dow Jones Sustainability Index and other standards and indices.

million euros	2022	2021	2020
Support for higher education	100	106	110
Other local initiatives	63	46	94
Total	163	152	204

39. Outputs and outcomes

We have developed internal methodologies to measure beneficiaries and people helped of our Santander Universities programme and our local community support initiatives, respectively.

39.1 Beneficiaries from Santander Universities programmes

beneficiaries	2022	2021	2020
Higher education	49,490	40,632	48,804
Employability ^A	195,798	98,480	75,237
Entrepreneurship	20,739	23,120	32,707
Total ^A	266,027	162,232	156,748

A. Seeking to maximise the reach of the programmes, in 2022 the number of beneficiaries has increased, especially in programmes aimed at improving employability, with the greatest increase in Brazil and Mexico.

39.2 People helped from local initiatives

million people	2022	2021	2020
Support for childhood education	0.4	0.8	0.5
Support for social welfare	0.9	1.3	1.8
Support for the arts and science	0.0	0.0	0.2
Others ^A	1.0	0.0	0.1
Total	2.3	2.1	2.5

A. The increase is due to support for Ukrainian refugees.

5. Further information

5.1 Stakeholder engagement

GRI 2-29, 3-3, F55





5.1.1 Listening to our stakeholders and creating value

We run surveys and speak-up channels for employees and customers. We assess externalities to identify risks and opportunities and to appraise our impact on the community. We respond to demands from analysts, investors and ratings and NGOs; keep pace with new regulation and best practices worldwide; and take part in consultations with authorities, trade bodies and other organizations that influence policymaking on sustainable development. We're also involved in major local and international initiatives to support inclusive and sustainable growth (see 'Joint initiatives to promote our agenda' in 'Governance and priorities').



For more details, see '[Economic, Regulatory and Competitive Context](#)' in the 'Economic and Financial Review'.

Key dialogue channels for stakeholders

People 	89% aggregated participation in Your voice Survey	3,935 complaints received through ethical channels		
Customers 	+5 million customer satisfaction surveys	+40,000 banked individuals surveyed in the corporate Brand Tracker ^A	436,316 complaints received	
Shareholders 	12,656 shareholders surveyed about Santander being Simple, Personal and Fair	276,198 responses from shareholders and investors through studies and qualitative surveys	163,761 queries answered by digital channels and telephone.	201 events with shareholders and 862 engagements with institutional investors (73 on ESG)
Communities 	1,306 partner universities and institutions ^B	+2,200 partnerships with social institutions and entities	+300 social media profiles	+26 million followers

A. Study that measures the perception of Santander's image and its peers in the 10 markets in which we operate as a retail bank.

B. This figure includes universities that have an agreement with Santander Universities, Universia and Fundación Universia's in 25 countries. Taking Santander Universities alone, the figure is 835 universities and academic institutions in 11 countries.

5.1.2 Helping society tackle global challenges: 2030 agenda

Our activity contribute to several United Nations' Sustainable Development Goals and to the Paris Agreement.

We analysed our agenda's contribution to the SDGs and determined the most relevant goals to Banco Santander's business, commitments and strategy.

For more details, see the 'Banco Santander and the SDGs' brochure on our corporate website.



The SDGs on which Banco Santander has the greatest impact



We guarantee the best employee experience and an inclusive workplace. Our financial inclusion and community support programmes help entrepreneurs create businesses and jobs; and strength local economies.



We tackle climate change with the ambition to be net zero by 2050, helping our customers transition to a sustainable economy and reducing our own carbon footprint and environmental impact.



We promote transparency, the fight against corruption and robust governance across our organization. Our policies and codes of conduct regulate our business and behaviour and steer our commitments towards a more responsible banking system.

Other SDGs on which Banco Santander also has an impact



We want to reduce poverty and boost wealth and well-being in the countries where we operate. Our financial inclusion products and services and our community investment programmes empower millions each year.



Our pioneering Santander Universities programme promotes education, entrepreneurship and employment so universities and students can prosper. Also, Santander Scholarships is one of the world's largest private education grant funds.



We promote an inclusive and diverse workplace, ensuring equal opportunity as a strategic priority. We also run initiatives to drive diversity.



We're the global leader in renewable energy financing, and finance energy efficiency projects; low-emission, electric and hybrid vehicles; and other cleaner transport solutions.



Our products and services give society's most vulnerable better access to financial services, and we teach them the concepts and skills they need to manage their finances effectively.



We finance sustainable infrastructure and promote access to affordable housing to guarantee basic services and inclusive economic growth.



We are firmly committed to reducing our environmental footprint, implementing energy efficiency plans, promoting the use of renewable energies and offsetting the consumption of our internal operations.



We participate in prominent local and international initiatives and working groups.



For more details on how Banco Santander supported the UN Sustainable Development Goals in 2022, see the '[SDGs contribution content index](#)' at the end of this chapter.



5.1.3 Partnerships to promote our agenda

GRI 2-23

We drive our responsible banking agenda through a number of local and international initiatives and working groups, including:

→ UNEP Finance initiative

We are an active member of UNEP FI and a founding signatory to the United Nations Principles for Responsible Banking.

→ United Nations Global Compact

We've been part of the Global Compact network since 2002 and a member signatory of the United Nations Global Compact's gender equality programme since 2020.

→ Glasgow Financial Alliance for Net Zero, Net Zero Banking Alliance and Net Zero Asset Management

In support of our net-zero ambition, we joined the Glasgow Financial Alliance for Net Zero, Net Zero Asset Managers and were co-founders to the Net Zero Banking Alliance. Within GFANZ, we co-led the Net Zero Public Policy and their call to action launched in October.

→ World Business Council for Sustainable Development (WBCSD)

We are an active member of WBCSD. In 2022, we continued participating in the Banking for Impact on Climate in Agriculture (B4ICA) initiative.

→ Banking Environment Initiative (BEI)

We continued to participate in the Bank 2030 initiative, aimed at building a roadmap for the banking industry to help society in the transition towards a low-carbon economy.

→ CEO Partnership for Economic Inclusion

We're part of a private-sector alliance for financial inclusion, led by Queen Máxima of the Netherlands, Special Representative of the United Nations, to promote inclusive financing for development.

Other international and local initiatives that Santander supports

→ UN Women's Empowerment Principles

→ The Valuable 500

→ UN Principles for Responsible Investment

→ CDP (Carbon Disclosure Project)

→ UN Global Investors for Sustainable Development (GISD) Alliance

→ Green Recovery Alliance of the European Union

→ Equator Principles

→ Partnership for Carbon Accounting Financials (PCAF)

→ International Wildlife Trade Financial Taskforce

→ Round Table on Responsible Soy

→ Working group on Sustainable Livestock

→ Climate Leadership Council

→ The Wolfsberg Group



5.2 Materiality assessment: identifying the issues that matter

GRI 2-29, 3-1, 3-2

The matrix is a refresh of last year’s Materiality assessment, incorporating reinforced trends from latest months, mainly: geopolitical tensions; inequality; the rising cost of living; stricter regulation; and other aspects that impact on our markets. It also takes inputs from subsidiaries related to the items that are relevant in their markets: digitalization; innovation; human rights; regulation.

As reflected in section [2.1 Materiality Matrix](#), there have not been relevant changes to the items or positioning in the matrix, but little adjustments in namings and definitions, to better reflect the current context (see next page).

Following the proposed Corporate Sustainability Reporting Directive (CSRD) and leading ESG reporting standards, our matrix follows the principle of double materiality: (1) financial materiality (how ESG issues impact financial performance); and (2) environmental and social materiality (how ESG action impacts society and the environment).

Our materiality assessment methodology

Last year we perform an in-depth materiality assessment which included direct stakeholder input (internal and external interviews and surveys on the bank’s ESG priorities), in line with best practice.

→ Phase 1

Based on the external landscape, key trends and our own operations, we drew up a preliminary list of ESG topics and placed them into three categories: E, S and G.

→ Phase 2

We ran workshops, surveys and one-to-one interviews to set priorities; and gathered feedback from customers, employees, senior managers, investors and NGOs.

→ Phase 3

We gave topics a score and weighting to rank them by order of importance to Banco Santander.

Analysis inputs

Global and sector-based

- Regulators' and international institutions' requirements (such as EU taxonomy)
- Sustainability frameworks and standards (such as UN Sustainable Development Goals, UN Principles for Responsible Banking, Task force on Climate-related Financial Disclosures, Global Reporting Initiative, Sustainability Accounting Standards Board,...)
- ESG analysts' and indices' expectations
- Banking sector reporting trends (peer banks)

Stakeholder opinion

Customers	9,000 surveys in 9 countries
Employees	500 surveys in each country and at HQ (more than 1,800 responses)
Senior management	Specific discussions on materiality at our annual senior leadership meeting. One-to-one interviews with heads of corporate areas and representatives of businesses and regions.
Investors	Interviews with major investors
NGOs	One-to-one interviews with international NGOs



Our ESG priorities

Our materiality assessment identified 15 ESG topics we should focus on.

Crucial topics

Customer experience and satisfaction

Be the bank of choice for our customers with products, process and services that meet their needs and treat them in a simple, personal and fair way. Innovation & usage of digital technologies to maximise access to products and services and enhance customer experience.

Financial health

Financially support our stakeholders to help with any potential challenges (e.g., rising cost of living) that might emerge through tailored products and solutions, including financial education

Green Finance and Socially Responsible Investment

Facilitate and advise our customers with a product offering that integrates environmental and social factors, helping them in their transition to a sustainable economy.

Environmental and social risk management

Ensure our risk management framework incorporates environmental & social aspects regarding customers and operations (Climate, Human Rights, Greenwashing, Social washing) and is implemented across geographies.

Culture, conduct and ethical behaviour

Ensure exemplary conduct from employees & the institution, incl.: simple, personal & fair environment at work, corporate culture, conduct and ethical behaviour, whistleblowing channels, full transparency towards customers and rest of stakeholders; best-in-class policies & controls (AML FC –inc. modern slavery, illegal trade, tax, human rights)

Major topics

Privacy, data protection and cybersecurity

Managing the risks from collecting, storing and using personal information.

Net zero by 2050

Ensure that the emissions from our customer portfolio and operational footprint are aligned with the Paris Agreement and targeted towards net zero by 2050.

Diversity, Equity and inclusion

Ensuring fairness and respect among employees in an inclusive environment, with zero tolerance of harassment and discrimination in a psychological safety environment.

Business resilience (inc. digitalization & innovation)

Adapting to a changing and uncertain environment, maintaining the resilience of the business and building on strategic priorities (One Santander, Digital Consumer Bank and PagoNxt) and adapt to current trends (e.g., growing importance of digitalization and innovation).

Talent management and development

Have a talented and motivated workforce, offering development opportunities; and ensuring meritocracy.

Financial inclusion

Developing and providing products and services promoting access to basic financial services, including finance that meet their needs.

Corporate Governance

Ensuring the corporate governance system remains well established & effective, supporting shareholder value & efficient capital allocation, whilst addressing interests of all our stakeholders. Incl. Rewards and incentives and with special focus in meeting growing regulatory requirements and responding to the disclosure demands with transparency and efficiency.

Relevant topics

Responsible procurement

Assessing ESG in our supply chain to manage associated risks.

Education and support to communities

Santander Universities focus on providing education, employability and entrepreneurship opportunities, connecting startups and SMEs, clients, training and other resources. We also support community well-being and improve the lives of people at risk of exclusion through our community programs.

Nature & Biodiversity

Identifying and managing the impact and dependencies of Santander's financial activity on nature and biodiversity through those it lends to, including, but not limited to deforestation, natural resource extraction, cultivation or project development.

— Environmental — Social — Government

After the materiality analysis, issues such as materials (GRI 301), water and effluents (GRI 303), waste (GRI 306), labor/management relations (GRI 402), occupational health and safety (GRI 403), freedom of association and collective bargaining (GRI 407), child labor (GRI 408), forced or compulsory labor (GRI 409), security practices (GRI 410), food waste, light and noise pollution have not been identified as material to the Group given its activity and geographies of operation. More details in Non-financial information Act 11/2018 content index and Global Reporting Initiative (GRI) content index.



5.3 Risk and opportunities

GRI 2-25, 3-3

Methodology analysis

Aligned to our materiality assessment, we have identified the risk and opportunities for Banco Santander and their impacts (real or potential). A two-part methodology has been applied:

1. We identified areas of social concern that relate to our most material issues, where we can have a major impact

Combining our internal analysis focused on the Group materiality assessment, along with external studies related to ESG matters in the market, such as The Global Risks Report 2022 by the World Economic Forum, we have identified four areas of social concerns — one environmental, two social and one economic/governance — where we can have a major impact due to the risk and opportunities they bring.

2. We identified the risks and opportunities each area of social concern bring, and the impacts (real or potential) associated.

We identified main risks and opportunities for each area of social concern considering guidelines such as the OECD Due Diligence Guidance for Responsible Business Conduct, or the Sector Impact Mapping of the United Nations Environment Programme Finance Initiative (UNEP FI).

This exercise has also informed our ESG agenda towards avoiding or minimizing negative impacts; and generating or maximizing positive impacts.

Below, the list of impacts associated and relevant KPIs.

	Environmental	Social		Governance
Areas	Climate change	Financial health and inclusion	Quality employment	Responsible management and business development
Materiality issue	Net zero by 2050 Green finance and SRI Nature & Biodiversity	Financial health Financial inclusion Education & support to communities	Diversity, equity and inclusion Talent management and development	Customer experience and satisfaction Culture, conduct and ethical behaviour Privacy, data protection & cyber Business Resilience (incl. digitalization & innovation) Corporate governance environmental, social and climate change risk management Responsible procurement



Key areas where Santander has or can have more impact

Environmental



Climate change

- The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report declares global warming an unquestionable reality given the unprecedented changes witnessed since the 1950s.
- The climate emergency is one of the humankind's biggest challenges.



Social



Social stability

- Despite progress, social inequality remains an area of concern.
- According to the World Bank, some 1.4 billion people are unbanked, and most of them live in low-income households in developing countries.
- According to latest UN Sustainable Development Goals Report, access to education remains an issue.



Quality employment

- According to Cambridge University's Sustainable Development Report 2022, while unemployment has fallen in developed countries since 2020, it has increased in developing countries.
- The war in Ukraine is expected to make joblessness worse, especially among vulnerable groups, due to rising energy prices and supply chain disruption.



Governance



Responsible management and business development

- The Covid-19 crisis put a strain on the global economy, but the war in Ukraine has made matters worse since it started in early 2022. Companies must adapt and take measures to properly manage at the same time a humanitarian crisis unseen since World War II, an energy crisis rooted in dependence on fossil fuels, major regulatory reform and the need for rapid digitalization.



5.4 EU Taxonomy

Information about Article 8 of the EU Taxonomy Regulation

In 2020, the European Parliament adopted the Taxonomy Regulation. It establishes the criteria for determining whether an economic activity qualifies as environmentally sustainable and incorporates an obligation that companies subject to the Non-Financial Reporting Directive (NFRD), including financial corporations, must disclose how operations align with the Taxonomy.

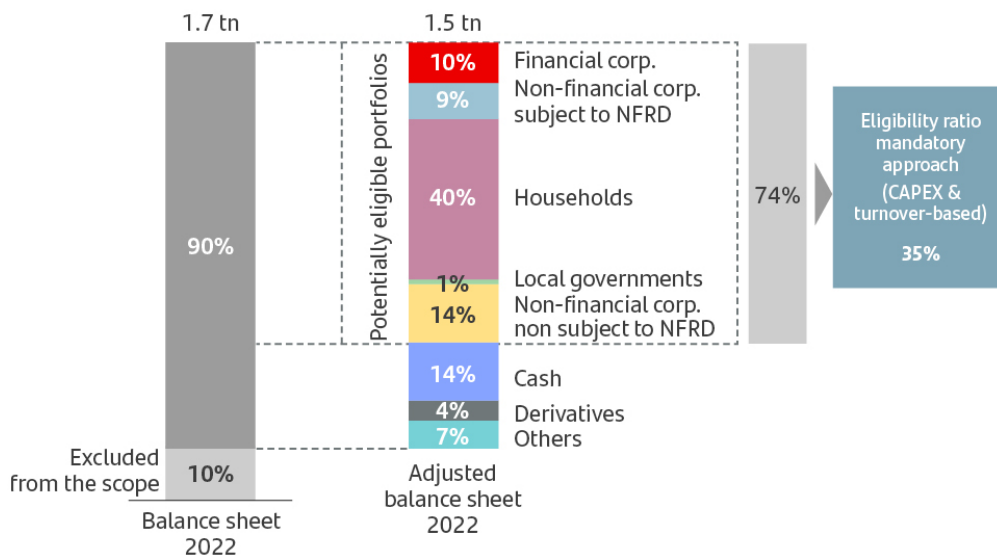
The primary indicator of alignment is the green asset ratio (GAR), which companies must publish from 2024. It shows the extent to which activities in our balance sheet meet the Taxonomy's technical standards. It's the ratio of an entity's Taxonomy-aligned assets to balance sheet assets (excluding exposure to sovereigns, central banks and the trading portfolio).

Before publishing the GAR in 2024, companies in 2022 and 2023 must make their eligibility ratio public. The eligibility ratio is calculated like the GAR. The only difference is that the eligibility ratio numerator covers activities included in the Taxonomy but doesn't determine if they meet the technical screening criteria that establishes under which conditions an activity can be considered as environmentally sustainable.

The European Commission has two approaches to calculate the eligibility ratio: mandatory reporting based on information that counterparties publicly disclose; and voluntary reporting, which is an estimate based on proxies when the information about eligibility of the counterparties is not available.

This year we have been able to include the eligibility exposure of our financial and non financial counterparties under the mandatory approach, after capturing the data published by these counterparties (both CapEx²⁹ and turnover³⁰-based eligibility) and provided by them on projects or activities aligned with the SFCS³¹.

How did we calculate our proportion of eligible activities?



Santander's eligibility ratio is 35%, while our balance sheet's potential eligibility is 74%³².

²⁹ CapEx: capital expenditure.

³⁰ Turnover: ordinary revenue pursuant to IAS 1, paragraph 82(a).

³¹ SFCS: Sustainable Finance Classification System, which sets our internal criteria to consider an asset as green, social or sustainable based on the EU Taxonomy, among other industry principles and guidelines. The activities from the SFCS not included in the EU Taxonomy were not included in the eligible exposures (e.g. agriculture or biodiversity). For more information, please see section 5.5. Sustainable Finance Classification System (SFCS).

³² Potential eligibility of our portfolio for both mandatory and voluntary approaches. Santander is developing only the mandatory approach across this report.



Numerator

The numerator includes:

- exposures in the following household loan portfolio: residential property loans, building renovation loans and vehicle loans.
- exposures to financial and non-financial corporations subject to NFRD³³ separated into:
 - General purpose: based on the eligibility ratio publicly disclosed by our counterparties
 - Specific purpose: based on information provided by the counterparties on projects or activities to which the proceeds were applied by using the SFCS.

Denominator

We calculated the eligibility ratio for the 88% of the balance sheet. The 12% not included comprises exposure to sovereign debt, central banks and the trading book.

Eligibility ratios

Our mandatory ratio, as required under the Disclosures Delegated Act, represents the eligible exposures to financial, non-financial corporations and household exposures divided by the denominator. The resulting mandatory eligibility ratio is 35% (both CapEx and turnover-based).

Our exposures reported under the Disclosures Delegated Act

Eligible activities under Article 10.3 (a) of the Disclosures Delegated Act

Lending	Proportion of eligible economic activities		Proportion of non-eligible economic activities		Coverage %
	%	EUR bn	%	EUR bn	
Mandatory approach (CapEx-based)	35 %	531.04	65 %	970.79	88 %
Mandatory approach (turnover-based)	35 %	530.66	65 %	971.18	

Other exposures to report under Articles 10.3 (b) and (c) of the Disclosures Delegated Act

Portfolios	Proportion of exposure to total assets	
	%	EUR bn
Exposure to central governments, central banks and supranational issuers	8 %	129.8
Exposure to derivatives	5 %	75.2
Exposure to companies exempt from disclosing non-financial information pursuant to Article 19 bis and 29 bis of Directive 2013/34/EU	14 %	214.2
Trading portfolio	5 %	89.1
Interbank lending	1 %	13.4

How do our financial strategy, product design and relations with customers and counterparties comply with Regulation (EU) 2020/852?

Our objectives are consistent with the EU Taxonomy. Our sustainable finance proposition to support our customers' transition considers the standards and enhancements of the EU Taxonomy. See 'Supporting the green transition'.



For more details on how our financial strategy, product design and relations with customers and counterparties comply with the EU Taxonomy, please see section '[Supporting the green transition](#)'.

³³ This condition has been identified: For the general-purpose volumes, companies publishing their eligible CapEx and turnover. For specific-purpose volumes, a combination of the booking criteria and exclusion of SMEs has been considered.

5.5 Sustainable Finance Classification System (SFCS)

GRI FS8

Sustainable finance is key to meeting our ambition to be net zero by 2050. We developed our Sustainable finance classification system (SFCS), which was published in February 2022 and has been recently updated. The SFCS is an internal guide that outlines harmonized criteria to consider an asset green, social or sustainable in all the Group’s units and businesses. Reviewed by Sustainalytics, it draws on such international industry guidelines, standards and principles as the EU Taxonomy, ICMA, LMA Principles, UNEP FI framework and Climate Bond Standards.

It also enables us to track our sustainable activity, support product development, mitigate the risk of greenwashing and reinforce our transparency and commitment to promote and increase our green, social and sustainability-linked activity.

We updated the SFCS based on lessons learned and market trends. It now features:



An entity-based approach, which complements the activity-based approach.



Additional details on manufacturing, real estate, sustainable agriculture and other activities.



New activities, like solutions to reduce GHG emissions or that relate to energy generation.

Nevertheless, we will keep updating the SFCS when new sustainable market developments and Santander’s practice will require. Beyond green activity, we are also working to identify transition activities to support our customers and contribute to our net zero objective.

International industry guidelines, standards and principles that the SFCS draws upon

EU taxonomy	ICMA Green/Social Bond Principles	LMA Green Loan Principles	LMA Sustainability Linked Loan Principles	ICMA Sustainability Linked Bond Principles	Febraban taxonomy (Brazil)	UNEP FI framework	Climate Bond Standards
-------------	-----------------------------------	---------------------------	---	--	----------------------------	-------------------	------------------------

Eligible products

Dedicated purpose

- Transaction proceeds go **towards eligible green or social projects**
- Eligibility criteria: **Specific activities and thresholds**, based on industry principles and guidelines (ICMA, LMA, Climate Bond Standards) and the EU Taxonomy

Sustainability-linked financing

- **Sustainability-linked transactions** designed to incentivize customers to set and work towards ambitious ESG targets
- Transaction structured according to pre-determined **sustainability performance targets** (KPIs and/or ESG ratings)
- Alignment with recognized **industry principles and guidelines** (ICMA and LMA)

Green, social and sustainability funding global framework published in 2022

Published in June 2022, our Green, Social and Sustainability Funding Global Framework is the reference for all green, social and sustainability labelled funding instruments traded in sustainable capital markets and allow all Santander Group entities to issue out of it. It replaces our previous Global Sustainable Bond and Green bond frameworks. Consistent with best market practices and the expectations of investors, it covers use of proceeds, process for project evaluation and selection, management of proceeds and reporting, in line with the International Capital Market

Association’s (ICMA) and Loan Market Association’s (LMA) guidelines. It is aligned with our Sustainable Finance Classification System (SFCS).



5.6 Country by country report

GRI 207-4

According to GRI 207-4 TAX, a report of financial, economic and tax-related information is required for each country where Santander operates. Profit/loss before tax, corporate income tax paid in cash, and the calculation of the number of employees are already included in [Appendix VI](#) of the consolidated financial statements (Annual Banking Report):

EUR million				
2022				
Jurisdiction	Revenue from third-party sales ^A	Revenue from intra-group transactions with other tax jurisdictions ^A	Tangible assets other than cash and cash equivalents ^B	Corporate income tax accrued on profit/loss ^C
Germany	1,710	11	2,767	202
Argentina	1,831	-20	634	195
Austria	204	-6	13	21
Bahamas	11	-1	1	0
Belgium	58	13	2	6
Brazil ^D	12,500	-187	1,755	894
Canada	68	-9	1	4
Chile	2,408	-16	531	204
China	14	5	0	1
Colombia	68	1	2	5
United Arab Emirates	1	6	0	0
Spain ^E	6,192	1,515	11,582	171
United States	7,776	-152	14,518	433
Denmark	177	-3	0	26
Finland	31	73	40	10
France	925	-56	77	24
Greece	2	-1	0	-1
Hong Kong	156	-52	0	4
India	1	2	0	0
Ireland	110	-128	940	1
Isle of Man	-14	62	0	3
Italy	582	-35	39	80
Jersey	-11	53	0	2
Luxembourg	380	-5	48	156
Mexico	4,572	-59	1,625	606
Norway	271	-26	50	28
The Netherlands	91	-4	61	79
Peru	155	-4	4	21
Poland	2,776	-6	238	238
Portugal	1,362	-5	514	208
Puerto Rico	0	0	0	0
United Kingdom	6,906	-170	1,949	590
Singapore	20	0	0	2
Sweden	172	0	0	-8
Switzerland	155	5	63	7
Uruguay	457	-3	55	60
Consolidated group total	52,117	798	37,509	4,272

A. Revenue from intra-group transactions with other tax jurisdictions includes interest income; interest expenses; commission income and expenses for transactions between Santander companies whose residence is in different tax jurisdictions; and intra-group income, excluded from total income in the consolidated income statement because counterparty expense is recorded under another item of the consolidated income statement not included in total income.

B. Tangible assets: Composed of tangible assets, non-current assets held for sale and inventories.

C. The accrued corporate income tax is a current-year expense and does not include deferred taxes.

D. Including the information about a branch in the Cayman Islands with EUR 124 million in accrued corporate income tax.

E. Includes Corporate Centre.



Corporate income tax accrued on profit/loss and the tax due if the statutory tax rate is applied to profit/loss before tax are different mainly because of tax calculation standards, which establish temporary or permanent restrictions on the deduction of expenses, exemptions, deductions and other adjustments that cause the tax and accounting result to differ.

Other main adjustments to the taxable income in the Group's relevant jurisdictions are:

- the monetary correction in Chile and Mexico;
- the hyperinflation adjustments in Argentina;
- the deduction of juros and taxes on margins in Brazil;
- and permanent adjustments in Poland and other jurisdictions due to non-deductible expenses (like Bank Levy) or recognized provisions.



6. ESG reporting standards and references

6.1 Non-financial information Act 11/2018 content index	106
6.2 UN Global Compact content index	111
6.3 UNEP FI Principles for Responsible Banking reporting index	112
6.4 Global Reporting Initiative (GRI) content index	130
6.5 Sustainability Accounting Standards Board (SASB) content index	144
6.6 Stakeholder Capitalism Metrics content index	147
6.7 Task Force on Climate-related Financial Disclosure (TCFD) content index	152
6.8 SDGs contribution content index	153



6.1 Non-financial information Act 11/2018 content index

Table of equivalences with reporting requirements under Spain's Act 11/2018

	Non-financial information to be disclosed	Chapter/section of the annual report	Correspondence with GRI indicators/Other regulations
0. General Information	Brief description of the Group's business model (including its business environment, organization and structure, markets, objectives and strategies, plus the main factors and trends that can affect its future performance).	Business model and strategy (p. 8); About this chapter (p. 19); Materiality matrix (p. 24); Materiality assessment (p. 96).	GRI 2-1 GRI 2-2 GRI 2-3 GRI 2-4 GRI 2-5 GRI 2-6 GRI 2-7 GRI 2-22
	A description of the Group's policies that includes due diligence procedures for identifying, assessing, preventing and mitigating risks and significant impacts, and for verifying and controlling, including the measures in which they have been adopted):	Policies (p. 27); Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management section).	GRI 3-3
	The results of these policies , including key indicators of relevant non-financial results that allow the monitoring and evaluation of progress and that favour the comparability between companies and sectors, in accordance with national, European or international frameworks of reference used for each matter.	A talented and motivated team (p. 38); Acting responsibly towards customers (p. 48); Responsible procurement (p. 52); Supporting the green transition (p. 53); Socially responsible investment (p. 68).	GRI 2-24 GRI 3-3
	The main risks related to these matters associated with the Group's activities (business relationships, products or services) that may have a negative effect in these areas, and how the Group manages these risks, explaining the procedures used to detect and assess them in accordance with national, European or international frameworks of reference for each matter. It must include information about the impacts that have been detected, offering a breakdown, in particular of the main risks in the short, medium and long term.	Our progress in figures (p. 77). Risk and opportunities (p. 25); Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management section); Supporting the green transition (p. 53); Acting responsibly towards customers (p. 48); Risk management and compliance chapter (p. 420).	GRI 2-12



	Non-financial information to be disclosed	Chapter/section of the annual report	Correspondence with GRI indicators/Other regulations
1. Environmental Information	Detailed information on the current and foreseeable effects of the activities of the company in the environment and, where appropriate, health and safety, environmental evaluation or certification procedures; the resources dedicated to the prevention of environmental risks; the application of the principle of caution, the amount of provisions and guarantees for environmental risks.	Supporting the green transition (p. 53); Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management). At the end of the 2022 financial year, no significant account is presented in the Consolidated Annual Accounts of the Group that should be included in this chapter regarding environmental provisions or guarantees.	GRI 2-12 GRI 2-23 GRI 3-3
	Contamination:		
	Measures to prevent, reduce or repair CO ₂ emissions that seriously affect the environment, taking into account any form of air pollution, including noise and light pollution.	Supporting the green transition (p. 53) (Reducing our environmental footprint).	GRI 3-3 GRI 305-5
	Circular economy and waste prevention and management:		
	Waste prevention measures, waste recycling measures, waste reuse measures; other forms of waste recovery and reuse; actions against food waste.	Supporting the green transition (p. 53) (Reducing our environmental footprint).	GRI 3-3 GRI 301-1 GRI 306-2
	Sustainable use of resources:		
	Use and supply of water according to local limitations	Supporting the green transition (p. 53) (Reducing our environmental footprint); Our progress in figures (p. 77) (Environmental footprint)	GRI 303-5
	Consumption of raw materials and measures taken to improve the efficiency of its use.	Supporting the green transition (p. 53) (Reducing our environmental footprint); Our progress in figures (p. 77) (Environmental footprint)	GRI 3-3 GRI 301-1
	Energy: direct and indirect consumption, measures taken to improve energy efficiency, use of renewable energies	Supporting the green transition (p. 53) (Reducing our environmental footprint); Our progress in figures (p. 77) (Environmental footprint)	GRI 3-3 GRI 302-1 GRI 302-3 GRI 302-4
	Climate change:		
	Important elements of greenhouse gas emissions generated as a business activity (including goods and services produced)	Supporting the green transition (p. 53) (Reducing our environmental footprint); Our progress in figures (p. 77) (Environmental footprint)	GRI 3-3 GRI 305-1 GRI 305-2 GRI 305-3 GRI 305-4
	Measures taken to adapt to the consequences of climate change	Supporting the green transition (p. 53)	GRI 3-3 GRI 201-2
	Reduction targets voluntarily established in the medium and long term to reduce greenhouse gas emissions and means implemented for this purpose.	Supporting the green transition (p. 53)	GRI 2-23 GRI 3-3
	Protection of biodiversity:		
Measures taken to preserve or restore biodiversity	Supporting the green transition (p. 53) (Our approach to nature and biodiversity).	GRI 3-3	
Impacts caused by the activities or operations of protected areas		GRI 304-2	



	Non-financial information to be disclosed	Chapter/section of the annual report	Correspondence with GRI indicators/Other regulations
	Employment:		
	Total number and distribution of employees by gender, age, country and professional classification	Our progress in figures (p. 77).	GRI 2-7 GRI 3-3 GRI 405-1
	Total number and distribution of contracts modes and annual average of undefined contracts, temporary contracts, and part-time contracts by: sex, age and professional classification.	Our progress in figures (p. 77).	GRI 2-7 GRI 405-1
	Number of dismissals by: gender, age and professional classification.	Our progress in figures (p. 77).	GRI 401-1
	Average remuneration and its progression broken down by gender, age and professional classification	Our progress in figures (p. 77).	GRI 405-2
	Salary gap and remuneration of equal or average jobs in society	A talented and motivated team (p. 38) (Diversity, equity and inclusion section).	GRI 3-3 GRI 405-2
	Average remuneration of directors and executives (including variable remuneration, allowances, compensation, payment to long-term savings forecast systems and any other payment broken down by gender)	Our progress in figures (p. 77).	GRI 2-19 GRI 2-20 GRI 3-3 GRI 405-2
	Implementation of work disconnection policies	A talented and motivated team (p. 38) (Transforming the way we work section).	GRI 3-3
	Employees with disabilities	Our progress in figures (p. 77).	GRI 405-1
	Organization of work:		
	Organization of work time	A talented and motivated team (p. 38) (Transforming the way we work section).	GRI 3-3
	Number of absent hours	Our progress in figures (p. 77).	GRI 403-9 GRI 403-10
	Measures designed to facilitate work-life balance and encourage a jointly responsible use of said measures by parents	A talented and motivated team (p. 38) (Gender equality section).	GRI 3-3
	Health and safety:		
	Conditions of health and safety in the workplace	A talented and motivated team (p. 38) (Employees' health and well-being section).	GRI 3-3
	Occupational accidents, in particular their frequency and severity, as well as occupational illnesses. Broken down by gender.	Our progress in figures (p. 77).	GRI 403-9 GRI 403-10
	Social relations:		
	Organization of social dialogue (including procedures to inform and consult staff and negotiate with them)	A talented and motivated team (p. 38) (Social dialogue section). Acting responsibly towards customers (p. 48); Stakeholders engagement (p. 93).	GRI 3-3
	Percentage of employees covered by collective bargaining agreements by country	Our progress in figures (p. 77).	GRI 2-30
	Balance of the collective bargaining agreements (particularly in the field of health and safety in the workplace)	A talented and motivated team (p. 38) (Employees' health and well-being section)	GRI 403-1 GRI 403-4
	Mechanisms and procedures that employers have for encouraging the involvement of workers in management of the company, in terms of information, consultation and participation	Conduct and ethical behaviours (p. 33) (Ethical channels)	
	Training:		
	The policies implemented in the field of training	A talented and motivated team (p. 38) (Ensuring we have the right talent and skills section).	GRI 3-3 GRI 404-2
	Total number of hours of training by professional categories.	Our progress in figures (p. 77).	GRI 404-1

2.
Social



	Non-financial information to be disclosed	Chapter/section of the annual report	Correspondence with GRI indicators/Other regulations
	Accessibility:		
	Universal accessibility of people	A talented and motivated team (p. 38) (Diversity, equity and inclusion section); Acting responsibly towards customers (p. 48); Support to higher education and other local initiatives (p. 73).	GRI 3-3
	Equality:		
2. Social	Measures taken to promote equal treatment and opportunities between women and men, Equality plans (Chapter III of Organic Law 3/2007, of 22 March, for the effective equality of women and men), measures taken to promote employment, protocols against sexual and gender-based harassment, Policy against all types of discrimination and, where appropriate, integration of protocols against sexual and gender-based harassment and protocols against all types of discrimination and, where appropriate, management of diversity	A talented and motivated team (p. 38) (Diversity, equity and inclusion section); Support to higher education and other local initiatives (p. 73).	GRI 3-3
	Application of due diligence procedures in the field of Human Rights	Policies (p. 27); Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management and Human rights protection section); Responsible Procurement (p. 52).	GRI 2-25 GRI 3-3
	Prevention of the risks of Human Rights violations and, where appropriate, measures to mitigate, manage and repair any possible abuses committed	Policies (p. 27); Conduct and ethical behaviour (p. 33) (General code of conduct, Environmental, social and climate change risk management, and Human rights protection sections); Responsible Procurement (p. 52).	GRI 2-23 GRI 2-24 GRI 2-25 GRI 2-26
3. Human Rights	Complaints about cases of human rights violations	Conduct and ethical behaviour (p. 33) (Ethical channels section).	GRI 406-1
	Promotion and compliance with the provisions of the fundamental conventions of the International Labour Organization regarding respect for freedom of association and the right to collective bargaining.	A talented and motivated team (p. 38)	GRI 3-3
	Elimination of discrimination in respect of employment and occupation; elimination of forced or compulsory labour; and the effective abolition of child labour.	Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management and Human rights sections)	GRI 2-23 GRI 3-3 GRI 406-1
	Measures taken to prevent corruption and bribery	Policies (p. 27); Conduct and ethical behaviour (p. 33) (Financial crime compliance section). Risk management and compliance chapter: 7.2 Compliance and conduct risk management section (p. 478).	GRI 2-23 GRI 2-26 GRI 3-3 GRI 205-1 GRI 205-2
4. Fight against corruption	Measures to combat money laundering	Policies (p. 27); Conduct and ethical behaviour (p. 33) (Financial crime compliance section). Risk management and compliance chapter: 7.2 Compliance and conduct risk management section (p. 478).	GRI 2-23 GRI 2-26 GRI 3-3 GRI 205-1 GRI 205-2
	Contributions to non-profit foundations and entities	Support to higher education and other local initiatives (p. 73).	GRI 413-1



	Non-financial information to be disclosed	Chapter/section of the annual report	Correspondence with GRI indicators/Other regulations
	Commitments of the company to sustainable development:		
	The impact of the company's activity on employment and local development	Support to higher education and other local initiatives (p. 73). Financial inclusion and empowerment (p. 70). Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	GRI 3-3 GRI 203-1 GRI 203-2 GRI 413-1 GRI 413-2
	The impact of the company's activity on local towns and villages and in the country.	Support to higher education and other local initiatives (p. 73). Financial inclusion and empowerment (p. 70).	GRI 203-1 GRI 203-2 GRI 411-1 GRI 413-1 GRI 413-2
5. Information on the company	Relations maintained with the representatives of local communities and the modalities of dialogue with them.	Stakeholder engagement (p. 93).	GRI 2-29
	Association or sponsorship actions	Santander participates in the sectoral associations representing financial activity in the countries in which it operates, such as the AEB in the case of Spain.	GRI 2-28
	Outsourcing and suppliers:		
	Inclusion of social, gender equality and environmental issues in the procurement policy	Responsible procurement (p. 52).	GRI 2-6 GRI 3-3
	Consideration in relations with suppliers and subcontractors of their responsibility	Responsible procurement (p. 52).	GRI 204-1 GRI 308-1 GRI 414-1
	Supervision and audit systems and resolution thereof	Responsible procurement (p. 52).	GRI 3-3
	Consumers:		
	Measures for the health and safety of consumers	Acting responsibly towards customers (p. 48). Risk management and compliance chapter: 7.2 Compliance and conduct risk management section (p. 478)	GRI 3-3 GRI 416-1 GRI 417-1
	Systems for complaints received and resolution thereof	Acting responsibly towards customers. (p. 48); Risk management and compliance chapter (7.2 Compliance and conduct risk management section) (p. 478).	GRI 2-26 GRI 3-3 GRI 416-2 GRI 417-2 GRI 418-1
5. Information on the company	Tax information:		
	The profits obtained country by country	Auditor's report and 2022 annual consolidate accounts (p. 502) (Annex VI Annual banking report) and Auditor's Report and 2021 annual consolidate accounts (Annex VI Annual banking report).	GRI 3-3 GRI 207-1
	Taxes on benefits paid	Our progress in figures (p. 77) (4.3 Tax contribution)	
	Public grants received	GRI content index (p. 130).	GRI 201-4
6. Other relevant information	EU Taxonomy	Information related to article 8 of EU Taxonomy: Socially responsible investment (p. 68); EU Taxonomy (p. 100).	EU Regulation 2020/852 and Commission Delegated Regulations 2021/2139 of 4 June and 2021/2178 of 6 July

In addition to the contents mentioned in the previous table, the consolidated non-financial information statement of Banco Santander includes the following contents: 1, 2-8, 2-10, 2-11, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-21, 2-27, 3-1, 3-2, 201-1, 201-3, 202-1, 202-2, 205-3, 206-1, 207-1, 207-2, 207-3, 207-4, 302-2, 302-5, 304-1, 304-3, 304-4, 305-6, 305-7, 306-1, 306-3, 306-4, 306-5, 308-2, 401-2, 401-3, 403-2, 403-3, 403-5, 403-6, 403-8, 404-3, 414-2, 415-1, 417-3.



6.2 UN Global Compact content index

Banco Santander has been a member of the United Nations Global Compact since 2002. Through the Responsible Banking chapter of this 2022 Annual Report, the bank shows its support and progress in complying with the Ten Principles of the United Nations Global Compact in the areas of human rights, labour, environment and anti-corruption.

Principles		Reference in the 2022 Annual report	Correspondence with GRI indicators
Human rights			
Principle 1:	Businesses should support and respect the protection of internationally proclaimed human rights.	Policies (p. 27); Governance (p. 28); Conduct and ethical behaviour (p. 33) (General code of conduct, Environmental, social and climate change risk management, and Human rights protection section); Responsible Procurement (p. 52).	GRI 2-7, 2-22, 2-23, 2-30, 201-3, 205-2, 401-1, 401-2, 403-1, 403-6, 403-9, 406-1, 414-1
Principle 2:	Businesses should make sure they are not complicit in human rights abuses.	A talented and motivated team (p. 38) (Our listening section); Conduct and ethical behaviour (p. 33) (Ethical channels section)	GRI 406-1, 414-1
Labour			
Principle 3:	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	A talented and motivated team (p. 38) (Social dialogue section).	GRI 2-30, 401-2
Principle 4:	Businesses should uphold the elimination of all forms of forced and compulsory labour.	Conduct and ethical behaviour (p. 33) (Environmental and social risk analysis and Human rights sections).	
Principle 5:	Businesses should uphold the effective abolition of child labour.	Conduct and ethical behaviour (p. 33) (Environmental and social risk analysis and Human rights sections).	
Principle 6:	Businesses should uphold the elimination of discrimination in respect to employment and occupation.	A talented and motivated team (p. 38) (Diversity, equity and inclusion section).	GRI 2-7, 401-1, 401-2, 403-9, 404-1, 404-2, 404-3, 405-1, 406-1
Environment			
Principle 7:	Businesses should support a precautionary approach to environmental challenges.	Supporting the green transition (p. 53).	GRI 308-1
Principle 8:	Businesses should undertake initiatives to promote greater environmental responsibility.	Supporting the green transition (p. 53).	GRI 302-1, 302-4, 303-5, 305-1, 305-2, 305-3, 305-4, 305-5
Principle 9:	Businesses should encourage the development and diffusion of environmentally friendly technologies.	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77).	GRI 302-4, 305-5
Anti-Corruption			
Principle 10:	Businesses should work against corruption in all its forms, including extortion and bribery.	Policies (p. 27); Conduct and ethical behaviour (p. 33) (Financial crime compliance section); Risk management and compliance chapter: 7.2 Compliance and conduct risk management section (p. 478).	GRI 2-23, 2-27, 205-1, 205-2



6.3 UNEP FI Principles for Responsible Banking reporting index

Principle 1: Alignment



We will align our business strategy to be consistent with and contribute to individuals' needs and society's goals, as expressed in the Sustainable Development Goals, the Paris Climate Agreement and relevant national and regional frameworks.

Business model

Describe (high-level) your bank's business model, including the main customer segments served, types of products and services provided, the main sectors and types of activities across the main geographies in which your bank operates or provides products and services. Please also quantify the information by disclosing e.g. the distribution of your bank's portfolio (%) in terms of geographies, segments (i.e. by balance sheet and/or off-balance sheet) or by disclosing the number of customers and clients served.

Santander is a retail bank operating in 3 regions (Europe, North America and South America) and in 10 main markets. Furthermore, we have two global businesses: like Santander Corporate & Investment Banking; Wealth Management & Insurance

Our business model is based on three pillars:

- Customer focus: Deepening the relationships with our customers through a simpler value proposition, superior customer experience and our digital proposition
- Our scale: Local scale and leadership.
- Diversification. Our geographic and business diversification allow us to overcome regional challenges in our footprint and business lines.

Building on our technology to further strengthen our customers' loyalty.

-Total customers served: 160 million

-Gross loans and advances to customers by region: Europe (57%); North America (16%); South America (15%); Digital Consumer bank (12%).

-Gross loans and advances to customers by segment: individuals (62%), SMEs and corporates (24%) and SCIB (14%).

Links and references

Corporate website - www.santander.com

- About us
- Our approach

2022 Digital Annual Review

2022 Annual Report

- [Business model and strategy](#) chapter
- [Economic and financial review](#) chapter



Strategy alignment

Does your corporate strategy identify and reflect sustainability as strategic priority/ies for your bank?

Yes

No

Please describe how your bank has aligned and/or is planning to align its strategy to be consistent with the Sustainable Development Goals (SDGs), the Paris Climate Agreement, and relevant national and regional frameworks.

Does your bank also reference any of the following frameworks or sustainability regulatory reporting requirements in its strategic priorities or policies to implement these?

UN Guiding Principles on Business and Human Rights

International Labour Organization fundamental convention

UN Global Compact

UN Declaration on the Rights of Indigenous Peoples

Any applicable regulatory reporting requirements on environmental risk assessments, e.g. on climate risk - please specify which ones: **NFRD (Spanish Act 11/2018), Pillar III**

Any applicable regulatory reporting requirements on social risk assessments, e.g. on modern slavery - please specify which ones: **Modern Slavery Act 2015 UK**

None of the above

At Banco Santander we are committed to inclusive and sustainable growth. Our purpose as a company is to help people and businesses prosper. Our aim is to be the best open financial services platform, by acting responsibly and earning the lasting loyalty of our people, customers, shareholders and communities.

As a responsible bank, we focus on areas where our activity can have the greatest impact and support an inclusive and sustainable growth.

We are a member of the United Nations Global Compact since 2002. Our policies take into account the highest international standards.

Our activity and investments contribute to several United Nations' Sustainable Development Goals and to the Paris Agreement. We have identified three SDGs in which the Group has the greatest impact (8, 13 and 16) and eight more to which we also make a very significant contribution through our activity and our social programmes (1, 4, 5, 7, 10, 11, 12, 13 and 17)

We support the Paris Agreement goals and in 2021 we set our ambition to be net zero carbon emissions by 2050.

We also drive our responsible banking agenda through a number of local and international initiatives and working groups, including: UN Principles for Responsible Banking, TCFD, NZBA, Equator principles, CDP; UN Principles for Responsible Investment, UN Women's Empowerment Principles, The Valuable 500, or CEO partnership for Economic inclusion.

We comply with all regulatory requirements regarding ESG disclosure. Our Responsible banking chapter of the Annual report 2022 is the consolidated non-financial information statement of Banco Santander, S.A. and its subsidiaries. It provides detailed information in accordance with Spanish Act 11/2018, which transposes into Spanish law Directive 2014/95/EU. Our first Pillar 3 ESG risk disclosure also covered the new market requirements.

Taking all this into consideration, our three main priorities as a responsible bank are:

- Support the transition to a low carbon economy;
- Promote inclusive growth;
- Strong governance and culture across the organization.

Links and references

2022 Digital Annual Review

- About us

2022 Annual Report -

Responsible banking chapter

- [2.3 Our ESG agenda](#)
- [5.1 Stakeholder engagement](#)
- [6.8 SDGs contribution content index](#)

Other references

- Santander UK Modern Slavery Statement - www.santander.co.uk/about-santander/investor-relations/modern-slavery-statement



Principle 2: Impact and Target Setting



We will continuously increase our positive impacts while reducing the negative impacts on, and managing the risks to, people and environment resulting from our activities, products and services. To this end, we will set and publish targets where we can have the most significant impacts.

2.1 Impact Analysis (Key Step 1)

Show that your bank has performed an impact analysis of its portfolio/s to identify its most significant impact areas and determine priority areas for target-setting. The impact analysis shall be updated regularly¹ and fulfil the following requirements/elements (a-d)²:

a) Scope: What is the scope of your bank's impact analysis? Please describe which parts of the bank's core business areas, products/services across the main geographies that the bank operates in (as described under 1.1) have been considered in the impact analysis. Please also describe which areas have not yet been included, and why

Banco Santander performs a materiality assessment, (last deep dive in 2021 and refresh in 2022) to identify the most relevant items in ESG following a double materiality approach.

Also in 2022 we conducted a first exercise to identify impacts, risks and opportunities for Banco Santander, aligned to our materiality assessment.

The scope of the exercise was Group while taking into account the Bank's main business segments (mainly retail banking and corporate and investment banking).

The identified four relevant aspects (climate change, financial health and inclusion, quality employment and responsible management and business development) also takes into account context and trends of the different geographies in which we operate.

Links and references

Annual report 2022 -

Responsible banking chapter

- [2.1 Materiality matrix](#)

- [2.2 Risk and opportunities](#)

- [5.2 Materiality assessment](#)

- [5.3 Risk and opportunities analysis](#)

b) Portfolio composition: Has your bank considered the composition of its portfolio (in %) in the analysis? Please provide proportional composition of your portfolio globally and per geographical scope

i) by sectors & industries³ for business, corporate and investment banking portfolios (i.e. sector exposure or industry breakdown in %), and/or

ii) by products & services and by types of customers for consumer and retail banking portfolios.

If your bank has taken another approach to determine the bank's scale of exposure, please elaborate, to show how you have considered where the bank's core business/major activities lie in terms of industries or sectors.

The identification of risk and opportunities takes into account key features of Santander such as our geographical footprint and our customers' profile (mostly retail).

- Credit risk distribution by region (31 dec 2022): Europe (57%), South America (16%), North America (15%) and Digital Consumer Bank (11%).

- Credit risk distribution by segment (31 dec 2022): Individuals (56%); Companies (24%); SCIB (24%).

For climate issues we developed an in-depth materiality assessment (Climate risk analysis and heat mapping of portfolios) with our exposure to different climate-material sectors also including an assessment of transition and physical risk. This materiality assessment identifies the climate most material portfolios. It covers more than 80% of our balance sheet and include assessments of residual value, strategic, market and liquidity risks.

Links and references

Annual report 2022 -

Responsible banking chapter

- [3.6 Supporting the green transition](#)

Annual report 2022 - Risk management and compliance chapter

- [3. Credit risk](#)

1. That means that where the initial impact analysis has been carried out in a previous period, the information should be updated accordingly, the scope expanded as well as the quality of the impact analysis improved over time.

2. Further guidance can be found in the Interactive Guidance on impact analysis and target setting (<https://www.unepfi.org/wordpress/wp-content/uploads/2022/05/Impact-and-Target-Process-V-1.1-09.05.2022.pdf>).

3. 'Key sectors' relative to different impact areas, i.e. those sectors whose positive and negative impacts are particularly strong, are particularly relevant here.



c) Context: What are the main challenges and priorities related to sustainable development in the main countries/ regions in which your bank and/or your clients operate?⁴ Please describe how these have been considered, including what stakeholders you have engaged to help inform this element of the impact analysis.

This step aims to put your bank's portfolio impacts into the context of society's needs.

Our materiality assessment reflects trends related to geopolitical tensions; inequality; the rising cost of living; stricter regulation; and other aspects that impact on our markets. It also takes inputs from subsidiaries on digitalization, innovation, human rights; regulation; and other issues.

We analyzed internal and external sources, including: Group local materialities, financial sector materiality, and main relevant reports published by sustainable trend setters. We also reviewed latest regulations, reporting standards and ESG ratings analysis.

This helped us to refresh previous materiality assessment, which also included an in-depth consultation with our key stakeholders (we ran workshops, surveys and one-to-one interviews and gathered feedback from customers, employees, senior managers, investors and NGOs).

Links and references

Annual report 2022 -
Responsible banking chapter

- [2.1 Materiality matrix](#)
- [2.2 Risk and opportunities](#)
- [5.2 Materiality assessment](#)
- [5.3 Risk and opportunities analysis](#)

Based on these first 3 elements of an impact analysis, what positive and negative impact areas has your bank identified? Which (at least two) significant impact areas did you prioritize to pursue your target setting strategy (see 2.2)⁵? Please disclose.

We have identified four areas of social concerns — one environmental, two social and one economic/governance (climate change, financial health and inclusion, quality employment and responsible management and business development) — where we can have a major impact due to the risk and opportunities they bring.

Of those, we have prioritised those two areas in which we believe we can contribute the most (minimizing negative impacts or maximizing positive ones) and which are aligned to our core business.

- Climate change
- Financial health & inclusion

Links and references

Annual report 2022 -
Responsible banking chapter

- [2.2 Risk and opportunities](#)
- [2.3 Our ESG agenda](#)
- [5.3 Risk and opportunities analysis](#)

d) For these (min. two prioritized impact areas): Performance measurement: Has your bank identified which sectors & industries as well as types of customers financed or invested in are causing the strongest actual positive or negative impacts? Please describe how you assessed the performance of these, using appropriate indicators related to significant impact areas that apply to your bank's context.

In determining priority areas for target-setting among its areas of most significant impact, you should consider the bank's current performance levels, i.e. qualitative and/or quantitative indicators and/or proxies of the social, economic and environmental impacts resulting from the bank's activities and provision of products and services. If you have identified climate and/or financial health&inclusion as your most significant impact areas, please also refer to the applicable indicators in the Annex.

If your bank has taken another approach to assess the intensity of impact resulting from the bank's activities and provision of products and services, please describe this.

The outcome of this step will then also provide the baseline (incl. indicators) you can use for setting targets in two areas of most significant impact.



As mentioned above, for the area of climate change, we developed a Climate risk analysis and heat mapping of portfolios. This analysis reflects our exposure to different climate-material sectors with an assessment of transition and physical risk, and hence, identifies the climate most material portfolios. The sectors with high and very high transition risk are the high-emitters, where we have focused to set decarbonisation targets. By year end, we have already set decarbonisation targets for five of these sectors.

Climate poses not only risks but also opportunities. We have worked to identify where are the largest opportunities to help the customers and the economies we serve in the transition to a low carbon economy. Prioritized sectors in the commercial banking portfolios are: Green buildings, Clean mobility, Sustainable Agro, Renewables and Circular Economy.

For large corporates (SCIB) main focus is in renewables and sustainable tech.

In the second area, financial inclusion and financial health, we pursue different aims depending on the context of the geographies we operate. In Latin America, we focus on giving people access to the financial system. In mature markets, we seek to ensure that no one needs to leave it.

Wherever we operate, we target unbanked and underserved individuals and SMEs that have difficulty in accessing credit; limited financial knowledge; or are in financial distress.

Links and references

Annual report 2022 -

Responsible banking chapter

- [3.6 Supporting the green transition](#)
- [3.8 Financial inclusion and empowerment](#)

4. Global priorities might alternatively be considered for banks with highly diversified and international portfolios.

5. To prioritize the areas of most significant impact, a qualitative overlay to the quantitative analysis as described in a), b) and c) will be important, e.g. through stakeholder engagement and further geographic contextualisation.

Self-assessment summary:

Which of the following components of impact analysis has your bank completed, in order to identify the areas in which your bank has its most significant (potential) positive and negative impacts?⁶

Scope: Yes In progress No

Portfolio composition: Yes In progress

Context: Yes In progress No

Performance measurement: Yes In progress No

Which most significant impact areas have you identified for your bank, as a result of the impact analysis?

Climate change mitigation and financial health & inclusion

How recent is the data used for and disclosed in the impact analysis?

Up to 6 months prior to publication

Up to 12 months prior to publication

Up to 18 months prior to publication

Longer than 18 months prior to publication

Open text field to describe potential challenges, aspects not covered by the above etc.: (optional)

6. You can respond "Yes" to a question if you have completed one of the described steps, e.g. the initial impact analysis has been carried out, a pilot has been conducted.



2.2 Target Setting (Key Step 2)

Show that your bank has set and published a minimum of two targets which address at least two different areas of most significant impact that you identified in your impact analysis.

The targets⁷ have to be Specific, Measurable (qualitative or quantitative), Achievable, Relevant and Time-bound (SMART). Please disclose the following elements of target setting (a-d), for each target separately:

a) Alignment: which international, regional or national policy frameworks to align your bank's portfolio with⁸ have you identified as relevant? Show that the selected indicators and targets are linked to and drive alignment with and greater contribution to appropriate Sustainable Development Goals, the goals of the Paris Agreement, and other relevant international, national or regional frameworks.

You can build upon the context items under 2.1.

Regarding Climate change we set our ambition to be net zero in carbon emissions by 2050 in February 2021 (2020 Annual Report). We're also a founding member of the UNEP FI Net Zero Banking Alliance (NZBA) as a key initiative to help us drive progress towards our net zero ambition.

We fulfilled the first round of target-setting as part of our UNEP FI Net Zero Banking Alliance (NZBA) commitments. We addressed most of the material and high-emitting sectors we financed, provided data and methodologies were available.

We base our work on NZBA guidelines and recommendations, the PCAF standard, GFANZ publications, SBTi recommendations and other standards that enrich our internal methodologies.

In financial inclusion we have developed an internal methodology to compute the number of people we provide with Access, Finance or Financial Education initiative. This methodology considers international best practice, has been ratified by an independent third party, and includes the Group's common principles, definitions and standards to count the number of people that our initiatives, products and services have empowered financially.

Links and references

Annual report 2022 -

Responsible banking chapter

- [3.6 Supporting the green transition](#)

Climate finance report

- 5. Metrics and targets

b) Baseline: Have you determined a baseline for selected indicators and assessed the current level of alignment?

Please disclose the indicators used as well as the year of the baseline.

You can build upon the performance measurement undertaken in 2.1 to determine the baseline for your target.

A package of indicators has been developed for climate change mitigation and financial health & inclusion to guide and support banks in their target setting and implementation journey. The overview of indicators can be found in the Annex of this template.

If your bank has prioritized climate mitigation and/or financial health & inclusion as (one of) your most significant impact areas, it is strongly recommended to report on the indicators in the Annex, using an overview table like below including the impact area, all relevant indicators and the corresponding indicator codes:

Impact area	Indicator code	Response
Climate change mitigation	...	See response below
	...	
	...	
Impact area	Indicator code	Response
Financial health & inclusion	...	See response below
	...	
	...	

In case you have identified other and/or additional indicators as relevant to determine the baseline and assess the level of alignment towards impact driven targets, please disclose these.



We have established baselines for our decarbonization targets.

Choice of base year: Our customers' emissions data takes longer to become available than regular financial information. We're using 2019 as the baseline for calculating targets & financed emissions because 2020 proved a clear outlier in many sectors due to the Covid-19 pandemic. This is consistent with industry practice, as 2019 is more representative of normal production levels.

In financial inclusion, we performed a baseline assessment during 2019 prior to set the target in this field. For this assessment, we considered the track record of financial inclusion & empowerment initiatives in previous years, the gap to address, and the context (i.e., unbanked population in LatAm). Based on this, we set the target of empowering financially 10 million people between 2019 and 2025.

Links and references

Climate finance report

- 5. Metrics and targets

7. Operational targets (relating to for example water consumption in office buildings, gender equality on the bank's management board or business-trip related greenhouse gas emissions) are not in scope of the PRB.

8. Your bank should consider the main challenges and priorities in terms of sustainable development in your main country/ies of operation for the purpose of setting targets. These can be found in National Development Plans and strategies, international goals such as the SDGs or the Paris Climate Agreement, and regional frameworks. Aligning means there should be a clear link between the bank's targets and these frameworks and priorities, therefore showing how the target supports and drives contributions to the national and global goals.



c) SMART targets (incl. key performance indicators (KPIs)⁹): Please disclose the targets for your first and your second area of most significant impact, if already in place (as well as further impact areas, if in place). Which KPIs are you using to monitor progress towards reaching the target? Please disclose.

Climate change. Our aim is to support the green transition and be Net zero in carbon emissions by 2050.

Portfolio alignment to Paris agreement goal

- Target / KPI 1: Thermal coal-related power & mining phase out. From 7 bn (2021) to 0 by 2030
- Target / KPI 2: Reduce emissions intensity of our power generation portfolio from 0.21 tCO₂e/MWh (2019) to 0.11 tCO₂e/MWh by 2030
- Target / KPI 3 [new 2022]: Reduce absolute emissions of energy portfolio from 23.84 mtCO₂e (2019) to 16.98 mtCO₂e in 2030
- Target / KPI 4 [new 2022]: Reduce emissions intensity of aviation portfolio from 92.47 grCO₂e / RPK (2019) to 61.71 grCO₂e / RPK in 2030
- Target / KPI 5 [new 2022]: Reduce emissions intensity of steel portfolio from 1.58 tCO₂e / tS (2019) to 1.07 tCO₂e / tS in 2030

Help customers transition to a low-carbon economy

- Target / KPI 6: To raise EUR 120bn in green finance between 2019 and 2025 and EUR 220bn by 2030

Help customers transition to a sustainable economy

- Target / KPI 7: 100 bn Socially Responsible Investment by 2025

Financial health & inclusion. Our aim is to help people access and use basic financial services; provide tailored finance to individuals and SMEs with difficulty accessing credit or that are in financial distress, and help people gain financial knowledge.

- Target 1: To financially empower 10 million people between 2019 and 2025.
 - KPI 1: # people helped to access and use basic financial services through simple payment platforms and cash-in/cash-out services in remote and small communities.
 - KPI 2: # micro entrepreneurs, customers in financial distress and low income / people with difficulties accessing credit for housing or basic financial needs supported.
 - KPI 3: # people benefited from financial education programmes.

Links and references

Annual report 2022 -

Responsible banking chapter

- [1.1 Highlights 2022](#)
- [3.6 Supporting the green transition](#)
- [3.8 Financial inclusion and empowerment](#)



d) Action plan: which actions including milestones have you defined to meet the set targets? Please describe.

Please also show that your bank has analysed and acknowledged significant (potential) indirect impacts of the set targets within the impact area or on other impact areas and that it has set out relevant actions to avoid, mitigate, or compensate potential negative impacts.

Climate change.

We have set a climate strategy, an ambition, and we are working to (1) set and operationalize decarbonization targets in the highest emitting sectors (1st round July 2022; 2nd round March 2024), reporting progress and action plans yearly; (2) supporting our customers in their transition (deploying solutions and increasing our green activity) and engaging with them as part of our action plan; (3) embedding climate in our Risk Management, revising the Risk appetite of portfolios with decarbonization targets and (4) and active managing the environmental footprint of our own operations, with multiyear plans agreed across units.

Financial health & inclusion.

Santander Finance for All is our initiative to support financial inclusion and empowerment. We financially empower people in three ways:

- Access. We help people access and use basic financial services through simple payment platforms and cash-in/cash-out services in remote and small communities.
- Finance. We provide tailored finance to individuals and SMEs with difficulty accessing credit or that are in financial distress.
- Resilience. We help people gain financial knowledge, making economic concepts more understandable and enabling them to make better financial decisions.

Links and references

Annual report 2022 -

Responsible banking chapter

- [1.1 Highlights 2022](#)
- [3.6 Supporting the green transition](#)
- [3.8 Financial inclusion and empowerment](#)

Self-assessment summary

Which of the following components of target setting in line with the PRB requirements has your bank completed or is currently in a process of assessing for your...

	... first area of most significant impact: ... Climate change	... second area of most significant impact: ... Financial health and inclusion	(If you are setting targets in more impact areas) ...your third (and subsequent) area(s) of impact: ... N/A
Alignment	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No
Baseline	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No
SMART targets	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No
Action plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> In progress <input type="checkbox"/> No

9. Key Performance Indicators are chosen indicators by the bank for the purpose of monitoring progress towards targets.



2.3 Target Implementation and Monitoring (Key Step 2)

For each target separately:

Show that your bank has implemented the actions it had previously defined to meet the set target.

Report on your bank's progress since the last report towards achieving each of the set targets and the impact your progress resulted in, using the indicators and KPIs to monitor progress you have defined under 2.2.

Or, in case of changes to implementation plans (relevant for 2nd and subsequent reports only): describe the potential changes (changes to priority impact areas, changes to indicators, acceleration/review of targets, introduction of new milestones or revisions of action plans) and explain why those changes have become necessary.

Climate change

Portfolio alignment to Paris agreement goal

- Target / KPI 1: Thermal coal-related power & mining phase out. From 7bn in 2021 to 5.9bn in 2022
- Target / KPI 2: Reduce emissions intensity of our power generation portfolio. From 0.21 tCO₂e/MWh (2019) to 0.17 tCO₂e/MWh in 2020.
- Targets / KPIs 3, 4 and 5 has been published in 2022. Progress will be reported in next Climate Finance report.

Help customers transition to a low-carbon economy

- Target / KPI 6: To raise EUR 120bn in green finance between 2019 and 2025 and EUR 220bn by 2030. 94.5bn by 2022
- Target / KPI 7: Socially Responsible Investment: 53.2 bn in 2022

Financial health & inclusion.

- Target 1: By 2022 we have reached 11.8 million of financially empowered people, fulfilling our target (10 million) three years ahead of schedule.
 - KPI 1: 3.1 million people helped to access and use basic financial services through simple payment platforms and cash-in/cash-out services in remote and small communities.
 - KPI 2: 3.6 million people that have received tailored finance for collectives with difficulties in accessing credit or in financial distress.
 - KPI 3: 5.1 million people helped to gain financial knowledge, making economic concepts more understandable and enabling them to make better financial decisions.

Links and references

Annual report 2022 -

Responsible banking chapter

- [1.1 Highlights 2022](#)



Principle 3: Clients and Customers



We will work responsibly with our clients and our customers to encourage sustainable practices and enable economic activities that create shared prosperity for current and future generations.

3.1 Client engagement

Does your bank have a policy or engagement process with clients and customers¹⁰ in place to encourage sustainable practices?

Yes In progress No

Does your bank have a policy for sectors in which you have identified the highest (potential) negative impacts?

Yes In progress No

Describe how your bank has worked with and/or is planning to work with its clients and customers to encourage sustainable practices and enable sustainable economic activities¹¹). It should include information on relevant policies, actions planned/implemented to support clients' transition, selected indicators on client engagement and, where possible, the impacts achieved.

This should be based on and in line with the impact analysis, target-setting and action plans put in place by the bank (see P2).

Our Responsible Banking and Sustainability Policy sets out the general principles, commitments, objectives and strategy that should guide Group's responsible banking and sustainability progress. The objective is promoting value creation in a sustainable manner for our stakeholders, setting how we should do things.

We also have other policies that support our responsible banking strategy, such as: Conduct Risk with Customers Management Model; Code of conduct in the securities markets; Cybersecurity policy; Third party approval policy; Tax policy; Conflicts of interest policy; Political party financing policy; Policy on contributions to social purpose; Global Health and Wellbeing policy; and Global mobility policy.

In addition, our socio-environmental and climate change risk management policy, establishes the identification, assessment, monitoring and management of environmental and social risks and other activities related to climate change. Together with the Principios de Ecuador, operations are analysed in relation to investment in entities, the provision of financial products or services in the oil and gas, electricity generation and mining and metallurgy sectors, as well as those derived from 'soft commodities' businesses.

Also, our Sensitive sectors policy provides guidelines for our involvement in industries that pose a reputational risk.

Links and references

Annual report 2022 -
Responsible banking chapter

- [2.4 Policies](#)

Corporate website -

www.santander.com

- Our approach/Policies - <https://www.santander.com/en/our-approach/policies>



3.2 Business opportunities

Describe what strategic business opportunities in relation to the increase of positive and the reduction of negative impacts your bank has identified and/or how you have worked on these in the reporting period. Provide information on existing products and services, information on sustainable products developed in terms of value (USD or local currency) and/or as a % of your portfolio, and which SDGs or impact areas you are striving to make a positive impact on (e.g. green mortgages – climate, social bonds – financial inclusion, etc.).

As main growth opportunities Banco Santander identifies.:

- **Green finance:** All initiatives aiming to support our customers in their transition to a low carbon economy. For large corps focus is mainly on renewables and sustainable tech solutions. In retail banking we have identified 5 areas of priority: green buildings, Clean mobility, renewables, sustainable agro and circular economy.
- **Financial inclusion/ microfinance:** our microfinance operations aim to support microentrepreneurs to set up and grow their businesses. We have operations in several markets across LatAm, mainly Brazil, Mexico, Uruguay, Colombia and Perú.
- **Financial inclusion/ Access:** we have the opportunity to provide access through bank accounts and digital solutions/ wallets for the base of the pyramid.

Links and references

Annual report 2022 -

Responsible banking chapter

- [2.2 Risk and opportunities](#)
- [3.6 Supporting the green transition](#)

10. A client engagement process is a process of supporting clients towards transitioning their business models in line with sustainability goals by strategically accompanying them through a variety of customer relationship channels.

11. Sustainable economic activities promote the transition to a low-carbon, more resource-efficient and sustainable economy.



Principle 4: Stakeholders



We will proactively and responsibly consult, engage and partner with relevant stakeholders to achieve society's goals.

4.1 Stakeholder identification and consultation

Does your bank have a process to identify and regularly consult, engage, collaborate and partner with stakeholders (or stakeholder groups¹²) you have identified as relevant in relation to the impact analysis and target setting process?

Yes In progress No

Please describe which stakeholders (or groups/types of stakeholders) you have identified, consulted, engaged, collaborated or partnered with for the purpose of implementing the Principles and improving your bank's impacts. This should include a high-level overview of how your bank has identified relevant stakeholders, what issues were addressed/results achieved and how they fed into the action planning process.

Our materiality assessment includes inputs from customers, employees, senior managers, investors and NGOs. We also consider external context, key trends, regulatory requirements, sustainability frameworks and standards, ESG ratings and peer banks.

We follow an approach of double materiality, prioritizing the issues both in terms of financial materiality and environmental and social materiality. The matrix ranks topics by relevance to Banco Santander, after applying weightings and scores to different sources and stakeholders interviewed.

We have identified fifteen material topics, under the Environmental, Social and Governance dimension.

Beyond the annual materiality assessment, we develop a continuous active listening and engagement along the year. We run surveys and speak-up channels for employees and customers. We assess externalities to identify risks and opportunities and to appraise our impact on the community. We respond to demands from analysts, investors and ratings and NGOs; keep pace with new regulation and best practices worldwide; and take part in consultations with authorities, trade bodies and other organizations on sustainability. We're also involved in major local and international initiatives to support inclusive and sustainable growth.

Links and references

Annual report 2022 -
Responsible banking chapter
• [5.2 Materiality assessment](#)

12. Such as regulators, investors, governments, suppliers, customers and clients, academia, civil society institutions, communities, representatives of indigenous population and non-profit organizations

Principle 5: Governance & Culture



We will implement our commitment to these Principles through effective governance and a culture of responsible banking

5.1 Governance Structure for Implementation of the Principles

Does your bank have a governance system in place that incorporates the PRB?

Yes In progress No

Please describe the relevant governance structures, policies and procedures your bank has in place/is planning to put in place to manage significant positive and negative (potential) impacts and support the effective implementation of the Principles. This includes information about

- which committee has responsibility over the sustainability strategy as well as targets approval and monitoring (including information about the highest level of governance the PRB is subjected to),
- details about the chair of the committee and the process and frequency for the board having oversight of PRB implementation (including remedial action in the event of targets or milestones not being achieved or unexpected negative impacts being detected), as well as
- remuneration practices linked to sustainability targets.

ESG Governance at Santander

1) The Board of Directors approves and oversees the implementation of policies and strategies related to corporate culture and values, responsible practices and sustainability (which includes UNEP FI's Responsible Banking principles). It also ensures that all the Group's employees are aware of the codes of conduct and act ethically, and ensures compliance with the laws, customs and good practices of the sectors and countries in which we operate.

2) Responsible Banking, Sustainability and Culture Committee (RBSCC) overseeing the Group's responsible banking programme and strategy. This committee is made up of a minimum of three and a maximum of nine directors, all external or non-executive, with a majority representation of independent directors. It meets four times a year.

3) Responsible Banking Forum, which meets six times a year, executes and drives the responsible banking strategy throughout the Group, drives decision-making and ensures the execution of any mandates from the CBRSC, other board committees and the board of directors itself. It also ensures alignment on key issues, including the review and submission of reports to the RBSCC.

4) Management meeting, chaired by the CEO, discusses quarterly our progress on the responsible banking agenda, including climate change, with a focus on the implementation of the TCFD recommendations and ESG business opportunities.

Remuneration linked to sustainability targets

Responsible Banking/ sustainability is part of the reward schemes, both short term (variable remuneration) and long term incentives. In both cases, Santander has put in place scorecards which leverage on ESG targets. In the case of the LTI scorecard 2022-2024, it comprises 5 metrics, including ratio of women in senior positions, number of financially empowered people, green finance volumes, number of sectors with decarbonization targets, and percentage reduction in power generation emissions intensity.

Links and references

Annual report 2022 - Responsible banking chapter

- [2.5 Governance](#)
- [3.3 A talented and motivated team](#) (Performance review and remuneration)

Annual report 2022 - Corporate governance chapter

- [4. Board of directors](#)
- [6. Remuneration](#)

Corporate website - www.santander.com

- Corporate governance - www.santander.com/en/shareholders-and-investors/corporate-governance
 - Rules and regulations of the Board of directors
 - Board of directors
 - Board committees

5.2 Promoting a culture of responsible banking:

Describe the initiatives and measures of your bank to foster a culture of responsible banking among its employees (e.g., capacity building, e-learning, sustainability trainings for client-facing roles, inclusion in remuneration structures and performance management and leadership communication, amongst others).



We have progressed on a 3 level training strategy:

- We launched the first global mandatory training in ESG for all employees, 'Sustainability for all'.
- We created ESG Talks, a series of online recordings, with internal experts from SCIB, Risk, Human Resources, Consumer Finance and Retail Banking for the areas involved in our sustainability agenda.
- We provided the contents for employees to obtain Santander ESG Commitment Fundamentals, International Sustainable Finance Specialist-IASE level II and other ESG expert certifications.

Some subsidiaries and global businesses provided additional training on climate change, sustainability, sustainable finance, sustainable investment, diversity and inclusion.

In 2022, the board of directors also completed training programmes on climate change, with modules on the Paris Agreement, net zero, portfolio alignment, climate risk management, transition plans, regulation and reporting, and biodiversity.

We also trained our employees on diversity and inclusion, health and safety, customer and supplier relations, the environment and anti-corruption.

Regarding culture of sustainability, Santander runs local and global employee awareness campaigns on the importance of reducing consumption and waste. Each subsidiary posts news and feature articles on the environment and the Group's ESG initiatives on its internal portal. In 2022, for the thirteenth consecutive year, we have observed Earth Hour, switching off the lights at the Group's most emblematic buildings.

We think it is key to lead by example: since 2021, our offices and buildings in our core markets have been free of single-use plastics in fulfilment of our public commitments on responsible banking. The Group aims to have ISO 1400111 certification for all the primary buildings it occupies. 30% of our employees already work in ISO 14001 or ISO 50001-certified buildings. Under our 2022-2025 Energy efficiency and sustainability plan, we aim to raise that by 6%.

Some buildings in Brazil, Germany, Poland and Spain are LEED Gold or Platinum-certified, while the Santander Group City and Santander España's central services buildings have 'Zero waste' certification.

Also, sustainability is part of reward schemes both short and long term as commented above.

Links and references

Annual report 2022 - Responsible banking chapter

- [3.3 A talented and motivated team](#) (Performance review and remuneration)
- [3.6 Supporting the green transition](#)

5.3 Policies and due diligence processes

Does your bank have policies in place that address environmental and social risks within your portfolio?¹³ Please describe.

Please describe what due diligence processes your bank has installed to identify and manage environmental and social risks associated with your portfolio. This can include aspects such as identification of significant/salient risks, environmental and social risks mitigation and definition of action plans, monitoring and reporting on risks and any existing grievance mechanism, as well as the governance structures you have in place to oversee these risks.



Our Environmental, social and climate change risk management policy sets out standards for investing in, and providing financial products and services to, companies and customers who engage in sensitive activities in the oil and gas, power generation and transmission, mining and metals, and soft commodities industries (especially retail customers involved in farming and ranching in the Amazon). We analyse customers subject to the policy with a detailed questionnaire that their assigned banker completes before a team of analysts conducts an overall assessment of their environmental, social and climate change risks (which we update every year). We also analyse one-off, project-related transactions in accordance with the Equator Principles and such international regulations as the International Finance Corporation Performance Standards. Following our environmental and social due diligence of projects, we ask our customers for mitigation plans, based on their risk rating.

Links and references

Annual report 2022 - Responsible banking chapter

- [3.2 Conduct and ethical behaviour](#) (Environmental and social risk management)

Corporate website - www.santander.com

- Our approach - Policies www.santander.com/en/our-approach/policies

13. Applicable examples of types of policies are: exclusion policies for certain sectors/activities; zero-deforestation policies; zero-tolerance policies; gender-related policies; social due diligence policies; stakeholder engagement policies; whistle-blower policies etc., or any applicable national guidelines related to social risks.

Self-assessment summary

Does the CEO or other C-suite officers have regular oversight over the implementation of the Principles through the bank's governance system?

Yes No

Does the governance system entail structures to oversee PRB implementation (e.g. incl. impact analysis and target setting, actions to achieve these targets and processes of remedial action in the event targets/milestones are not achieved or unexpected neg. impacts are detected)?

Yes No

Does your bank have measures in place to promote a culture of sustainability among employees (as described in 5.2)?

Yes In progress No



Principle 6: Transparency & Accountability



We will periodically review our individual and collective implementation of these Principles and be transparent about and accountable for our positive and negative impacts and our contribution to society's goals.

6.1 Assurance

Has this publicly disclosed information on your PRB commitments been assured by an independent assurer?

Yes Partially

If applicable, please include the link or description of the assurance statement.

This is our fourth reporting on the Principles for Responsible Banking, and has been verified with limited assurance by PricewaterhouseCoopers Auditores, S.L. for sections 2.1 Impact Analysis, 2.2 Target Setting, 2.3 Target Implementation and Monitoring and 5.1 Governance Structure for Implementation of the Principles. . An independent firm that also audited Banco Santander, S.A.'s consolidated Non-financial and financial statements for 2022.

Links and references

Annual report 2022 - Responsible banking chapter

• [Independent verification report](#)

6.2 Reporting on other frameworks

Does your bank disclose sustainability information in any of the listed below standards and frameworks?

GRI

SASB

CDP

IFRS Sustainability Disclosure Standards (to be published)

TCFD

Other: **WEF Stakeholder Capitalism Metrics**

Our chapter meets the Spanish Act 11/2018, UE 2017/C215/01 Guidelines on non-financial reporting, European Taxonomy regulation (Regulation (EU) 2020/852 and Commission Delegated Regulations 2021/2139 and 2021/2178), GRI Standards, and the GRI G4 guidelines on financial services disclosures. It also takes into account the Sustainability Accounting Standards Board's (SASB) 2018-10 industry standards, and the World Economic Forum's Stakeholder Capitalism Metrics. It shows Santander's progress with respect to the UN Principles for Responsible Banking, the TCFD recommendations, the 2030 Agenda and the UN Sustainable Development Goals.

Links and references

Annual report 2022 - Responsible banking chapter

• [About this chapter](#)

• [ESG reporting standards and references](#)

6.3 Outlook

What are the next steps your bank will undertake in next 12 month-reporting period (particularly on impact analysis¹⁴, target setting¹⁵ and governance structure for implementing the PRB)? Please describe briefly.

We will continue progressing in the identification of material items, risk and opportunities analysis.

Links and references

14. For example outlining plans for increasing the scope by including areas that have not yet been covered, or planned steps in terms of portfolio composition, context and performance measurement

15. For example outlining plans for baseline measurement, developing targets for (more) impact areas, setting interim targets, developing action plans etc.



6.4 Challenges

Here is a short section to find out about challenges your bank is possibly facing regarding the implementation of the Principles for Responsible Banking. Your feedback will be helpful to contextualise the collective progress of PRB signatory banks.

What challenges have you prioritized to address when implementing the Principles for Responsible Banking? Please choose what you consider the top three challenges your bank has prioritized to address in the last 12 months (optional question).

If desired, you can elaborate on challenges and how you are tackling these:

- | | |
|--|--|
| <input type="checkbox"/> Embedding PRB oversight into governance | <input checked="" type="checkbox"/> Customer engagement |
| <input type="checkbox"/> Gaining or maintaining momentum in the bank | <input type="checkbox"/> Stakeholder engagement |
| <input type="checkbox"/> Getting started: where to start and what to focus on in the beginning | <input type="checkbox"/> Data availability |
| <input checked="" type="checkbox"/> Conducting an impact analysis | <input type="checkbox"/> Data quality |
| <input checked="" type="checkbox"/> Assessing negative environmental and social impacts | <input type="checkbox"/> Access to resources |
| <input checked="" type="checkbox"/> Choosing the right performance measurement methodology/ies | <input type="checkbox"/> Reporting |
| <input checked="" type="checkbox"/> Setting targets | <input type="checkbox"/> Assurance |
| <input type="checkbox"/> Other: ... | <input type="checkbox"/> Prioritizing actions internally |

If desired, you can elaborate on challenges and how you are tackling these:



6.4 Global Reporting Initiative (GRI) content index

GRI 1

Statement of use	Grupo Santander has reported in accordance with the GRI Standards for the period between 01 January 2022 and 31 December 2022
GRI 1 used	Foundation 2021
Sectoral standard of application	Financial Services (GRI G4)

GRI Standards: GENERAL DISCLOSURES

GRI Standard	Disclosure	Page	Omission
GRI 2: GENERAL DISCLOSURES			
THE ORGANIZATION AND ITS REPORTING PRACTICES	2-1 Organizational details	Business model and strategy (p. 8); Note 1.a to the consolidated financial statements (p. 531).	-
	2-2 Entities included in the organization's sustainability reporting	2022 consolidated directors' report (Introduction)(p.4); About this chapter (p.19); Notes 3 and 52 to the consolidated financial statements; and Sections 3 and 4 of the Economic and financial review.	-
	2-3 Reporting period, frequency and contact point	2022 consolidated directors' report (Introduction)(p.4); About this chapter (p.19).	-
	2-4 Restatements of information	Our progress in figures (p. 77). Note 1.d to the consolidated financial statements (p. 531). The information on the number of employees and branches for the year ended 31 December 2021 has been restated for comparative purposes in accordance with the Group's homogenisation criteria.	-
	2-5 External assurance	About this chapter (p.19); Independent verification report (p. 155).	-
ACTIVITIES AND WORKERS	2-6 Activities, value chain and other business relationships	Business model and strategy (p.8); Section 4 of the Economic and financial review; Auditor's report and annual consolidated accounts (p. 530)(Appendix I. Subsidiaries of Banco Santander, S.A.).	-
	2-7 Employees	Our progress in figures (p. 77). Note 1.d to the consolidated financial statements (p. 531). The information on the number of employees for the year ended 31 December 2021 has been restated for comparative purposes in accordance with the Group's homogenisation criteria.	-
	2-8 Workers who are not employees	Information unavailable.	1



GRI Standard	Disclosure	Page	Omission
GOVERNANCE	2-9 Governance structure and composition	Governance (p. 28); Corporate Governance chapter of the annual report. (p. 158) (4. Board of directors).	-
	2-10 Nomination and selection of the highest governance body	Corporate Governance chapter of the annual report (p. 158)(4.2 Board composition).	-
	2-11 Chair of the highest governance body	Corporate Governance chapter of the annual report (p. 158)(4.3 Board functioning and effectiveness).	-
	2-12 Role of the highest governance body in overseeing the management of impacts	Governance (p. 28); Corporate Governance chapter of the annual report (p. 158)(4.3 Board functioning and effectiveness; 4.9 Responsible banking, sustainability and culture committee).	-
	2-13 Delegation of responsibility for managing impacts	Governance (p. 28); Corporate Governance chapter of the annual report (p. 158)(4.3 Board functioning and effectiveness; 4.9 Responsible banking, sustainability and culture committee).	-
	2-14 Role of the highest governance body in sustainability reporting	Governance (p. 28); Corporate Governance chapter of the annual report (p. 158)(4.3 Board functioning and effectiveness; 4.9 Responsible banking, sustainability and culture committee).	-
	2-15 Conflicts of interest	Conduct and ethical behaviours (p.33); Corporate Governance chapter of the annual report (p. 158)(4.12 Related-party transactions and other conflicts of interest); Auditor's report and consolidated annual accounts (p. 502).	-
	2-16 Communication of critical concerns	Corporate Governance chapter of the annual report (p. 158)(sections 4.4 to 4.10); Auditor's report and consolidated annual accounts (p. 502).	-
	2-17 Collective knowledge of the highest governance body	A talented and motivated team (p. 38) (3.3.2 Ensuring we have the right talent and skills); Corporate Governance chapter of the annual report (p. 158) (4.3 Board functioning and effectiveness).	-
	2-18 Evaluation of the performance of the highest governance body	Corporate Governance chapter of the annual report (p. 158) (4.3 Board functioning and effectiveness).	-
	2-19 Remuneration policies	A talented and motivated team (p. 38)(Performance review and remuneration subsection); Corporate Governance chapter of the Annual Report (p. 158)(6. Remuneration).	-
	2.20 Process to determine remuneration	Corporate Governance chapter of the Annual Report (p. 158)(4.7 Remuneration committee activities in 2022; 6. Remuneration).	-
	2-21 Annual total compensation ratio	Confidentiality constraints.	2
	STRATEGY, POLICIES AND PRACTICES	2-22 Statement on sustainable development strategy	Business model and strategy (p. 8); Our ESG agenda (p. 26).
2-23 Policy commitments		Highlights 2022 (p. 26)(Meeting our public targets); Our ESG agenda (p. 26); Policies (p. 27); Conduct and ethical behaviours (p.33).	-
2-24 Embedding policy commitments		Policies (p. 27); Governance (p. 28); Conduct and ethical behaviours (p.33); A talented and motivated team (p. 38); Acting responsibly towards customers (p. 48); Responsible procurement (p. 52); Supporting the green transition (p. 53); Socially responsible investment (p. 68). Corporate Governance chapter of the annual report (p. 158) (4. Board composition); Risk management and compliance chapter (p. 420)(7. Compliance and conduct risk).	-
2-25 Processes to remediate negative impacts		Conduct and ethical behaviours (p.33); Acting responsibly towards customers (p.48); Supporting the green transition (p. 53) (Risk management section). Risk management and compliance chapter (p. 420).	-
2-26 Mechanisms for seeking advice and raising concerns		A strong and inclusive culture: The Santander Way (p.32); Conduct and ethical behaviour (p.33)(Ethical channels); Risk management and compliance chapter (p. 420)(7.2 Compliance and conduct risk management).	-



GRI Standard	Disclosure	Page	Omission	
STRATEGY, POLICIES AND PRACTICES	2-27 Compliance with laws and regulations	<p>From 1 April 2020 to 31 January 2021, a legal payment moratorium for creditors affected by Covid took place in Austria. On 14 March 2022 Santander Consumer Bank, A.G. (SCB AG) received a cease and desist letter of the Austrian Consumer Protection Agency (Verein für Konsumenteninformation: "VKI"). VKI claimed that SCB AG charged interest on the credit accounts affected by the moratorium during the moratorium period and this was not admissible as clarified by the Supreme Court ruling on 22 December 2022. On 4 of May 2022, the Management Board of SCB AG approved to reach a settlement with VKI. The settlement was closed in July 2022 and Santander Consumer Bank, A.G. compensated 468 Accounts on request and 71 account with proactive compensation of €661,658.</p> <p>On 4 June 2021, the Massachusetts Attorney General issued a Civil Investigative Demand to Santander Consumer seeking all notices provided to Massachusetts residents from 30 March 2017 to the present regarding repossession or auction of a repossessed vehicle. The Attorney General alleged that the notices did not comply with Massachusetts law. On 18 February 2022, the Massachusetts Attorney General and SC entered into an Assurance of Discontinuance resolving the matter for payment by SC of approximately \$5.6 million.</p> <p>On 18 March 2021, a putative Pennsylvania-only class action filed in state court against Santander Consumer USA, Inc. (SC) alleging SC violated the Uniform Commercial Code and related Pennsylvania state law, and that the repossessions were not commercially reasonable and done in good faith and that SC failed to inform the consumer of a redemption and/or personal property fee that would have been required to have been paid in order to retrieve their personal affects. The parties agreed to settle this putative class action for US 14 million dollars. The court granted preliminary settlement approval on 31 December 2022, and final court approval of the settlement is currently scheduled for 17 October 2023.</p> <p>On 24 January 2020, a putative class action filed against Santander Bank, N.A. (SBNA) alleged that SBNA failed to pay 2% simple interest on insurance and tax escrow accounts as required under NY state law. The parties agreed to settle this putative class action for US 2 million dollars. On 14 November 2022, the court granted final approval of the settlement.</p> <p>On 28 September 2021, a former employee included Reduction in Force sued Santander Investment Securities Inc. (SIS) and her manager, in New York federal court alleging discrimination, failure to accommodate, and retaliation related to a current and previous pregnancy. On 27 October 2022, the plaintiff accepted SIS's offer to settle for US 900,000 dollars.</p> <p>A former branch manager terminated for failure to secure cash shipment sued SBNA for national origin and race discrimination. The Trial Court granted summary judgment in favor of SBNA. Plaintiff appealed. Matter settled for 575,000 USD prior to September 2022 trial.</p> <p>See also GRI 206-1, 416-2, 417-2, 417-3, 418-1</p>	3	
	2-28 Membership associations	Santander participates in industry associations representing financial activity in the countries where it operates, as the AEB in the case of Spain	-	
	STAKEHOLDER ENGAGEMENT	2-29 Approach to stakeholder engagement	Stakeholder engagement (p. 93); Materiality matrix (p. 24); Materiality assessment (p. 96).	-
		2-30 Collective bargaining agreements	A talented and motivated team (p. 38) (Social dialogue); Our progress in figures (p. 77).	-
	GRI 3: MATERIAL TOPICS			
	MATERIAL TOPICS	3-1 Process to determine material topics	Materiality assessment: Identifying the issues that matter (p. 96); Risk and opportunities analysis (p. 98); Risk and opportunities (p. 25)	-
3-2 List of material topics		Materiality matrix (p. 24). Materiality assessment: Identifying the issues that matter (p. 96).	-	
3-3 Management of material topics		Responsible banking chapter (p. 18)	-	



GRI Standards: Topic-specific disclosures

See material and non-material issues in sections 2.1 '[Materiality matrix](#)' and 5.2 '[Materiality assessment: identifying the issues that matter](#)'

GRI Standard	Disclosure	Page	Scope	Omission																										
ECONOMIC STANDARDS																														
ECONOMIC PERFORMANCE																														
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Business model and strategy (p. 8); Policies (p. 27); Stakeholder engagement (p. 93); Economic and financial review chapter (p. 304)	Group	-																										
GRI 201: ECONOMIC PERFORMANCE	201-1 Direct economic value generated and distributed	<p>€ million</p> <table border="1"> <tr> <td></td> <td>2022</td> </tr> <tr> <td>Economic value generated¹</td> <td>52,136</td> </tr> <tr> <td>Gross income</td> <td>52,117</td> </tr> <tr> <td>Net loss on discontinued operations</td> <td>0</td> </tr> <tr> <td>Gains/(losses) on disposal of assets not classified as non-current held for sale</td> <td>12</td> </tr> <tr> <td>Gains/(losses) on disposal of assets not classified as discontinued operations</td> <td>7</td> </tr> <tr> <td>Economic value distributed</td> <td>26,546</td> </tr> <tr> <td>Dividends</td> <td>979</td> </tr> <tr> <td>Other administrative expenses (except taxes)</td> <td>8,371</td> </tr> <tr> <td>Personnel expenses</td> <td>12,547</td> </tr> <tr> <td>Income tax and other taxes²</td> <td>4,486</td> </tr> <tr> <td>CSR investment</td> <td>163</td> </tr> <tr> <td>Economic value retained (economic value generated less economic value distributed)</td> <td>25,590</td> </tr> </table> <p>1. Gross income plus net gains on asset disposals. 2. Only includes income tax on profits accrued and taxes recognised during the period. Our progress in figures (p. 77) (4.3 Tax contribution) provides additional information on the taxes paid. 3. For comparative issues see Auditor's report and 2021 annual consolidate accounts.</p>		2022	Economic value generated ¹	52,136	Gross income	52,117	Net loss on discontinued operations	0	Gains/(losses) on disposal of assets not classified as non-current held for sale	12	Gains/(losses) on disposal of assets not classified as discontinued operations	7	Economic value distributed	26,546	Dividends	979	Other administrative expenses (except taxes)	8,371	Personnel expenses	12,547	Income tax and other taxes ²	4,486	CSR investment	163	Economic value retained (economic value generated less economic value distributed)	25,590	Group	-
	2022																													
Economic value generated ¹	52,136																													
Gross income	52,117																													
Net loss on discontinued operations	0																													
Gains/(losses) on disposal of assets not classified as non-current held for sale	12																													
Gains/(losses) on disposal of assets not classified as discontinued operations	7																													
Economic value distributed	26,546																													
Dividends	979																													
Other administrative expenses (except taxes)	8,371																													
Personnel expenses	12,547																													
Income tax and other taxes ²	4,486																													
CSR investment	163																													
Economic value retained (economic value generated less economic value distributed)	25,590																													
	201-2 Financial implications and other risks and opportunities due to climate change	Supporting the green transition (p. 53) (Governance, and risk management) Risk management and compliance chapter (p. 488) (10. Climate and environmental risk).	Group	-																										
	201-3 Defined benefit plan obligations and other retirement plans	The liability for provisions for pensions and similar obligations at 2022 year-end amounted to EUR 2,392 million (p. 514). Endowments and contributions to the pension funds in the 2022 financial year have amounted to EUR 361 million. The detail may be consulted in Auditor's report and annual consolidated accounts (p. 530) (Note 46.a to annual consolidated accounts). For comparative purposes see Audit report and consolidated annual accounts 2021.	Group	-																										
	201-4 Financial assistance received from government	The Bank has not received significant subsidies or public aids during 2021 and 2022. The detail may be consulted in Annual banking report, section e) Public subsidies (p. 805).	Group	-																										



	GRI Standard	Disclosure	Page	Scope	Omission
MARKET PRESENCE					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	A talented and motivated team (p. 38). corporate governance chapter (p. 158).	Grupo	-
	GRI 202: MARKET PRESENCE	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Our progress in figures (p. 77).	Group	-
		202-2 Proportion of senior management hired from the local community	Our progress in figures (p. 77). The Group Corporate Human Resources Model aims to attract and retain the best professionals in the countries in which it operates.	Group excluding USA	-
INDIRECT ECONOMIC IMPACT					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Financial inclusion and empowerment (p. 70). Support to higher education and other local initiatives (p. 73); Stakeholder engagement (p. 93).	Group	-
	GRI 203: INDIRECT ECONOMIC IMPACT	203-1 Infrastructure investments and services supported	Financial inclusion and empowerment (p. 70); Support to higher education and other local initiatives (p. 73).	Group	-
		203-2 Significant indirect economic impacts	Financial inclusion and empowerment (p. 70); Support to higher education and other local initiatives (p. 73).	Group	-
PROCUREMENT PRACTICES					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Responsible procurement (p. 52); Stakeholder engagement (p. 93).	Group	-
	GRI 204: PROCUREMENT PRACTICES	204-1 Proportion of spending on local suppliers	Responsible procurement (p. 52).	Group	-
ANTI-CORRUPTION					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	2022 overview (p. 21). A strong and inclusive culture: The Santander Way (p. 32); Risk management and compliance chapter (p. 420).	Group	-
	GRI 205: ANTI-CORRUPTION	205-1 Operations assessed for risks related to corruption	Risk management and compliance chapter (p. 420).	Group	-
		205-2 Communication and training about anti-corruption policies and procedures	Conduct and ethical behaviour (p. 33) (Finance crime compliance). Risk management and compliance chapter (p. 420).	Group	-
		205-3 Confirmed incidents of corruption and actions taken	Conduct and ethical behaviour (p. 33) (Ethical channel). Risk management and compliance chapter (p. 420).	Group	4



GRI Standard	Disclosure	Page	Scope	Omission
ANTI-COMPETITIVE BEHAVIOR				
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	2022 overview (p. 21). A strong and inclusive culture: The Santander Way (p. 32). Risk management and compliance chapter (p. 420).	Group	-
GRI 206: ANTI-COMPETITIVE BEHAVIOUR	206-1 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	<p>On 23 September 2020 the UOKiK (Office of Competition and Consumer Protection in Poland) published its decision in which a clause used by Santander Bank Poland in annexes to agreements on residential mortgage loans indexed to foreign currencies, was declared abusive. The clause relates to FX exchange rate (method of its determination). Fine: EUR 5,3 million. Banco Santander Poland appealed the decision of the UOKiK before the Court of Competition and Consumer Protection, which resolved favorably for the Bank. This decision is subject to appeal.</p> <p>On 30 December 2021 the President of the UOKiK (Office of Competition and Consumer Protection in Poland) fined Santander Consumer Bank Poland (SCB Poland) with 9.8 million euros for an alleged breach of consumer regulations in respect of the proceedings regarding individual offers and insurance. SCB Poland has appealed UOKiK'S decision before SOKiK (Polish Court of Competition and Consumer Protection).</p>	Group	3
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	2022 overview (p. 21). A strong and inclusive culture: The Santander Way (p. 32). Risk management and compliance chapter (p. 420).	Group	-
GRI 207: TAX	207-1 Approach to tax	Conduct and ethical behaviour (p. 33) (Principles of action in tax matters).	Group	-
	207-2 Tax governance, control, and risk management	Conduct and ethical behaviour (p. 33) (Principles of action in tax matters).	Group	-
	207-3 Stakeholder engagement and management of concerns related to tax	Conduct and ethical behaviour (p. 33) (Principles of action in tax matters).	Group	-
	207-4 Country-by-country reporting	Further information (p. 93) (Country-by-country report); Auditor's report and 2022 annual consolidate accounts (p. 502) (Annex VI Annual banking report); Audit report and consolidated annual accounts 2021 (Annex VI Annual banking report).	Group	-
ENVIRONMENTAL STANDARDS				
MATERIALS				
GRI 301: MATERIALS	301-1 Materials used by weight or volume	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint).	Group	5

Although this is not a material issue for the Bank, Banco Santander reports information on the following indicators for greater transparency.



	GRI Standard	Disclosure	Page	Scope	Omission
ENERGY					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Supporting the green transition (p. 53) (Reducing our environmental footprint).	Group	-
	GRI 302: ENERGY	302-1 Energy consumption within the organization	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint).	Group	5
		302-2 Energy consumption outside of the organization	Our progress in figures (p. 77) (Environmental footprint).	Group	5
		302-3 Energy intensity	Our progress in figures (p. 77) (Environmental footprint).	Group	5
		302-4 Reduction of energy consumption	Supporting the green transition (p. 53) (Reducing our environmental footprint).	Group	-
		302-5 Reductions in energy requirements of products and services	Not applicable.	Group	6
WATER AND EFFLUENTS					
	GRI 303: WATER AND EFFLUENTS	303-5 Water consumption	Banco Santander manages its water consumption and supply in accordance with local limitations. In addition, the Bank collects its water from the public water supply and discharges the used water to the public network. Our progress in figures (p. 77) (Environmental footprint).	Group	5
Although this is not a material issue for the Bank, Banco Santander reports information on the following indicators for greater transparency.					
BIODIVERSITY					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Conduct and ethical behaviour (Environmental, social and climate change risk management) (p. 33). Supporting the transition to a green economy (p. 53) (Our approach to nature and biodiversity).	Group	-
	GRI 304: BIODIVERSITY	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Not applicable.	Group	6
		304-2 Significant impacts of activities, products, and services on biodiversity	Supporting the green transition (p. 53) (Our approach to nature and biodiversity)	Group	-
		304-3 Habitats protected or restored	Not applicable.	Group	6
		304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Not applicable.	Group	6



	GRI Standard	Disclosure	Page	Scope	Omission
EMISSIONS					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Supporting the green transition (p. 53) (Reducing our environmental footprint).	Group	-
	GRI 305: EMISSIONS	305-1 Direct (Scope 1) GHG emissions	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint).	Group	5
		305-2 Energy indirect (Scope 2) GHG emissions	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint).	Group	5
		305-3 Other indirect (Scope 3) GHG emissions	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint).	Group	5
		305-4 GHG emissions intensity	Our progress in figures (p. 77) (Environmental footprint)	Group	5
		305-5 Reduction of GHG emissions	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint)	Group	5
		305-6 Emissions of ozone-depleting substances (ODS)	Not applicable.	Group	6
		305-7 Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emissions	Not applicable.	Group	6
WASTE					
	GRI 306: WASTE	306-1 Waste generation and significant waste-related impacts	Supporting the green transition (p. 53)	Group	-
Although this is not a material issue for the Bank, Banco Santander reports information on the following indicators for greater transparency.		306-2 Management of significant waste-related impacts	Supporting the green transition (p. 53)	Group	-
		306-3 Waste generated	Supporting the green transition (p. 53) (Reducing our environmental footprint). Our progress in figures (p. 77) (Environmental footprint)	Group	5
		306-4 Waste diverted from disposal	Our progress in figures (p. 77) (Environmental footprint)	Group	5
		306-5 Waste directed to disposal	Our progress in figures (p. 77) (Environmental footprint)	Group	5
	SUPPLIER ENVIRONMENTAL ASSESSMENT				
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Responsible procurement (p. 52). Stakeholder engagement (p. 93)	-	-
	GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT	308-1 New suppliers that were screened using environmental criteria	Responsible procurement (p. 52).	Group	-
		308-2 Negative environmental impacts in the supply chain and actions taken	Responsible procurement (p. 52).	Group	7



	GRI Standard	Disclosure	Page	Scope	Omission
SOCIAL STANDARDS					
EMPLOYMENT					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	A talented and motivated team (p. 38) (Talent attraction). Our ESG strategy (p. 26).	Group	-
	GRI 401: EMPLOYMENT	401-1 New employee hires and employee turnover	A talented and motivated team (p. 38) (Talent attraction section). Our progress in figures (p. 77).	Group	-
		401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Benefits detailed in 'A talented and motivated team' (p. 38) (section 'Corporate benefits') are regarding only full-time employees. Corporate Governance chapter (p. 158)	Group	-
		401-3 Parental leave	Information unavailable.	Group	9
OCCUPATIONAL HEALTH AND SAFETY					
	GRI 403: OCCUPATIONAL HEALTH AND SAFETY	403-1 Occupational health and safety management system	Banco Santander has occupational health and safety management systems in place in all the geographies in which it operates, complying with the legal requirements of each country regarding occupational risk prevention.	Group	-
Although this is not a material issue for the Bank, Banco Santander reports information on the following indicators for greater transparency.		403-2 Hazard identification, risk assessment, and incident investigation	A talented and motivated team (p. 38) (Employee wellbeing section).	Group	-
		403-3 Occupational health services	A talented and motivated team (p. 38) (Employee wellbeing section).	Group	-
		403-4 Worker participation, consultation, and communication on occupational health and safety	At Banco Santander SA, the percentage of Representation in the Security Committee is 100%.	Banco Santander S.A. and SCF	-
		403-5 Worker training on occupational health and safety	A talented and motivated team (p. 38) (Employee wellbeing section).	Group	-
		403-6 Promotion of worker health	A talented and motivated team (p. 38) (Employee wellbeing section).	Group	-
		403-8 Workers covered by an occupational health and safety management system	100% of Banco Santander own employees are covered by health and safety management systems at work.	Group	-
		403-9 Work-related injuries	A talented and motivated team (p. 38) (Employee wellbeing). Our progress in figures (p. 77).	Group	-
		403-10 Work-related ill health	Our progress in figures (p. 77).	Group	-



	GRI Standard	Disclosure	Page	Scope	Omission
TRAINING AND EDUCATION					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	A talented and motivated team (p. 38). (Ensuring we have the right talent and skills).	Group	-
		404-1 Average hours of training per year per employee	A talented and motivated team (p. 38)) (Talent attraction). Our progress in figures (p. 77)	Group	-
	GRI 404: TRAINING AND EDUCATION	404-2 Programs for upgrading employee skills and transition assistance programs	Banco Santander offers management programmes and continuous training skills that foster the employees' employability and that, sometimes, help them manage the end of their professional careers. A talented and engaged team (p. 38) (Learning and development).	Group	-
		404-3 Percentage of employees receiving regular performance and career development omissions.	A talented and motivated team (p. 38) (Performance review and remuneration section). Regular performance and career development are received by the 100% of the employees.	Group	-
DIVERSITY AND EQUAL OPPORTUNITY					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	A talented and motivated team (p. 38) (Diversity and Inclusion).	Group	-
	GRI 405: DIVERSITY AND EQUAL OPPORTUNITIES	405-1 Diversity of governance bodies and employees	A talented and motivated team (p. 38) (Diversity and Inclusion section). Our progress in figures (p. 77). Corporate governance chapter of the Annual Report (p. 158).	Group	-
		405-2 Ratio of basic salary and remuneration of women to men	A talented and motivated team (p. 38) (Diversity and Inclusion). Our progress in figures (p. 77).	Group	-
NON-DISCRIMINATION					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	A talented and motivated team (p. 38) (Diversity and Inclusion).	Group	-
	GRI 406: NON-DISCRIMINATION	406-1 Incidents of discrimination and corrective actions taken	Conduct and ethical behaviour (p. 33). A talented and motivated team (p. 38) (Active listening). Risk management and compliance chapter (p. 420).	Group	-
RIGHTS OF INDIGENOUS PEOPLE					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Conduct and ethical behaviour (p. 33). (Environmental, social and climate change risk management).	Group	-
	GRI 411: RIGHTS OF INDIGENOUS PEOPLE	411-1 Incidents of violations involving rights of indigenous people	The Bank ensures, through social and environmental risk assessments in their financing operations under the Equator Principles, that no violations of the indigenous peoples' rights occur in such operations. In 2022, a total of 45 operations were evaluated in this respect.	Group	8
LOCAL COMMUNITIES					
	GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Financial inclusion and empowerment (p. 70). Support to higher education and other local initiatives (p. 73)	Group	-
	GRI 413: LOCAL COMMUNITIES	413-1 Operations with local community engagement, impact assessments, and development programs	Financial inclusion and empowerment (p. 70) (Finance), Support to higher education and other local initiatives (p. 73). The Santander Group has several programmes in its ten main countries aim to encourage development and participation of local communities, in which it is carried out an assessment on people helped, scholarships given through agreement with Universities, among others. Moreover, in the last years the Group has developed different products and services offering social and/or environmental added value adapted to each country where Santander develops its activities.	Group	-
		413-2 Operations with significant actual and potential negative impacts on local communities	Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	Group	-



GRI Standard	Disclosure	Page	Scope	Omission
SUPPLIER SOCIAL ASSESSMENT				
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Responsible procurement (p. 52).	Group	-
GRI 414: SUPPLIER SOCIAL ASSESSMENT	414-1 New suppliers that were screened using social criteria	Responsible procurement (p. 52).	Group	3
	414-2 Negative social impacts in the supply chain and actions taken	Responsible procurement (p. 52).	Group	7
PUBLIC POLICY				
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	2022 overview (p. 21). Governance (p. 27). A strong and inclusive culture: The Santander Way (p. 32). Conduct and ethical behaviour (p. 33) (Relations with political parties).	Group	-
GRI 415: PUBLIC POLICY	415-1 Political contributions	The ties, membership or collaboration with political parties or with other kind of entities, institutions or associations with public purposes, as well as contributions or services to them, should be done in a way that can assure the personal character and that avoids any involvement of the Group, as indicated in Santander Group General Code of Conduct. In 2022 we made a contribution of \$75,000 to the US Political Action Committee. Conduct and ethical behaviour (p. 33) (Relations with political parties)	Group	-
CUSTOMER HEALTH SAFETY				
GRI 3 MATERIAL TOPICS	3-3 Management of material topics	Acting responsibly towards our customers (p. 48) (Product governance and consumer protection).	Group	-
GRI 416: CUSTOMER HEALTH AND SAFETY	416-1 Assessment of the health and safety impacts of product and service categories	Acting responsibly towards our customers (p. 48). The Commercialization Committee evaluates potential impact of all products and services, previously they are launched onto the market. These impacts include, among others, clients security and compatibility with other products.	Group	-
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	The Bank has not received final sanctions for this concept. In addition, information on litigation and other Group contingencies can be found in Auditor's report and annual consolidated accounts.	Group	3



GRI Standard	Disclosure	Page	Scope	Omission
MARKETING AND LABELLING				
GRI 3 MATERIAL TOPICS GRI 417: MARKETING AND LABELLING	3-3 Management of material topics	Acting responsibly towards our customers (p. 48) (Product governance and consumer protection).	Group	-
	417-1 Requirements for product and service information and labelling	Acting responsibly towards our customers (p. 48) (Product governance and consumer protection). Responsible business practices. The Commercialization Committee evaluates potential impact of all products and services, previously they are launched onto the market. These impacts include, among others, clients security and compatibility with other products. In addition, the Bank is member of the Association for Commercial Self- Regulation (Autocontrol) assuming the ethical commitment to be responsible regarding the freedom of commercial communication.	Group	-
	417-2 Incidents of non-compliance concerning product and service information and labelling	The Bank has not received final sanctions for this concept. In addition, information on litigation and other Group contingencies can be found in Auditor's report and annual consolidated accounts.	Group	3
	417-3 Incidents of non-compliance concerning marketing communications	The Bank hasn't received any sanctions concerning this matter. Additional information about Group's litigation and other risks can be found at the Auditor's report and 2021 consolidated annual accounts.	Group	3
CUSTOMER PRIVACY				
GRI 3 MATERIAL TOPICS GRI 418: CUSTOMER PRIVACY	3-3 Management of material topics	Acting responsibly towards our customers (p. 48).	Group	-
	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	On 3 November 2022, the "Instituto Nacional de Acceso a la Información Pública y Protección de Datos Personales (INAI)" fined Santander Mexico with 163,000 and 279,000 euros for an alleged breach of data protection regulations. Santander Mexico has filed an appeal. On 13 May 2022, Bank of Spain fined Santander Consumer Finance, S.A. (as successor of Santander Consumer E.F.C.) with 540,000 euros for breach of the regulations on transparency and customer protection in the commercialization of consumer loans during the period 2014 to 2019 due to the lack of communication of settlements of unpaid debts to approximately 25% of customers. This non-compliance did not cause any detriment to customers and did not result in any benefit to the entity.	Group	-



GRI Standards - Financial services sector disclosures

G4 Standard	Disclosure	Page	Scope	Omission
FINANCIAL SERVICES SECTOR DISCLOSURES				
PRODUCT PORTFOLIO				
FS1	Policies with specific environmental and social components applied to business lines	Governance (p. 27). Supporting the green transition (p. 53) (Corporate governance). Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	Group	-
FS2	Procedures for assessing and screening environmental and social risks in business lines	Governance (p. 27). Supporting the green transition (p. 53) (Corporate governance). Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	Group	-
FS3	Processes for monitoring clients' implementation of and compliance with environmental and social requirements included in agreements of transactions	Governance (p. 27). Supporting the green transition (p. 53). Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	Group	-
FS4	Process(es) for improving staff competency to implement the environmental and social policies and procedures as applied to business lines	A talented and motivated team (p. 38). (Ensuring we have the right talent) and skills	Group	-
FS5	Interactions with clients/investees/business partners regarding environmental and social risks and opportunities	A strong and inclusive culture: The Santander Way (p. 32). 2022 overview (p. 21). Stakeholder engagement (p. 93) (Joint initiatives to promote our agenda). Shareholder value (p. 29). Risk management and compliance chapter (p. 420).	Group	-
FS6	Percentage of the portfolio for business lines by specific region, size (e.g. micro/ SME/ large) and by sector	Acting responsibly towards customers (p. 48). Stakeholder engagement (p. 93) (Helping society tackle global challenges: 2030 agenda section). Our progress in figures (p. 77).	Group	-
FS7	Monetary value of products and services designed to deliver a specific social benefit for each business line broken down by purpose	Financial inclusion and empowerment (p. 70).	Group	-
FS8	Monetary value of products and services designed to deliver a specific environmental benefit for each business line broken down by purpose	Supporting the green transition (p. 53). Socially responsible investment (p. 68).	Group	-
AUDIT				
FS9	Coverage and frequency of audits to assess implementation of environmental and social policies and risk assessment procedures	Every two years, the Group's Internal audit function reviews the corporate Responsible banking function's governance, materiality analyses, control, procedures and risk culture. If it spots areas for improvement, it will give recommendations to mitigate any operational risks from the Responsible banking function's procedures. The last audit in 2021 ended with an overall rating of 'acceptable'.	Group	-



	G4 Standard	Disclosure	Page	Scope	Omission
ACTIVE OWNERSHIP					
	FS10	Percentage and number of companies held in the institution's portfolio with which the reporting organization has interacted on environmental or social issues	Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management).	Group	8
	FS11	Percentage of assets subject to positive and negative environmental or social screening	Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management); Socially responsible investment (p. 68).	Group	8
	FS12	Voting policy(ies) applied to environmental or social issues for shares over which the reporting organization hold the right to vote shares or advises on voting	The Santander Group has no voting policies relating to social and/or environmental matters for entities over which acts as an advisor. The Santander Employees Pension Fund does have a policy of formal vote in relation to social and environmental aspects, for shareholder meetings of the entities over which it has voting rights.	Group	-
	FS13	Access points in low-populated or economically disadvantaged areas by type	Financial inclusion and empowerment (p. 70).	Group	-
	FS14	Initiatives to improve access to financial services for disadvantaged people	Financial inclusion and empowerment (p. 70) (Access).	Group	-
	FS15	Policies for the fair design and sale of financial products and services	Acting responsibly towards customers (p. 48) (Product governance and consumer protection).	Group	-
	FS16	Initiatives to enhance financial literacy by type of beneficiary	Financial inclusion and empowerment (p. 70) (Promoting financial education).	Group	-

1. Given the size of the organisation and the rotation of outsourced services, Banco Santander does not currently have a register of non-employees. In the medium and long term the Group will evaluate the possibility of reporting this indicator. 2. The indicator is not reported because it is confidential information. 3. The sanctions and sentences reported correspond to those for an amount greater than 60,000 euros, excluding collective and/or mass sanctions. The evolution of already reported sanctions or adverse sentences that have been appealed will not be informed, until they reach their firmness in law. 4. Information is provided on the total number of complaints related to gifts and invitations/corruption and bribery. 5. The scope and limitations of this indicator are described on Our progress in figures. 6. Not applicable due to the nature of the Group's financial business, geographies and sectors of operation. It should be noted that all of the Bank's activities are carried out in urban areas. 7. Only top-500 risk suppliers are reported. 8. Information is only provided on the number of project finance deals of Santander's Bank, which have been analysed regarding social and environmental risks in Equator Principles' frame. 9. Given the size of the organization and the turnover of outsourced services, Banco Santander does not currently have a record of employees who have requested and taken parental leave during 2022. In the medium and long term the Group will evaluate the possibility of reporting this indicator.

6.5 Sustainability Accounting Standards Board (SASB) content index

This is the second year in which Santander has decided to report in accordance with the Sustainability Accounting Standards Board (SASB), following its Industry Standards Version 2018-10 issue.

The relevant standards disclosed in this section have been selected according to a materiality-driven analysis, focusing on the industries that are most closely aligned with our businesses within the 'Financials sector': Asset Management & Custody Activities (FN-AC), Commercial Banks (FN-CB), Consumer Finance (FN-CF), Investment Banking & Brokerage (FN-IB).

Acknowledging that SASB has a US-based approach, we have done our best efforts for translating it to our European standards.

Currently, we do not disclose all metrics included in the aforementioned industry standards, but we will continue to evaluate additional metrics in the future, enhancing our reporting under SASB framework for meeting the needs of our growing base of stakeholders and investors.

Unless otherwise is noted, all data and descriptions are reported for the Santander Group, if applicable, on a consolidated basis, and not just the segments relevant to the particular industry. The information will refer to the 2021 fiscal year, unless otherwise is specified.

Sustainability Accounting Metrics

Topic	Industry	Accounting Metric	Code	Response
Data Security	Commercial Banks	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of account holders affected.	FN-CB-230a.1	Refer to 'Litigation and other matters' in the note 25 of the Consolidated accounts in the Auditor's report and consolidated financial statements (p. 502).
	Consumer Finance		FN-CF-230a.1	
	Commercial Banks	Description of approach to identifying and addressing data security risks.	FN-CB-230a.2	Refer to 'Risk Pro' in section ' A strong and inclusive culture ' of this chapter (p. 32); and to 'Relevant mitigation actions' in section 6.2 of 'Risk management and compliance chapter' (p. 420).
Consumer Finance	FN-CF-230a.3			
Financial Inclusion & Capacity Building	Commercial Banks	(1) Number and (2) amount of loans outstanding qualified to programs designed to promote small business and community development.	FN-CB-240a.1	Refer to ' Acting responsibly towards customers ' section of this chapter (p. 48). For more detail see note 10. 'Loans and advances to customers' in the Auditor's report and consolidated financial statements (p. 502). Additionally, all the information related to microfinance programmes are available on the ' Financial inclusion and empowerment ' section of this report (p. 70).
	Commercial Banks	(1) Number and (2) amount of past due and nonaccrual loans qualified to programs designed to promote small business and community development.	FN-CB-240a.2	Refer to 'Amounts past due' and 'Impairment of financial assets' in 3.3 'Key metrics' section of the Risk management and compliance chapter. (p. 420). Also refer to notes 2.g and 10.d of the consolidated accounts in the Auditor's report and consolidated financial statements (p. 502).
	Commercial Banks	Number of no-cost retail checking accounts provided to previously unbanked or underbanked customers.	FN-CB-240a.3	Refer to ' Financial inclusion and empowerment ' section of this chapter (p. 70).
	Commercial Banks	Number of participants in financial literacy initiatives for unbanked, underbanked, or underserved customers.	FN-CB-240a.4	In 2022, Grupo Santander has financially empowered 5.5 million people. For further information refer to ' Financial inclusion and empowerment ' section of this chapter (p. 70).



Topic	Industry	Accounting Metric	Code	Response
Incorporation of Environmental, Social, and Governance Factors in Credit Analysis	Commercial Banks	Commercial and industrial credit exposure, by industry.	FN-CB-410a.1	Refer to 'Concentration risk' in section 3.5 'Other credit risk details' of the Risk Management and compliance chapter (p. 420).
	Commercial Banks	Description of approach to incorporation of environmental, social, and governance (ESG) factors in credit analysis.	FN-CB-410a.2	Refer to the 'Environmental and social risk analysis' section on Conduct and ethical behaviour (p. 33), and the ' Climate and environmental risk ' (p. 488).section of the Risk management and compliance chapter For further information see our 'General Sustainability Policy' and our 'Environmental, social & climate change risk management Policy', both available on our corporate website.
Incorporation of Environmental, Social, and Governance Factors in investment Banking & Brokerage Activities	Investment Banking & Brokerage	(1) Number and (2) total value of investments and loans incorporating integration of environmental, social, and governance (ESG) factors, by industry.	FN-IB-410a.2	Refer to ' Supporting the green transition ' section of this chapter (p. 53).
	Investment Banking & Brokerage	Description of approach to incorporation of environmental, social, and governance (ESG) factors in investment banking and brokerage activities.	FN-IB-410a.3	Refer to ' Supporting the green transition ' section of this chapter (p. 53). For further information see our 'General Sustainability Policy', and our 'Environmental, social & climate change risk management policy', both available on our corporate website.
Business Ethics	Asset Management & Custody Activities Commercial Banks Investment Banking & Brokerage	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations.	FN-AC-510a.1 FN-CB-510a.1 FN-IB-510a.1	Refer to GRI 206-1 discloses legal actions for anticompetitive behaviour, anti-trust, and monopoly practices. For further information, refer to 'Litigation and other matters' section on the Auditor's report and consolidated financial statements (p. 502).
	Asset Management & Custody Activities Commercial Banks Investment Banking & Brokerage	Description of whistleblower policies and procedures.	FN-AC-510a.2 FN-CB-510a.2 FN-IB-510a.2	Refer to 'Ethical Channels' in the section ' A talented and motivated team ' of this chapter (p. 38). For further information, see our 'General Code of Conduct', available on our website.
Systemic Risk Management	Commercial Banks Investment Banking & Brokerage	Global Systemically Important Bank (G-SIB) score, by category	FN-CB-550a.1. FN-IB-550a.1.	According to the '2022 list of global systemically important banks (G-SIBs)' released by the Financial Stability Board, Santander's G-SIB buffer is 1.0 %. (G-SIBs as of November 2021). According to the G-SIB Scores Dashboard from the Basel Committee on Banking Supervision (BCBS), Santander Group's scores are (end-2021 data): • Score: 174 • Complexity: 75 • Cross-jurisdictional: 447 • Interconnectedness: 136 • Size: 170 • Substitutability: 44
	Commercial Banks Investment Banking & Brokerage	Description of approach to incorporation of results of mandatory and voluntary stress tests into capital adequacy planning, long-term corporate strategy, and other business activities	FN-CB-550a.2. FN-IB-550a.2.	Refer to 'Capital planning and stress tests' in the section 3.5 'Capital management and adequacy' (p. 341) of the Economic and Financial chapter.



Topic	Industry	Accounting Metric	Code	Response
Employee Diversity & Inclusion	Commercial Banks, Investment Banking & Brokerage	Percentage of gender and racial/ethnic group representation for (1) executive management, (2) non-executive management, (3) professionals, and (4) all other employees	FN-AC-330a.1 FN-IB-330a.1	Refer to ' Our progress in figures ' section of this chapter (p. 77). For further information, refer to 'Diversity & Inclusion' section of ' A talented and motivated team ' this chapter (p. 38). For further information about our diversity and inclusion principles, see our 'Corporate Culture Policy', available on our corporate website.
Activity metrics	Commercial Banks	(1) Number and (2) value of checking and savings accounts by segment: (a) personal and (b) small business.	FN-CB-000.A	Refer to 'Consolidated annual accounts' in Auditor's report and consolidated financial statements (p. 502).
	Commercial Banks	(1) Number and (2) value of loans by segment: (a) personal, (b) small business, and (c) corporate.	FN-CB-000.B	Refer to 'Consolidated annual accounts' in Auditor's report and consolidated financial statements (p. 502).



6.6 Stakeholder Capitalism Metrics content index

Stakeholder Capitalism Metrics

Theme	Metric	Response
Principles of governance		
Governing Purpose	Setting Purpose: The company's stated purpose, as the expression of the means by which a business proposes solutions to economic, environmental, and social issues. Corporate purpose should create value for all stakeholders, including shareholders.	'Business model and strategy' (p. 8) chapter reflects how we help people and businesses prosper whilst adopting ESG practices.
	Purpose-led management: How the company's stated purpose is embedded in company strategies, policies, and goals.	Additionally, in 'Our ESG strategy' (p. 24) section in 'Responsible banking' chapter, we detail in deep how we work to be a more sustainable bank.
Quality of Governing Body	Governing Body Composition: Composition of the highest governance body and its committees by: competencies relating to economic, environmental, and social topics; executive or non-executive; independence; tenure on the governance body; number of each individual's other significant positions and commitments, and the nature of the commitments; gender; membership of under-represented social groups; stakeholder representation.	Refer to the 'Board of directors' section in 'Corporate governance' chapter (p. 158).
	Progress against strategic milestones: Disclosure of the material strategic economic, environmental, and social milestones expected to be achieved in the following year, such milestones achieved from the previous year, and how those milestones are expected to or have contributed to long-term value.	Refer to '2022 Overview' (p. 20) and 'Our ESG agenda' (p. 26) sections in 'Responsible banking' chapter.
	Remuneration: 1. How performance criteria in the remuneration policies relate to the highest governance body's and senior executives' objectives for economic, environmental, and social topics, as connected to the company's stated purpose, strategy, and long-term value. 2. Remuneration policies for the highest governance body and senior executives for the following types of remuneration: Fixed pay and variable pay, including performance-based pay, equity-based pay, bonuses, and deferred or vested shares, Sign-on bonuses or recruitment incentive payments, termination payments, clawback and retirement benefits.	1. Refer to 'Performance review and remuneration' in 'A talented and engaged team' section (p. 38) in 'Responsible banking' chapter. 2. Refer to 'Remuneration' section (p. 230) in 'Corporate governance' chapter.
Ethical Behavior	Anti-corruption: 1. Total percentage of governance body members, employees and business partners who have received training on the organization's anti-corruption policies and procedures, broken down by region. 2. (a) Total number and nature of incidents of corruption confirmed during the current year but related to previous years and (b) Total number and nature of incidents of corruption confirmed during the current year, related to this year. 3. Discussion of initiatives and stakeholder engagement to improve the broader operating environment and culture, in order to combat corruption.	1. Refer to Financial Crime Compliance on 7.2 'Compliance and conduct risk management' section (p. 478) in 'Risk management and compliance' chapter. Refer also to GCC in Conduct and 'Ethical behaviour' section in 'Responsible banking' chapter. All our employees receive mandatory training on the GCC on an annual basis. 2. Refer to 'Litigation and other matters' in the note 25.e (p. 642) of the consolidated accounts. 3. Refer to Financial Crime Compliance on 7.2 'Compliance and conduct risk management' section (p. 478) in 'Risk management and compliance' chapter.



Theme	Metric	Response
	<p>Protected ethics advice and reporting mechanisms: A description of internal and external mechanisms for:</p> <ol style="list-style-type: none"> 1. Seeking advice about ethical and lawful behaviour and organizational integrity 2. Reporting concerns about unethical or unlawful behaviour and organizational integrity 	<p>Refer to pages 13-14 in our Code of Conduct (available in our corporate website).</p> <p>In addition see 7.2 'Compliance and conduct risk management' (p. 478) in 'Risk and compliance management' section on 'Risk management and compliance' chapter. And 'Ethical channels' on 'Conduct and ethical behaviour' section (p. 33) in 'Responsible banking' chapter.</p>
	<p>Monetary losses from unethical behaviour: Total amount of monetary losses as a result of legal proceedings associated with: fraud, insider trading, anti-trust, anti-competitive behaviour, market manipulation, malpractice, or violations of other related industry laws or regulations.</p>	<p>Refer to 'Litigation and other matters' in the note 25.e (p. 642) of the consolidated accounts.</p>
	<p>Alignment of strategy and policies to lobbying: The significant issues that are the focus of the company's participation in public policy development and lobbying; the company's strategy relevant to these areas of focus; and any differences between its lobbying positions, purpose, and any stated policies, goals, or other public positions.</p>	<p>Refer to 'Principles of action in our relationship with political parties' in 'Conduct and ethical behaviour' section in 'Responsible banking' chapter (p. 33). The Financing of political parties policy is available on our corporate website.</p>
Risk and Opportunity Oversight	<p>Integrating risk and opportunity into business process: Company risk factor and opportunity disclosures that clearly identify the principal material risks and opportunities facing the company specifically (as opposed to generic sector risks), the company appetite in respect of these risks, how these risks and opportunities have moved over time and the response to those changes. These opportunities and risks should integrate material economic, environmental, and social issues, including climate change and data stewardship.</p>	<p>Refer to 'Risk and opportunities' section in 'Risk management and compliance' chapter (p. 420).</p> <p>In addition, we report our progress in implementing TCFD recommendations (including Risk management) in 'Responsible banking' chapter (p. 53).</p> <p>Our Environmental, social and climate change risk policy is available at our corporate website.</p>
Stakeholder Engagement	<p>Material issues impacting stakeholders: A list of the topics that are material to key stakeholders and the company, how the topics were identified, and how the stakeholders were engaged.</p>	<p>Refer to 'Materiality matrix' (p. 24) and 'Materiality assessment' (p. 96) section in 'Responsible banking' chapter. Refer also to 'Our ESG agenda' (p. 26).</p>
Planet		
Climate Change	<p>Greenhouse Gas (GHG) emissions: For all relevant greenhouse gases (e.g. carbon dioxide, methane, nitrous oxide, F-gases etc.), report in metric tonnes of carbon dioxide equivalent (tCO₂e) GHG Protocol Scope 1 and Scope 2 emissions. Estimate and report material upstream and downstream (GHG Protocol Scope 3) emissions where appropriate.</p>	<p>Refer to Environmental footprint 2021-2022 table in 'Our progress in figures' section in 'Responsible banking' chapter (p. 77).</p> <ul style="list-style-type: none"> • Total emissions (market based): 134,419 T CO₂e • Scope 1: 21,967 T CO₂eT₂e • Scope 2 – market based: 30,917 T CO₂e • Scope 2 – location based: 217,906 T CO₂e • Scope 3: 81,535 T CO₂e
	<p>TCFD implementation: Fully implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). If necessary, disclose a timeline of at most three years for full implementation. Disclose whether you have set, or have committed to set GHG emissions targets that are in line with the goals of the Paris Agreement — to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C — and to achieve net-zero emissions before 2050.</p>	<p>Refer to 'Supporting the green transition' (p. 53) and 'TCFD content index' (p. 152) sections in 'Responsible banking' chapter, where we report our progress in implementing TCFD recommendations.</p> <p>In 2020, we became carbon neutral on our own operations. In 2021, we set our commitment to be net-zero in carbon emissions by 2050, and we set our first decarbonization targets.</p> <p>In addition, refer to 'Climate and environmental risk' section (p. 488) in 'Risk management and compliance' chapter.</p>
	<p>Paris-aligned GHG emissions targets: Define and report progress against time-bound science-based GHG emissions targets that are in line with the goals of the Paris Agreement — to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C. This should include defining a date before 2050 by which you will achieve net-zero greenhouse gas emissions and interim reduction targets based on the methodologies provided by the Science Based Targets initiative if applicable.</p>	<p>Refer to 'Supporting the green transition' section (p. 53) of the 'Responsible banking' chapter.</p> <p>We set our first decarbonization targets. We're committed to aligning our power generation portfolio with the Paris Agreement by 2030. We are also ending financial services to power generation clients by 2030 if over 10% of their revenue depends on thermal coal.</p>



Theme	Metric	Response
Fresh water availability	Water consumption and withdrawal in water-stressed areas: Report for operations where material, mega litres of water withdrawn, mega litres of water consumed and the percentage of each in regions with high or extremely high baseline water stress according to WRI Aqueduct water risk atlas tool. Estimate and report the same information for the full value chain (upstream and downstream) where appropriate.	Refer to Environmental footprint 2021-2022 table in ' Our progress in figures ' section (p. 77) in 'Responsible banking' chapter. In 2022, Santander consumed 1,887,857 m3 from the public network, equalling a consumption of 9.75 m3/employee. (Information is provided exclusively on water withdrawal from the public network). We do not disclose data on water stress, due to our financial activities generating negligible impacts.
Nature Loss	Land use and ecological sensitivity: Report the number and area (in hectares) of sites owned, leased or managed in or adjacent to protected areas and/or key biodiversity areas (KBA).	Refer to Our approach to nature and biodiversity on ' Supporting the green transition ' section (p. 77) of the 'Responsible banking' chapter.
Single-use plastics	Report wherever material along the value chain: estimated metric tonnes of single-use plastic consumed. Disclose the most significant applications of single-use plastic identified, the quantification approach used and the definition of single-use plastic adopted.	Refer to Reducing our environmental footprint on ' Supporting the green transition ' section (p. 53) in 'Responsible banking' chapter. In 2021 we have met our goal of eliminating unnecessary single-use plastics from our buildings and branches. In 2022 we also continue not providing single-use plastics in our buildings and offices.
Prosperity		
Employment and wealth generation	Absolute number and rate of employment: 1. Total number and rate of new employee hires during the reporting period, by age group, gender, other indicators of diversity and region. 2. Total number and rate of employee turnover during the reporting period, by age group, gender, other indicators of diversity and region.	Refer to ' Our progress in figures ' section (p. 77) in 'Responsible banking' chapter. 1. See: • Table 11.1. Distribution of new hires by age bracket • Table 12. Distribution of new hires by gender 2. See: • Table 14. External turnover rate by gender • Table 15. External turnover rate by age bracket
	Economic Contribution: 1. Direct economic value generated and distributed (EVG&D) — on an accrual basis, covering the basic components for the organization's global operations, ideally split out by: a. Revenue b. Operating Costs c. Employee wages and benefits d. Payments to providers of capital e. Payments to government f. Community Investment. 2. Financial assistance received from the government. Total monetary value of financial assistance received by the organization from any government during the reporting period.	1. Refer to Global Reporting Initiative (GRI) content index in 'Responsible banking' chapter, and more specifically to GRI 201.1 Direct economic value generated and distributed (p. 130). • Economic value generated in 2022: EUR 52,136 million • Economic value distributed: EUR 26,546 million • Economic value retained EUR 25,590 million 1.a Revenue: EUR 52,117 million 1.b Operating cost: EUR 23,903 million 1.c Employee wages and benefits: EUR 12,547 million 1.d Payments to providers of capital: N/A 1.e Payments to government: EUR 9,734 million (total taxes) 1.f Community investment: EUR 163 million Further detail for 1a-c refer to Group financial performance section on Economic and financial review chapter (p. 312). Further detail for 1d refer to 3.3 Dividends in Shareholders section on Corporate governance chapter (p. 176). Further detail for 1e refer to 'Total taxes paid' table on 4. ' Our progress in figures ' in 'Responsible banking' chapter (p. 77). 2. Grupo Santander did not receive public subsidies in 2022. Refer to 'Annual banking report', e) (p. 805).
Wealth creation and Employment	Financial investment contribution disclosure: 1. Total capital expenditures (CapEx) minus depreciation supported by narrative to describe the company's investment strategy. 2. Share buybacks plus dividend payments supported by narrative to describe the company's strategy for returns of capital to shareholders.	1. Refer to note 16 Tangible assets (p. 614) – For own use section in 'Auditor's report' in the consolidated financial statements. Additionally, refer to - Operating expenses data (p. 304) in 'Economic and financial review' chapter. - Note 47. Other general administrative expenses (p. 698) of consolidated annual accounts. 2. Refer to ' Shareholder value ' section (p. 29) in 'Responsible banking' chapter, and 3. ' Shareholders. Engagement and general meeting ' section (p. 158) in 'Corporate governance' chapter.



Theme	Metric	Response
Community and social vitality	Total tax paid: The total global tax borne by the company, including corporate income taxes, property taxes, non-creditable VAT and other sales taxes, employer-paid payroll taxes and other taxes that constitute costs to the company, by category of taxes.	Refer to 'Total taxes paid' table on 'Our progress in figures' section in 'Responsible banking' chapter (p. 77).
Additional tax remitted	The total additional global tax collected by the company on behalf of other taxpayers, including VAT and employee-related taxes that are remitted by the company on behalf of customers or employees, by category of taxes.	Refer to 'Total taxes paid' table on 'Our progress in figures' section in 'Responsible banking' chapter (p. 77).
Total tax paid by country for significant locations	Total tax paid and, if reported, additional tax remitted, by country for significant locations.	Refer to 'Total taxes paid' table on 'Our progress in figures' section in 'Responsible banking' chapter (p. 77).
Innovation in better products and services	Total R&D expenses (\$): Total costs related to research and development.	Innovation and technological development are strategic pillars of Grupo Santander. We aim to respond to fresh challenges that emanate from digital transformation, focusing on operational excellence and customer experience As in previous years, the latest European Commission ranking (2022 EU Industrial R&D Investment Scoreboard, based on 2021 data) ranked our technological effort first among Spanish companies and we are the second global bank for investment in R&D. The equivalent investment in R&D&I to that considered in this ranking amounted to EUR 1,325 million. Refer to 'Research, development and innovation (R&D&I)' section in 'Economic and financial review' (p. 400). Additional information refer to note 18 in 'Audit's report and consolidated financial statements' (p. 620)
People		
Dignity and equality	Diversity and inclusion (%): Percentage of employees per employee category, per age group, gender and other indicators of diversity (e.g. ethnicity).	Refer to 'Our progress in figures' section (p. 77) of the Responsible Banking chapter. Additional information on how we promote DEI refer to 'Diversity, equity and inclusion' in 'A talented and motivated team' section (p. 38) in 'Responsible banking' chapter.
	Pay equality: Ratio of the basic salary and remuneration for each employee category by significant locations of operation for priority areas of equality: women to men; minor to major ethnic groups; and other relevant equality areas.	Gender and equal pay gap figures match 2021 trends, on the back of a firm commitment and ambitious action plans assumed throughout the Group (1%). Refer to 'Equal pay' in 'A talented and motivated team' section (p. 38) on 'Responsible banking' chapter.
	Wage level (%): 1. Ratios of standard entry-level wage by gender compared to local minimum wage 2. Ratio of CEO's total annual compensation to median total annual compensation of all employees (excluding the CEO)	1. Refer to 'Our progress in figures' section (p. 77) in 'Responsible banking' chapter. Table 18 'Ratio between the Bank's minimum annual salary and the legal minimum annual salary by country and gender 2022'. We take as a reference the Bank's minimum annual salary in each country. 2. Refer to 6. 'Remuneration section' (p. 230) on 'Corporate governance' chapter.
	Risk for incidents of child, forced or compulsory labor: An explanation of the operations and suppliers considered to have significant risk for incidents of child labor, forced or compulsory labor. Such risks could emerge in relation to type of operation (such as manufacturing plant) and type of supplier; or countries or geographic areas with operations and suppliers considered at risk.	Refer to 'Protecting human rights' in 'Environmental, social and climate change risk management' on 'Conduct and ethical behaviour' section (p. 33) of the 'Responsible banking' chapter. We have zero tolerance towards employee, customer and supplier discrimination, forced labour and child exploitation. We respect the provisions of the ILO convention and the legal minimum working aged established in countries. Further detail on our Responsible banking and sustainability policy, available at our corporate website.
	Discrimination and Harassment Incidents (#) and the Total Amount of Monetary Losses (\$): Number of discrimination and harassment incidents, status of the incidents and actions taken and the total amount of monetary losses as a result of legal proceedings associated with (1) law violations and (2) employment discrimination.	Refer to 'Litigation and other matters' in note 25.e of the 'Auditor's report and consolidated financial statements' (p. 642).



Theme	Metric	Response
	<p>Freedom of Association and Collective Bargaining at Risk (%):</p> <p>1. Percentage of active workforce covered under collective bargaining agreements</p> <p>2. An explanation of the assessment performed on suppliers for which the right to freedom of association and collective bargaining is at risk including measures taken by the organization to address these risks.</p>	<p>1. Refer to 'Our progress in figures' section (p. 77) in 'Responsible banking' chapter.</p> <p>- Table 10. Coverage of the workforce by collective agreement</p>
Health and well being	<p>Health and Safety (%):</p> <p>1. The number and rate of fatalities as a result of work-related injury; high-consequence work-related injuries (excluding fatalities); recordable work-related injuries, main types of work-related injury; and the number of hours worked.</p> <p>2. An explanation of how the organization facilitates workers' access to non-occupational medical and healthcare services and the scope of access provided for employees and workers.</p>	<p>1. Refer to 'Our progress in figures' section (p. 77) on the 'Responsible banking' chapter.</p> <ul style="list-style-type: none"> • Table 23. Accident rate • Table 24. Occupational health and safety <p>2. Refer to 'Our wellbeing' in 'A talented and motivated team' section on 'Responsible banking' chapter (p. 38).</p>
Skills for the future	<p>Training provided (#, \$):</p> <p>1. Average hours of training per person that the organization's employees have undertaken during the reporting period, by gender and employee category (total number of trainings provided to employees divided by the number of employees).</p> <p>2. Average training and development expenditure per full time employee.</p>	<p>Refer to 'Our progress in figures' section (p. 77) in 'Responsible banking' chapter.</p> <ul style="list-style-type: none"> • Table 19. Training • Table 20. Hours of training by category • Table 21. Hours of training by gender • 33.34 hours per employee • EUR 346.94 of investment per employee.



6.7 Task Force on Climate related Financial Disclosure (TCFD) content index

	TCFD Recommendations	Reference in this Annual Report	Reference in Climate Finance Report 2021 - June 2022	Pages in this Annual Report
Governance	a Describe the board's oversight of climate-related risks and opportunities.	3.6 Supporting the green transition - Governance	3. Governance; 5. Metrics and targets - Action plan - Power generation sector alignment	56
	b Describe management's role in assessing and managing climate-related risks and opportunities.	3.6 Supporting the green transition - Governance; Risk Management; Supporting our customers in the transition	3. Governance; 6. Financing the green transition - ESG governance in Santander Asset Management	56 , 57 , 62
Strategy	a Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.			
	b Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	3.6 Supporting the green transition - Our ambition and strategy	2. Strategy - Climate risks and opportunities; Resilience of Santander's strategy. Scenario analysis	54
	c Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.			
Risk Management	a Describe the organization's processes for identifying and assessing climate-related risks.			
	b Describe the organization's processes for managing climate-related risks.	3.6 Supporting the green transition - Risk management	4. Risk management - I. Identification; II. Planning; III. Assessment; IV. Monitoring; V. Mitigation; VI. Reporting	57
	c Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.			
Metrics and Targets	a Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	3.6 Supporting the green transition - Metrics and targets	5. Metrics and targets - Aligning our portfolio to the Paris agreement	58
	b Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	3.6 Supporting the green transition - Reducing our environmental footprint; 4.4. Green Transition - Environmental Footprint 2021-2022	5. Metrics and targets - Decarbonization targets - Financed emissions; Our environmental footprint	66 , 90
	c Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	3.6 Supporting the green transition - Metrics and targets	5. Metrics and targets - Decarbonization targets	58

References in this report are included in the Responsible banking chapter.

For more details TCFD recommendations, see our Climate Report 2021-June 2022 available on our corporate website. Progress has been made on some of these recommendations since the publication of the Climate Finance Report in July 2022



6.8 SDGs contribution content index

We have identified eleven SDGs and associated targets on which we have the greatest impact.

Summary of SDG target	Reference in the 2022 Annual report
SDG 1	
1.2 Reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions	<ul style="list-style-type: none"> Support for higher education and other local initiatives (p. 73) (Other community support programmes).
1.4 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services	<ul style="list-style-type: none"> Acting responsibly towards customers. Product Governance and consumer protection (p. 48) (Transforming sales culture - Vulnerable customers). Financial inclusion and empowerment (p. 70)
1.5 Build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	<ul style="list-style-type: none"> Financial inclusion and empowerment (p. 70)
SDG 4	
4.3 Ensure equal access for all to affordable and quality technical, vocational and tertiary education, including university.	<ul style="list-style-type: none"> Support for higher education and other local initiatives (p. 73) (Support for higher education, employability and entrepreneurship).
4.4 Substantially increase the number of young people and adults with technical and vocational skills to access quality employment and entrepreneurial opportunities.	<ul style="list-style-type: none"> Support for higher education and other local initiatives (p. 73) (Support for higher education, employability and entrepreneurship).
4.5 Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for persons with disabilities, indigenous populations and vulnerable children, among others.	<ul style="list-style-type: none"> Support for higher education and other local initiatives (p. 73) (Support for higher education, employability and entrepreneurship section; Other community support programmes sections).
4.6 Substantially increase the scholarships available to developing countries for enrolment in higher education, including vocational training and ICT, technical, engineering and scientific programmes	<ul style="list-style-type: none"> Support for higher education and other local initiatives (p. 73) (Support for higher education, employability and entrepreneurship section; Other community support programmes sections). Financial inclusion and empowerment (p. 70)
SDG 5	
5.1. End all forms of discrimination against all women and girls everywhere.	<ul style="list-style-type: none"> A talented and engaged team (p. 38) (Diversity, equity and inclusion - Gender equality section)
5.5 Ensure women's full and effective participation in, and equal opportunities for, leadership at all levels of decision making	<ul style="list-style-type: none"> A talented and engaged team (p. 38) (Diversity, equity and inclusion - Gender equality section)
SDG 7	
7.1 Ensure universal access to affordable, reliable and modern energy services	<ul style="list-style-type: none"> Supporting the green transition (p. 53) (Supporting our customers in the transition: Corporate and Investment Banking; Retail and commercial banking).
7.b Expand infrastructure and improve technology to provide modern and sustainable energy services	<ul style="list-style-type: none"> Supporting the green transition (p. 53) (Supporting our customers in the transition: Corporate and Investment Banking).

**SDG 8**

8.3 Promote development-orientated policies that support production, job creation, entrepreneurship, creativity and innovation, and promote the start-up and growth of micro, small and medium-sized enterprises through access to financial services and other means.

- Financial inclusion and empowerment (p. 70)
- Support for higher education and other local initiatives (p. 73) (Support for higher education - Entrepreneurship).

- Supporting the green transition (p. 53) (Reducing our environmental footprint).

8.5 Secure wholesome and productive employment and decent work for all - most notably young people and persons with disabilities - and equal pay for work of equal value.

- A talented and engaged team (p. 38) (Diversity, equity and inclusion: Gender equality; People with disabilities).
- Support for higher education and other local initiatives (p. 73) (Support for higher education - Fundación universia).

8.6 Substantially reduce the proportion of youth not in employment, education or training

- Support for higher education and other local initiatives (p. 73) (Support for higher education).

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

- Conduct and ethical behaviour. Ethical channel (p. 33)
- A talented and motivated team. A diverse and inclusive workplace. Employees' health and well-being (p. 38)
- A talented and motivated team. Transforming the way we work. Social dialogue (p. 38)

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

- Financial inclusion and empowerment (p. 70)

SDG 10

10.2 Strengthen and promote social, economic and political inclusion for all

- Financial inclusion and empowerment (p. 70)
- Support for higher education and other local initiatives. Other community support programmes (p. 73)

SDG 11

11.1 Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

- Financial inclusion and empowerment (p. 70)

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

- Conduct and ethical behaviour (p. 33) (Environmental, social and climate change risk management)
- Support for higher education and other local initiatives (p. 73) (Other community support programmes).

11.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

- Supporting the green transition (p. 53) (Reducing our environmental footprint)

SDG 12

12.2 Achieve the sustainable management and efficient use of natural resources

- Supporting the green transition (p. 53) (Reducing our environmental footprint)

12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse

- Supporting the green transition (p. 53) (Reducing our environmental footprint)

12.6 Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

- See Responsible Banking chapter (p. 18)

SDG 13

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

- Supporting the green transition (p. 53) (Our approach; Risk management)

SDG 16

16.5 Considerably reduce corruption and bribery in all their forms.

- Conduct and ethical behaviour (p. 33) (General code of conduct; Financial Crime Compliance)

16.6 Develop effective, accountable and transparent institutions at all levels

- About this report (p. 19)
- Shareholder value (p. 29) (Communication with shareholder, investors and analysts; ESG ratings)
- Stakeholders engagement (p. 93)

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels

- Stakeholders engagement (p. 93)

SDG 17

- Stakeholders engagement (p. 93) (Partnerships to promote our agenda)



7. Independent verification report

GRI 2-5



This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Independent verification report

To the shareholders of Banco Santander, S.A.:

Pursuant to article 49 of the Code of Commerce, we have verified, with the scope of a limited assurance engagement, "Responsible banking" chapter, which corresponds to the attached Consolidated non-financial information statement ("NFIS") for the year ended 31 December 2022 of Banco Santander, S.A. (Parent company) and subsidiaries (hereinafter "Grupo Santander") which forms part of the Grupo Santander's consolidated management report.

The content of the NFIS includes information additional to that required by current mercantile legislation in relation to non-financial information, which has not been covered by our verification work. In this respect, our work was limited solely to verifying the information identified in the sections included in the accompanying NFIS:

- "6.1 Non-financial information Act 11/2018 content index",
- "6.4 Global Reporting Initiative (GRI) content index",
- "6.3 UNEP FI Principles for Responsible Banking reporting index" subsections:
 - 2.1 Impact Analysis (Key Step 1),
 - 2.2 Target Setting (Key Step 2),
 - 2.3 Target Implementation and Monitoring (Key Step 2) and
 - 5.1 Governance Structure for Implementation of the Principles.

Responsibility of the directors of the Parent company

The preparation of the NFIS included in Grupo Santander's consolidated management report and the content thereof, are the responsibility of the directors of Banco Santander, S.A. The NFIS has been drawn up in accordance with the provisions of:

- Current mercantile legislation and in accordance with the criteria of the Sustainability Reporting Standards of the Global Reporting Initiative ("GRI Standards") and the Financial Services Sector Disclosures of the GRI G4 Guidelines Industry Supplement as per the details provided for each matter included in the section "6.1 Non-financial information Act 11/2018 content index" and in the section "6.4 Global Reporting Initiative (GRI) content index" of the aforementioned Statement.
- The criteria described in the Reporting and Self-Assessment Template for the Principles for Responsible Banking (PRB) promoted by the United Nations Environment Programme Finance Initiative (UNEP FI) in the subsections 2.1 Impact Analysis, 2.2 Target Setting, 2.3 Target Implementation and Monitoring and 5.1 Governance Structure for Implementation of the Principles from the section "6.3 UNEP FI Principles for Responsible Banking reporting index".

PricewaterhouseCoopers Auditores, S.L., Torre PwC, Pº de la Castellana 259 B, 28046 Madrid, España
Tel.: +34 915 684 400 / +34 902 021 111, Fax: +34 915 685 400, www.pwc.es

1

R. M. Madrid, hoja 87.250-1, folio 75, tomo 9.267, libro 8.054, sección 3ª
Inscrita en el R.O.A.C. con el número S0242 - CIF: B-79 031290



This responsibility also includes the design, implementation and maintenance of the internal control considered necessary to allow the NFIS to be free of material misstatement due to fraud or error.

The directors of Banco Santander, S.A. are also responsible for defining, implementing, adapting and maintaining the management systems from which the information required to prepare the NFIS is obtained.

Our independence and quality management

We have complied with the independence requirements and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants ("IESBA Code") which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies current international quality standards and maintains, consequently, a quality system that includes policies and procedures related to compliance with ethical requirements, professional standards and applicable legal and regulatory provisions.

The engagement team consisted of professionals specialising in Non-financial Information reviews, specifically in information on economic, social and environmental performance.

Our responsibility

Our responsibility is to express our conclusions in a limited assurance independent report based on the work we have performed. We carried out our work in accordance with the requirements laid down in the current International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000 Revised) issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC) and in the Guidelines for verification engagements of the Statement of Non-Financial Information issued by the Spanish Institute of Auditors ("Instituto de Censores Jurados de Cuentas de España").

In a limited assurance engagement, the procedures performed vary in nature and timing of execution, and are less extensive, than those carried out in a reasonable assurance engagement and accordingly, the assurance provided is also lower.

Our work consisted of posing questions to management as well as to the various units of Grupo Santander that were involved in the preparation of the NFIS, of the review of the processes for compiling and validating the information presented in the NFIS, and in the application of certain analytical procedures and review procedures on a sample basis, as described below:

- Meetings with the Grupo Santander personnel to understand the business model, policies and management approaches applied, principal risks relating to these matters and to obtain the information required for the external review.
- Analysis of the scope, relevance and integrity of the content of the NFIS for the year 2022, based on the materiality analysis carried out by Grupo Santander and described in the section "5.1 Stakeholder engagement" and the section "5.2 Materiality assessment: identifying the issues that matter", taking into account the content required by current mercantile legislation.
- Analysis of the procedures used to compile and validate the information presented in the NFIS for the year 2022.
- Review of information relating to risks, policies and management approaches applied in relation to material matters presented in the NFIS for the year 2022.



- Verification, by means of sample testing, of the information relating to the content of the NFIS for the year 2022 and that it was adequately compiled using data provided by the sources of the information.
- Obtaining a management representation letter from the directors and management of the Parent company.

Conclusion

Based on the procedures performed in our verification and the evidence we have obtained, nothing has come to our attention that causes us to believe that the “Responsible banking” chapter, which corresponds to the attached NFIS of Banco Santander, S.A. and its subsidiaries, for the year ended 31 December 2022 has not been prepared, in all material respects, in accordance with the provisions of:

- Current mercantile legislation and in accordance with the criteria of the GRI Standards and the Financial Services Sector Disclosures of the GRI G4 Guidelines Industry Supplement as per the details provided for each matter included in the section “6.1 Non-financial information Act 11/2018 content index” and in the section “6.3 Global Reporting Initiative (GRI) content index” of the aforementioned Statement.
- The criteria described in the Reporting and Self-Assessment Template for the Principles for Responsible Banking (PRB) promoted by the United Nations Environment Programme Finance Initiative (UNEP FI) in the subsections 2.1 Impact Analysis, 2.2 Target Setting, 2.3 Target Implementation and Monitoring and 5.1 Governance Structure for Implementation of the Principles from the section “6.4 UNEP FI Principles for Responsible Banking reporting index”.

Emphasis of matter

The Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 relating to the establishment of a framework to facilitate sustainable investments establishes the obligation to disclose information on the manner and extent to which the company’s investments are associated with eligible economic activities according to the Taxonomy. For such purposes, Grupo Santander’s directors have incorporated information on the criteria that, in their opinion, best allow compliance with the aforementioned obligation and that are defined in the section “5.4 EU Taxonomy” of the accompanying NFIS. Our conclusion has not been modified in relation to this matter.

Use and distribution

This report has been drawn up in response to the requirement established in current Spanish mercantile legislation and therefore may not be suitable for other purposes and jurisdictions.

PricewaterhouseCoopers Auditores, S.L.

Pablo Bascones Ilundáin

27 February 2023

Corporate governance





1. 2022 Overview	161	5. Management team	228
Statement from Bruce Carnegie-Brown, lead independent director	161	6. Remuneration	230
1.1 Board skills and diversity	162	6.1 Principles of the remuneration policy	230
1.2 Board effectiveness	162	6.2 Remuneration of directors for supervisory and collective decision-making duties: policy applied in 2022	230
1.3 Strengthening of a remuneration policy aligned with the strategy, investors' interests and long-term sustainability	163	6.3 Remuneration of directors for executive duties	233
1.4 Engagement with our shareholders	163	6.4 Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote	245
1.5 Achievement of our 2022 goals	164	6.5 Preparatory work and decision-making process in relation to the remuneration policy, with a description of the participation of the remuneration committee	254
1.6 Priorities for 2023		6.6 Remuneration of non-director members of senior management	254
2. Ownership structure	167	6.7 Prudentially significant disclosures document	255
2.1 Share capital	167	7. Group structure and internal governance	257
2.2 Authority to increase capital	167	7.1 Corporate Centre	257
2.3 Significant shareholders	168	7.2 Internal governance	257
2.4 Shareholders' agreements	169	8. Internal control over financial reporting (ICFR)	260
2.5 Treasury shares	169	8.1 Control environment	260
2.6 Stock market information	171	8.2 Risk assessment in financial reporting	261
3. Shareholders. Engagement and general meeting	173	8.3 Control activities	262
3.1 Shareholder communication and engagement	173	8.4 Information and communication	263
3.2 Shareholder rights	175	8.5 Monitoring	264
3.3 Dividends and shareholder remuneration	176	8.6 External auditor report	264
3.4 2022 AGM	177	9. Other corporate governance information	267
3.5 Our next AGM in 2023	179	9.1 Reconciliation with the CNMV's corporate governance report model	267
4. Board of directors	180	9.2 Statistical information on corporate governance required by the CNMV	270
4.1 Our directors	181	9.3 Table on compliance with or explanations of recommendations on corporate governance	292
4.2 Board composition	189	9.4 Reconciliation to the CNMV's remuneration report model	294
4.3 Board functioning and effectiveness	195	9.5 Statistical information on remuneration required by the CNMV	295
4.4 Executive committee activities in 2022	202		
4.5 Audit committee activities in 2022	203		
4.6 Nomination committee activities in 2022	208		
4.7 Remuneration committee activities in 2022	212		
4.8 Risk supervision, regulation and compliance committee activities in 2022	216		
4.9 Responsible banking, sustainability and culture committee activities in 2022	220		
4.10 Innovation and technology committee activities in 2022	223		
4.11 International advisory board	226		
4.12 Related-party transactions and other conflicts of interest	226		



Structure of our corporate governance report

Since 2018, Banco Santander's annual reports on corporate governance and remuneration have followed an open format, as permitted by the Spanish stock market authority (CNMV), and are included in this chapter. It includes:

- Content legally required for the annual corporate governance report.
- Reports on board committees' operations. See sections [4.4](#) to [4.10](#).
- Annual report on directors' remuneration, which we are required to prepare and submit to a non-binding vote at our 2023 annual general meeting. See section [6. 'Remuneration'](#).
- Directors' remuneration policy. See section [6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'](#).
- Cross references for each section of the corporate governance and remuneration reports in the CNMV's required format in this and other chapters. See sections [9.1 'Reconciliation with the CNMV's corporate governance report model'](#) and [9.4 'Reconciliation with the CNMV's remuneration report model'](#).
- Cross references for each response to all recommendations in the CNMV'S Good Governance Code for Listed Companies (Spanish Corporate Governance Code) in this corporate governance report and other chapters of this annual report. See section [9.3 'Table on compliance with and explanations of recommendations on corporate governance'](#).



Banco Santander has the highest score in the Spanish Association for Standardisation and Certification's (AENOR) Good Corporate Governance Index, which verifies aspects such as board structure and dynamics, shareholders' general meeting operation and participation, transparency, and ESG governance.

1. 2022 Overview



'The 2022 geopolitical environment has been even more challenging than 2021, primarily driven by the continuing impact of the covid pandemic and the war in Ukraine which have significantly disrupted supply chains, increased energy and food costs and generated global inflation. In these challenging times, strong and effective governance overseen by the board is essential and in 2022 we made a number of improvements to ensure that this remained the case.

During the year, we strengthened our board composition with the addition of both Germán de la Fuente and Glenn Hutchins who both bring highly relevant skills and experience. We also continued to focus on succession planning and developing the quality of our internal pipeline of talent. Of particular note was the process we ran to appoint a new Group CEO which resulted in the appointment of Héctor Grisi to the role from 1 January 2023. I am delighted that José Antonio Álvarez will stay on the board as a non-executive director, retaining his Vice Chair position. We have significantly benefited from José Antonio's exceptional dedication and professionalism whilst in an executive role and will continue to do so in a non-executive capacity. In turn, and following their departure from the board of directors, I would like to thank R. Martín Chávez and Sergio Rial for their contribution and commitment to the Group.

We also remained focused on delivering against the agreed actions arising from the governance review we conducted in 2021, which delivered a number of governance enhancements, notably introducing a direct reporting line for the CEO to the board of directors. Most recently, we completed our internal board effectiveness review in 2022, the details of which can be found in '[Board effectiveness review in 2022](#)', in section 4.3.

The board has also continued to embrace its commitment to a green economy and to supporting our customers in their own transition to a Net Zero situation. To ensure maximum progress in this regard, we have factored responsible banking and ESG criteria into both our long and short-term incentives schemes for executive directors and top management; details can be found in section [6. 'Remuneration'](#).

For 2023, the rapidly evolving macro-economic environment will continue to be volatile and unpredictable. This will crystallise challenges that the board will need to navigate. I am confident that our ongoing commitment to best-in-class governance will ensure that we continue to be well placed to deal with such challenges.'

Bruce Carnegie-Brown, Lead independent director



1.1 Board skills and diversity

Appointments in 2022

Throughout 2022, we continued to renew and strengthen the board, reflecting our strong commitment to ensuring balance of expertise and skills and diversity. 40% of board members are women (in line with our representation target of 40-60% of both genders); and two thirds are independent directors.

The changes have reinforced the board's banking, financial, technological and digital prowess, and to make it more diverse in terms of regional origin; and, overall, giving it the right composition to lead the Group in pursuit of its strategy now and in the future.

The main board changes in 2022 were as follows:

- Héctor Grisi was co-opted on 20 December 2022 as executive director and Group CEO with effect from 1 January 2023, succeeding Jose Antonio Álvarez who remains on the board of directors as non-executive Vice Chair. Mr Grisi filled the vacancy left by Sergio Rial, who stepped down with effect 1 January 2023. He brings a relentless focus on the customer, proven leadership in driving transformation and greater connectivity across the Group, and a strong track record of delivering growth and business profitability. See section [4.1 'Our directors'](#) for further details.
- Glenn Hutchins was co-opted as independent director on 20 December 2022 to fill the vacancy left by R. Martín Chávez, who stepped down with effect from 1 July 2022. Glenn Hutchins has a solid background in the financial sector, including experience in the private sector and supervisory activities, tech savviness and business transformation. See section [4.1 'Our directors'](#) for further details.

The board of directors has submitted the referred nominations to our annual general meeting called for 30 or 31 March 2023 at first or second call, respectively, (2023 AGM) for ratification. See section [3.5 'Our next AGM in 2023'](#) for further details.

Board committees

The board made the following changes to the composition of its committees to ensure that they remained well equipped to discharge their responsibilities:

- Executive committee: Héctor Grisi joined the committee with effect from 1 January 2023.
- Audit committee: Germán de la Fuente became member on 21 April 2022.
- Nomination committee: Glenn Hutchins joined the committee on 20 December 2022 and R. Martín Chávez stepped down on 1 July 2022.
- Remuneration committee: Glenn Hutchins joined the committee on 20 December 2022 and R. Martín Chávez stepped down on 19 April 2022.
- Risk supervision, regulation and compliance committee: Germán de la Fuente became member on 1 January 2023 and R. Martín Chávez stepped down on 7 April 2022.
- Responsible banking, sustainability and culture committee: Álvaro Cardoso stepped down on 1 April 2022 and Gina Díez Barroso was appointed to the committee on 31 January 2023.

- Innovation and technology committee: Ana Botín was appointed chair on 18 April 2022 replacing R. Martín Chávez who stepped down on the same date. Glenn Hutchins also joined the committee on 20 December 2022 and Héctor Grisi joined with effect from 1 January 2023.

1.2 Board effectiveness

Group and subsidiary board relations

Strengthening the ties between the Group's and its subsidiaries' boards of directors is key to effective oversight of policies, controls and corporate culture. In the last years, the global pandemic together with the rapidly evolving macro-economic environment heightened the need for effective cross-border cooperation, which our proven Group Subsidiary Governance Model (GSGM) facilitates.

Governance is strengthened by the presence of a number of Group non-executive directors on our subsidiary boards: José Antonio Álvarez at Banco Santander (Brasil) S.A. and PagoNxt, S.L.; Homaira Akbari at Santander Consumer USA Holdings Inc. and PagoNxt, S.L.; Henrique de Castro at PagoNxt, S.L.; Gina Díez Barroso at Universia México, S.A. de C.V.; Pamela Walkden at Santander UK PLC and Santander UK Group Holdings PLC; and Luis Isasi at Santander España. See section [7. 'Group structure and internal governance'](#).

Group audit and risk supervision, regulation and compliance committees' chairs attended specific subsidiary committee meetings during 2022. In turn, they invited local audit and risk supervision, regulation and compliance committees' chairs to join Group audit and risk supervision, regulation and compliance committee meetings throughout the year. This helped to enhance communication and information cross-sharing.

In 2022, we continued to hold the convention with the chairs of the audit committees, which was held at our headquarters in Boadilla del Monte. The aim was to foster further collaboration between subsidiaries, raise awareness about global initiatives and expectations, collectively discuss topical issues and encourage networking. The event was both successful and very productive, with universal positive feedback received from participants. Further meetings of chairs of this and other committees are planned in 2023 and beyond.

The Group's training, induction and development methodology and content has been shared with subsidiaries in 2022 in order to promote best practices and drive consistency of approach on a Group-wide basis. See ['Director training and induction programmes'](#) in section 4.3 for further details.

As in previous years, at least one board session is held in one of the Group's key geographies. As part of these visits, directors meet local management in order to better understand local practices and challenges. In 2022, the board of directors met in Dallas, US with a specific focus on the transformation agenda of our business in this country.

Furthermore, subsidiary boards are encouraged to hold their board meetings at Santander's headquarters in Boadilla del Monte on occasion to foster further collaboration with the corporate teams and drive further engagement on Group



matters. The above mentioned practices will continue in 2023 and beyond.

Board effectiveness review and actions to continuously improve its operation

Corporate governance is a priority for Santander. Our governance model has consistently received strong support from shareholders, as evidenced by their high participation in general meetings and strong approval rates for corporate management and the re-election of directors. Governance needs to adapt to business and strategic needs, so we continuously monitor and enhance the functioning of our governance bodies.

While we are confident of the effectiveness of Santander's governance model, we regularly assess our governance framework. We enlist the help of external advisors when necessary. We also review individual and collective skills, both thematic and horizontal, to ensure the board's competence and diversity are sufficient for it to function effectively and hold management to account through constructive challenge.

Following on from the holistic external governance review conducted in 2021, the nomination committee, chaired by our Lead Independent Director, monitored execution of the resultant action plan during 2022 under the coordination of the General Secretary. The action plan aimed to continue ensuring clarity of the roles and responsibilities of the most senior executives, ensuring that checks and balances remained appropriate and effective; and that control functions remained fully independent.

Furthermore, in 2022, the nomination committee monitored the action plan resulting from specific areas for improvement identified by the non-executive directors under the leadership of the Lead Independent Director in 2021.

The comprehensive action plan was successfully completed and implemented, ensuring continuous improvement in the overall functioning and effectiveness of our board, its dynamics and internal culture.

In 2022, the board conducted its annual self-assessment internally, covering its structure, organization and functioning, dynamics and internal culture, committees' performance, as well as each director's performance and contribution. See ['Board effectiveness review in 2022'](#) in section 4.3.

1.3 Strengthening of a remuneration policy aligned with the strategy, investors' interests and long-term sustainability

To make remuneration policy for the Group's executive directors and key executives consistent with the new strategic plan disclosed at Investor Day on 28 February 2023 in London, the short-term corporate bonus scheme was updated as follows:

- New metrics relating to the Group's transformation, based on active and total customer growth and customer transaction cost; and quantitative metrics on generation of capital, which will bear more heavily on variable remuneration for all Material Risk Taker population;
- A simpler qualitative assessment, with four components (risk, compliance, NPS and ESG) instead of seven, to more

efficiently satisfy regulatory requirements and our stakeholders' needs regarding risk, compliance, network collaboration and ESG topics;

- In addition, as a new feature this year, a relative market performance multiplier to maximize shareholder value is introduced; it can raise or lower qualitative metrics, depending on leading entities' progress with significant transformation matters; and
- In terms of long-term remuneration, the metrics associated with:
 - Return on tangible equity (RoTE) to keep long-term profitability and value creation at the top of our list of priorities.
 - Total shareholder return (TSR).
 - Four ESG metrics on sustainability as part of our responsible banking agenda.

1.4 Engagement with our shareholders

In 2022 we were able to bring back in-person activities once suspended for the covid health crisis. Following its last edition in April 2019, we have convened our Investor Day on 28 February 2023 in London, the first event with shareholders and investors attended by Hector Grisi as our new CEO. Notwithstanding the above, we continue to focus on digitalisation in the relationship with our shareholders and investors. Through both traditional and virtual communication channels, we managed to engage our almost four million shareholders in our corporate governance, adapt to their needs and serve their interests.

We continued to inform of our sustainability strategy in a challenging economic and geopolitical environment. We are aware that our investors increasingly praise our efforts in ESG and the positive impact our activity can have on society and the environment. Therefore, we kept an open and constructive dialogue with analysts who advise investors on sustainability. We also proactively reported them on the progress of our responsible banking agenda. By doing things responsibly and developing long-term environmental and social solutions to support inclusive and sustainable growth, we are able to create value not just for our shareholders but for broader society. We also enhanced the strength of our governance to drive our strategy and ensure sound risk control.

For our 2022 AGM, we again gave shareholders the option of attending the meeting in person or remotely. This flexibility allows our shareholders, spread around the world, to participate in the general meeting without having to travel, encouraging their involvement in our corporate governance. As demonstrated during the covid pandemic, shareholders can participate in our entirely virtual general meetings the same way they would in person. Through our remote attendance app, they can fully exercise their rights to attend and participate in real time, being able to watch a live feed of the entire meeting, cast votes, make remarks, propose resolutions and send messages to the AGM notary.



1.5 Achievement of our 2022 goals

The 2021 annual report disclosed our corporate governance goals and priorities for 2022. The following chart describes how we delivered on each priority.

2022 goals

How we delivered

Developing strategic initiatives: One Santander, PagoNxt and Digital Consumer Bank

Overseeing those three strategic initiatives we launched in 2020 to help achieve our aim to be the world's best open financial services platform, acting responsibly and earning the trust of our employees, customers, shareholders and broader society:

- One Santander: A common operational and business model created to transform the way we serve our customers and provide a simpler and more enhanced customer experience;
- PagoNxt: An autonomous global payment platform to integrate all Santander customers into the open market. It includes the Payments Hub and our acquiring and international trade businesses. It will roll out payment solutions globally to our customers faster, which is critical to building One Santander; and
- Digital Consumer Bank: A combination of Santander Consumer Finance (SCF) and our fast-growing auto and consumer finance businesses with Santander's digital native bank, Openbank, to boost the technological transformation of the consumer finance business and ensure profitability and growth.

The board has overseen the three mentioned strategic initiatives and the main achievements can be summarized as follows:

- Regarding the transformation of our operating and business model, we have initiated its transformation with individuals, a segment where we have a significant opportunity and that accounts for 80% of our customers (127 million). During 2022, we have developed specific plans and appointed transformation leaders to help us accelerate our transformation ambitions.
- PagoNxt: It closed 2022 with EUR 953 million in incomes, well above expectations and managing more than 5% of the Group's payments. In 2022, the team was strengthened, and PagoNxt accelerated the deployment of common solutions in both merchant and trade, while ensuring that its overall structure remains simple and efficient.
- Digital Consumer Bank: Despite the slowdown of the auto business, DCB has delivered on its budget and market commitments, achieving a 14% RoTE, 2% return (net of tax) on risk weighted assets for a particular business (RoRWA) and 47% C/I ratio. DCB made relevant progress in the transformation of its businesses, both auto and non-auto, with the development of a common leasing solution, innovating on insurance offerings around its lending products. It also expanded new business models such as Wabi, an integrated car solution with monthly subscription and Zinia, our 'buy now, pay later' service, where we have added 4.2 million customers by year end and which is now available in the Netherlands and Germany.

In our digital banking business, Openbank closed 2022 with more than 1.9 million customers, a 12% growth. Additionally, in 2022 we have streamlined the governance of DCB subsidiaries (Openbank, Santander Consumer Finance and Open Digital Services) to optimise efficiency and coordination.

Ensuring responsible, profitable growth

We will continue to focus on generating profitable growth in a responsible way as a means of creating long-term value for our shareholders and other stakeholders. We will oversee the fulfilment of our ESG commitments to reach net zero emissions by 2050; raise 120 billion euros in green financing by 2025 and 220 billion euros by 2030; and financially empower 10 million people by 2025.

In 2022, we will set new short- and medium-term climate change objectives that will help us meet our long-term climate commitment.

We continued to progress on our ESG commitments. In particular:

- We announced three main new decarbonization targets for 2030 (measured in emissions reductions against 2019) in the following sectors: energy (-29% absolute emissions), aviation and steel (-33% and -32%, respectively, emissions intensity), both in emissions as part of our commitment to reach net zero emissions by 2050.
- We raised EUR 28.8bn this year in green finance (EUR 94.5bn since 2019 towards our EUR 120bn target by 2022).
- We reached EUR 53.2bn (EUR 100bn 2025 target by 2025) in assets under management (AUM) in socially responsible investments.
- Our Santander Finance For All programme has financially empowered 11.8mn people since 2019, achieving our 2025 10mn target three years early. Euromoney named us the Best Bank for Sustainable Finance in Latin America and the Banker named us the Best Bank for Financial Inclusion.
- 29.3% of our senior managers are women (30% target by 2025). We continued to prioritize diversity and inclusion awareness and equal opportunity for everyone regardless of gender, culture, sexual orientation or disability.

For additional information, see the ['Responsible Banking'](#) chapter.



2022 goals

How we delivered

Strengthening governance to ensure we fulfil our long-term vision

We will continue to bolster our corporate governance by taking the improvement measures we identified in the 2021 review and enhancing our management bodies' operations to make sure we continue to adhere to national and international best practices and to supervisors' expectations.

In 2022, we successfully managed the succession planning discipline throughout Santander, most notably conducting a rigorous and effective process that led to the appointment of Héctor Grisi as new Group CEO, following our comprehensive and disciplined methodology. The strength and depth of our overall succession planning discipline is a solid evidence of the strong internal cadre of talent the Group has to face the challenges ahead, acknowledging that this will remain an ongoing area of focus for the board.

We have continued to work on an appropriately refreshed board of directors ensuring diversity in its broadest sense (gender, backgrounds, new skills and experience) to ensure that we are well placed to address the challenges faced in our business and taking into account feedback on previous board effectiveness reviews.

We have maintained our positive progress on governance following completion of the external governance review commissioned in 2021 with the resultant actions executed in 2022. These actions also impacted the split of roles and responsibilities between the Executive Chair and the Group CEO, with the CEO now reporting exclusively to the board.

Our continuous improvement approach has helped accelerate our progress with strategically important initiatives such as Digital Consumer Bank and Investment Platforms governance arrangements. With regard to Special Situations Management, we have completed a detailed review and executed various enhancements applicable on a Group-wide basis.

Ongoing improvements in oversight and control of our subsidiaries has continued as a priority, leveraging new initiatives such as induction and training sessions for subsidiary directors facilitated by Group (with high attendance levels) and proactive guidance provided by Group on board effectiveness methodology, board governance disciplines and associated best practices. We have also continued our relentless focus on simplification of internal governance and related internal regulations, ensuring that they are more user friendly and capable of application in practice. Digital tools have played a significant part of this achievement.

Maintaining capital discipline and creating shareholder value

In 2022, we will prioritize organic growth as part of our capital management, focusing on businesses with high returns on risk-weighted assets (RoRWA) and shareholder remuneration.

Our shareholder remuneration policy aims to payout 40% of the underlying profit for 2022, split almost equally between a cash dividend and a share buyback.

In 2022, the board has continuously monitored an even more disciplined approach of capital allocation applied by the Group. This has resulted in a reduction of the portfolios whose returns are below the cost of equity, going from 30% in 2021 to 20%, a commitment made to the market. Such discipline and transparency have allowed us to take actions on the portfolio profitability and together with securitizations, they have enabled us to close each quarter with a CET1 above 12%.

Once we complete the necessary actions under our shareholders' remuneration policy for 2022 (see section [3.3 'Dividends and shareholder remuneration'](#)), the dividend per share will have risen 18% and earnings per share (EPS) 23%, owing to a lower amount of shares in circulation after cancelling the repurchased shares in the share buyback programmes and to increased profits. In addition, TNAV in 2022 has increased 6% year on year, including cash dividends paid out in 2022.



1.6 Priorities for 2023

The board set the following priorities for 2023:

- **Ensure a smooth transition of the new Chief Executive Officer and new Chief Risk Officer**

In 2023, we welcomed Héctor Grisi as new CEO with effect from 1 January 2023 and Mahesh Aditya will assume the Group CRO position in March 2023, subject to regulatory approval. The board will oversee the orderly transition into these roles, providing ongoing support and constructive challenge.

- **Progressing in our ESG commitments**

We will oversee the fulfilment of our ESG commitments to reach net zero emissions by 2050, accelerating the green finance with new and wider value propositions for our customers, and at the same time taking care of the sustainability and responsible banking agenda.

- **Governance effectiveness**

We will continue to enhance the overall effectiveness of the board, with an appropriate composition and ensuring that its role is discharged in the most tangible and effective manner. We will also consolidate the enhancements delivered as part of our action plan executed in 2022, following the review of our governance arrangements.

- **Balance sheet strength**

In 2023, due to the current economic environment, the solvency of the balance sheet and in particular, the quality of the credit risk portfolio will be a priority for the board, while we maintain our focus on capital management and capital allocation to businesses with high returns on risk-weighted assets (RoRWA).

- **Long-term shareholder value**

The board will promote the generation of long-term and sustainable shareholder value creation through consistent and reliable returns growth while continuing to build capital strength organically. This will ensure strong shareholder remuneration and the resources required to deliver our strategic transformation.

2. Ownership structure

→ Broad and balanced shareholder base

→ A single share class

→ Authorized capital in line with best practices to provide the necessary flexibility

2.1 Share capital

Our share capital is made up of ordinary shares, each with a par value of EUR 0.50. All shares belong to the same class and carry the same voting, dividend and other rights.

There are no bonds or securities that can be converted into shares other than contingent convertible preferred securities (CCPS), which are mentioned in section [2.2 'Authority to increase capital'](#).

As of 31 December 2022, Banco Santander's share capital was EUR 8,397,200,792 and comprised 16,794,401,584 shares.

It changed two times in 2022, related to two share capital reductions by the respective amounts of EUR 129,965,136.50 (1.5% of share capital) and EUR 143,154,722.50 (1.7%), cancelling the repurchased shares through the buyback programmes carried out within the 2021 shareholder remuneration policy.

On 1 February 2023, the board resolved to reduce, subject to the required regulatory authorization from the ECB, the share capital in the amount of EUR 170,203,286, by cancelling the 340,406,572 repurchased shares, representing 2.03% of the share capital, through the first buyback programme carried out within the 2022 shareholder remuneration policy (First 2022 Buyback Programme). Once the required regulatory authorization is obtained, the share capital will be EUR 8,226,997,506 represented by 16,453,995,012 shares.

Such three share capital reductions were made under the capital reduction resolutions approved at April 2022 AGM.

At the 2023 AGM, the board of directors submitted two capital reduction resolutions to cancel the shares that will be acquired through the second share buyback programme charged against 2022 results (Second 2022 Buyback Programme); as well as those that will be acquired as part of any new buyback programmes that the board may implement or by other legally permitted means. See sections [3.3 'Dividends and shareholder remuneration'](#) and [3.5 'Our next AGM in 2023'](#).

We have a diversified and balanced shareholder structure. As of 30 December 2022, Banco Santander had 3,915,388 shareholders, broken down by type, geographical provenance and number of shares as follows:

Type of investor

Type of investor	% of share capital
Board ^A	1.10%
Institutional	56.66%
Retail	42.24%
Total	100%

A. Shares owned or represented by directors. For more details on the shares owned and represented by directors, see ['Tenure and equity ownership'](#) in section 4.2 and subsection A.3 in section [9.2 'Statistical information on corporate governance required by CNMV'](#).

Geographic region

Geographic region	% of share capital
Europe	74.71%
The Americas	24.19%
Other	1.10%
Total	100%

Number of shares

Number of shares	% of share capital
1-3,000	8.74%
3,001-30,000	17.76%
30,001-400,000	12.58%
Over 400,000	60.92%
Total	100%

2.2 Authority to increase capital

Under Spanish law, shareholders at the general meeting have the authority to increase share capital and may delegate power to the board of directors to increase share capital by no more than 50%. Our Bylaws are consistent with Spanish law and do not set out special conditions for share capital increases.

As of 31 December 2022, our board of directors had received authorization from shareholders to approve or carry out these capital increases:

- **Authorized capital to 2025:** At our April 2022 AGM, the board was granted authorization for three years (until 1 April 2025) to increase share capital on one or more occasions by up to EUR 4,335,160,25.50 (50% the of capital at the time of that AGM).The board was granted this authorization for three years (until 1 April 2025).

Consequently, the board can issue shares for cash consideration with or without pre-emptive rights for shareholders, and for capital increases to back any convertible



bonds or securities issued under its authority granted at the April 2019 AGM. The board put to a vote at the 2023 AGM the renovation of the authorization for the issuing of convertible bonds or securities. See section [3.5 'Our next AGM in 2023'](#).

Shares without pre-emptive rights under this authorization can be issued up to EUR 867,032,065 (10% of the capital at the time of the April 2022 AGM). However, under the Spanish Companies Act that limit does not apply to capital increases to convert CCPS (which shall be converted into newly-issued shares when the CET1 ratio falls below a predetermined threshold). This authorization has not been used in 2022.

- **Capital increases approved for contingent conversion of CCPS:** We issued contingent convertible preferred securities that qualify as regulatory Additional Tier 1 (AT1) instruments and would be converted into newly-issued shares if the CET1

ratio fell below a predetermined threshold. Each issue was backed by a capital increase approved under the authorization granted to the board by shareholders. The chart below shows the outstanding CCPS at the time of this report, with details about the capital increase resolutions that back them. Those capital increases are, therefore, contingent and have been delegated to the board of directors. The board is authorised to issue additional CCPS and other convertible securities and instruments in accordance with a resolution passed at the AGM held on 12 April 2019 that allows convertible instruments and securities to be issued for up to EUR 10 billion or an equivalent amount in another currency (no issues were executed in 2022 under this authorization). Any capital increase that results from shares converted from CCPS and other convertible instruments will occur according to the capital increase authorization made at the time those instruments were issued.

Issues of contingent convertible preferred securities

Date of issuance	Nominal amount	Discretionary remuneration per annum	Conversion predetermined threshold	Maximum number of shares in case of conversion ^A
29/09/2017	EUR 1,000 million	5.25% for the first six years		263,852,242
19/03/2018	EUR 1,500 million	4.75% for the first seven years		416,666,666
08/02/2019	USD 1,200 million	7.50% for the first five years		388,349,514
14/01/2020	EUR 1,500 million	4.375% for the first six years	If, at any time, the CET1 ratio of Banco Santander or the Group is less than 5.125%	604,594,921
06/05/2021	USD 1,000 million	4.75% for the first six years		391,389,432
06/05/2021	EUR 750 million	4.125% for the first seven years		352,278,064
21/09/2021	EUR 1,000 million	3.625% for the first eight years		498,007,968

A. The figure corresponds to the maximum number of shares that could be required to cover the conversion of these CCPS, calculated as the quotient (rounded off by default) of the nominal amount of the CCPS issue divided by the minimum conversion price determined for each CCPS (subject to any antidilution adjustments and the resulting conversion ratio).

2.3 Significant shareholders

As of 31 December 2022, Norges Bank was registered with the CNMV with a direct significant shareholding of 3.006% of voting shares of Banco Santander (3% is the lower threshold generally provided under Spanish law to disclose a significant holding in a listed company), as it had announced on 5 May 2022.

On 16 June 2022, fund manager Dodge & Cox reported to the CNMV a significant shareholding of 3.038% of voting shares of Banco Santander, which it specified belonged to funds and portfolios that it managed, with none holding more than 3% individually. In addition, on 24 October 2019 asset manager BlackRock Inc. reported a significant shareholding of 5.426% of voting shares of Banco Santander, which it specified belonged to several funds and investment firms, with none holding more than 3% individually. These participations appear in the CNMV records as of 31 December 2022.

These are other significant shareholder changes reported to the CNMV in 2022:

- Amundi, S.A. reported on 21 February a significant shareholding of 3.007%. On 11 May, it reported that its shareholding had decreased to 2.997%. On 17 May, it reported that its shareholding had risen to 3.004%. On 5 September, it reported that its shareholding had decreased to 2.881% (under the mandatory threshold). However, it specified each time that shares belonged to investment funds managed by entities that it controlled with none holding more than 3% individually.

- On 12 December, the Goldman Sachs Group also reported to the CNMV a significant shareholding, with voting shares and financial instruments, of 7.465%; on 22 December, it reported that its shareholding had decreased to 0.608%.

Likewise, though as of 31 December 2022 certain custodians appeared in our shareholder registry as holding more than 3% of our share capital, we understand that those shares were held on behalf of other investors, none of whom exceeded that threshold individually. These custodians were State Street Bank (14.23%), Chase Nominees Limited (6.88%), The Bank of New York Mellon Corporation (4.82%), Citibank New York (3.90%), BNP Paribas (3.28%) and EC Nominees Limited (3.04%).

There may be some overlap in the holdings declared by the above mentioned custodians and asset managers.

As of 31 December 2022, neither our shareholder registry nor the CNMV's registry showed any shareholder residing in a non-cooperative jurisdiction with a shareholding equal to, or greater than, 1% of our share capital (which is the mandatory disclosure threshold applicable to such investors under Spanish law).

Our Bylaws and the Rules and regulations of the board of directors set out an appropriate regime system for analysing and approving related-party transactions with significant shareholders. See section [4.12 'Related-party transactions and other conflicts of interest'](#).



2.4 Shareholders' agreements

In February 2006, several persons linked to the Botín-Sanz de Sautuola y O'Shea family entered into a shareholders' agreement to set up a syndicate for their shares in Banco Santander. The CNMV was informed of this agreement and the subsequent amendments the parties made. This information can be found on the CNMV website.

The main provisions of the agreement are:

- **Transfer restrictions.** Any transfer of Banco Santander shares expressly included in the agreement requires prior authorization from the syndicate meeting (which can freely authorise or reject it), except when the transferee is also a party to the agreement or member of the Fundación Botín. These restrictions apply to the shares they expressly cover under the agreement and to shares subscribed for, or acquired by, syndicate members in exercising any subscription, bonus share, grouping or division, replacement, exchange or conversion rights that pertain or are attributed to, or derive from, those syndicated shares.
- **Syndicated voting.** Under the agreement, the parties will pool the voting rights attached to all their shares so that syndicate members may exercise them and engage Banco Santander in a concerted manner, in accordance with the instructions and the voting criteria and orientation the syndicate establishes. This covers the shares subject to the transfer restrictions mentioned above as well as any voting rights attached to any other Banco Santander shares held either directly or indirectly by the parties to the agreement, and any other voting rights assigned to them by virtue of usufruct, pledge or any other contractual title, for as long as they hold those shares or are assigned those rights. Representation of the syndicated shares is attributed to the syndicate chair, who will be the chair of Fundación Botín (currently Javier Botín, one of our directors and our Group executive chair's brother).

Though the agreement initially terminates on 1 January 2056, it will extend automatically for additional 10-year periods unless one of the parties notifies of their intention not to extend six months before the initial term or extension period ends. The agreement may only be terminated early if all the syndicated shareholders agree unanimously.

As of 31 December 2022, the parties to this agreement held 102,279,441 shares in Banco Santander (0.61% of its capital at such time), which were therefore subject to the voting syndicate. They include 80,355,819 shares (0.48% of its capital at such time) that are also subject to the transfer restrictions.

Subsection A.7 of section [9.2 'Statistical information on corporate governance required by CNMV'](#) contains a list of parties to the shareholders' agreement and the relevant information filed with CNMV.

2.5 Treasury shares

Shareholder approval

The acquisition of treasury shares was last authorized at our April 2020 AGM, for five years and subject to these provisions:

- Treasury shares held at any time cannot exceed 10% of Banco Santander's share capital, which is the legal limit set under the Spanish Companies Act.

- The purchase price cannot be lower than the nominal value of the shares nor exceed 3% of the last price on the Spanish market for any trades in which Banco Santander does not act on its own behalf.
- The board may establish its purposes and the procedures in which it may apply.

The board put to a vote at the 2023 AGM the renewal of the authorization for the acquisition of treasury shares. See section [3.5 'Our next AGM in 2023'](#).

Treasury shares policy

On 27 October 2020, the board approved the current treasury shares policy, which dictates that treasury share transactions may be carried out for these **purposes**:

- Provide liquidity or supply of securities in the market for Banco Santander shares, which gives this market depth and minimizes any temporary imbalances in supply and demand.
- Take advantage, for the benefit of all shareholders, of weakness in the share price due to its medium-term outlook.
- Meet our obligations to deliver shares to our employees and directors.
- Serve any other purpose authorized by the board within the limits set at the general meeting. In this regard, Banco Santander has made during the year the donations to Fundación Banco Santander indicated below in the context of its Responsible Banking Policy.

Among other things, the policy also provides for:

- The **principles** to uphold in treasury share trades, which include protecting financial markets' integrity and prohibiting market manipulation and insider trading.
- The **rules** on how treasury share trades must be carried out, unless in exceptional circumstances as per the policy or carried out through mechanisms, such as buyback programmes, with a regulation of their own. These rules include:
 - **Responsibility for execution** of these trades, which falls on the Investments and Holdings department, which is kept separate from the rest of Santander.
 - **Venues and types of trades.** Trades must generally be carried out in the orders market of the *mercado continuo* (continuous market) of Spanish stock exchanges.
 - **Volume limits.** Volume limits must generally not exceed 15% of the average daily trading volume for Banco Santander shares in the previous 30 sessions in the *mercado continuo*.
 - **Price limits.** In general, (a) buy orders should not exceed the greater of the price of the last trade in the market between independent parties and the highest buy order price in the order book; and (b) sell orders should not be lower than the lesser of the price of the last trade in the market by independent parties and the lowest sell order price in the order book.



- **Time limits**, including a 15-day black-out period that applies before each quarterly results presentation.
- **Disclosure to the markets** of treasury shares trading.

The policy applies to the discretionary trading of treasury shares irrespective of whether they are carried out in regulated markets, in multilateral trading facilities, outside the orders market, either through blocks or through special transactions, or under buyback programmes. Furthermore, buyback programmes shall comply with all the applicable specific regulations, such as regulation on market abuse and their relevant implementing rules. The policy does not apply to transactions on Banco Santander's shares carried out to hedge market risks or provide brokerage or hedging for customers.

The full treasury shares policy is available on Banco Santander's corporate website.

Execution of the buyback programmes charged against 2021 results

According to the 2021 shareholder remuneration policy, the 2022 AGM agreed to reduce Banco Santander's share capital by cancelling the repurchased shares in the first buyback programme of 2021 under the authorization of the general shareholders meeting held in April 2020, for an amount of EUR 129,965,136.50. On 25 April 2022, the capital reduction was registered with the Commercial Registry.

In the second buyback programme of 2021 (executed from 15 March to 6 May 2022, once the required European Central Bank (ECB) regulatory authorization was obtained), we acquired 286,309,445 treasury shares — 1.676% of Banco Santander's share capital at such time— at a weighted average price per share of EUR 3.0212. On 1 July 2022 the public deed of capital reduction through the cancellation of repurchased shares, in the terms agreed by the 2022 AGM and for an amount of EUR 143,154,722.50, was registered with the Commercial Registry. See section [3.4 '2022 AGM'](#)

First 2022 Buyback Programme

Under the authorization of the general shareholders meeting held in April 2020, and according to the 2022 shareholder

remuneration policy, on 27 September 2022 the board resolved that it would execute a new share buyback programme worth EUR 979 million (approximately 20% of the Group's underlying attributable profit in first semester 2022) as shareholder remuneration charged against 2022 results once it had obtained the required regulatory authorization.

In the First 2022 Buyback Programme (executed from 22 November 2022 to 31 January 2023, once the required regulatory authorization was obtained), we acquired 340,406,572 treasury shares, which was 2.03% of Banco Santander's share capital at such time, at a weighted average price per share of EUR 2.8754.

The purpose of the First 2022 Buyback Programme 2022 was to reduce Banco Santander's share capital by cancelling the repurchased shares in the terms agreed by the 2022 AGM. On 1 February 2023, the board resolved to reduce, subject to the required regulatory authorization from the ECB, the share capital in the amount of EUR 170,203,286, by cancelling the 340,406,572 repurchased shares.

Second 2022 Buyback Programme

Under the same AGM approval, on 27 February 2023 the board resolved that it would execute a new share buyback programme worth EUR 921 million as shareholder remuneration charged against 2022 results for which the appropriate regulatory authorization has already been obtained. The execution of the Second 2022 Buyback Programme will start on 1 March 2023. The purpose of the Second 2022 Buyback Programme is to reduce Banco Santander's share capital by cancelling purchased shares, for which the board submitted a resolution for a vote at the 2023 AGM. See section [3.5 'Our next AGM in 2023'](#).

Activity in 2022

As of 31 December 2022, Banco Santander and its subsidiaries held 243,689,025 shares, which accounted for 1.45% of the share capital (compared to 277,591,940, 1.601% of the share capital, at 31 December 2021).

The chart below summarizes the monthly average proportion of treasury shares to share capital throughout 2022 and 2021.

Monthly average of daily positions in treasury shares

% of Banco Santander's share capital at month end

	2022	2021
January	1.64%	0.16%
February	1.55%	0.18%
March	1.92%	0.17%
April	1.27%	0.17%
May	1.74%	0.18%
June	0.02%	0.19%
July	0.03%	0.19%
August	0.11%	0.05%
September	0.13%	0.05%
October	0.03%	0.27%
November	0.48%	1.08%
December	1.45%	1.90%



In 2022, the Group's treasury share trades amounted to these values:

Acquisitions and transfers of treasury shares in 2022

EUR (except number of shares)	Acquisitions				Transfers				Profit (loss) net of taxes
	Number of shares	Total par value	Total cash amount	Average purchase price	Number of shares	Total par value	Total cash amount	Average purchase price	
Discretionary trading	74,833,528	37,416,764.00	202,659,000	2.71	69,748,976 ^A	34,874,488.50 ^A	194,864,000 ^A	2.72 ^B	6,653,000 ^B
Client induced trading	131,274,007	65,637,003.50	368,573,000	2.81	131,274,007	65,637,003.50	368,573,000	2.81	
Buyback programmes	507,252,251	253,626,125.50	1,478,840,000	2.92	N/A	N/A	N/A	N/A	N/A
Total	713,359,786	356,679,893.00	2,050,072,000	2.87	201,022,983^A	100,511,491.50^A	563,437,000^A	2.85^B	6,653,000^B

A. Include two donations that Banco Santander had made to Fundación Banco Santander during the year totalling 36,700,000 treasury shares. For more details, see 'Other programs to support communities' in section 3.9 'Support to higher education and other local initiatives' of the 'Responsible banking' chapter.

B. Excluding the donations mentioned in footnote A above.

C. Transactions on Banco Santander's shares to hedge market risks or provide brokerage or hedging for customers.

The chart below shows significant changes in treasury shares that required disclosure to the CNMV in the year. Companies must report to the CNMV when purchases of treasury shares exceed 1% of the total voting rights (without discounting sales or transfers) or there is a change in the number of total voting rights.

Significant changes in treasury shares in 2022^A

Reported on	% of voting rights represented by shares		
	acquired since last notice	transferred since last notice	held at reference date of notice
03/01/2022 ^B	1.016	0.576	1.593
08/04/2022 ^C	1.008	0.518	2.084
10/05/2022 ^D	0.981	1.584	1.512
6/07/2022	0.618	2.123	0.032
5/12/2022	1.029	0.502	0.559
27/12/2022 ^E	1.061	0.221	1.399

A. Percentages calculated with share capital at the date of disclosure.

B. Data shown as corrected by notice dated 11 January 2022.

C. Data shown as corrected by notice dated 10 May 2022.

D. Data shown as corrected by notice dated 11 May 2022.

E. Data shown as corrected by notice dated 13 January 2023.

Transactions with financial instruments

We carried out these transactions of our own for a purpose similar to discretionary treasury share management and with Banco Santander shares as the underlying asset in 2022:

- In Q1, we reduced the investment position by a *delta* (i.e. net exposure to share price changes) equalling 2,000,000 shares.
- In Q2 and Q3, we took two investment positions by a *delta* equalling 1,500,000 shares each. The final position at year end was a Delta equalling 9,000,000 shares worth a total EUR 24,300,000.
- The instruments used were total return equity swaps, to be settled exclusively in cash.

2.6 Stock market information

Markets

Banco Santander shares are listed on Spanish stock exchanges (Madrid, Barcelona, Bilbao and Valencia, under the trading symbol 'SAN'), the New York Stock Exchange (NYSE) as American Depositary Shares (ADS) under the trading symbol 'SAN' (each ADS represents one Banco Santander share), the London Stock Exchange as Crest Depositary Interests (CDI) under the trading symbol 'BNC' (each CDI represents one Banco

Santander share), the Mexican Stock Exchange under the trading symbol 'SAN', and the Warsaw Stock Exchange under the trading symbol 'SAN'.

Market trends

2022 was marred by the war in Ukraine, strong inflationary pressure, central banks' tightening of monetary policy to halt rising prices, slow growth in China, by covid outbreaks and lockdowns, and fears of an upcoming global recession.

Central banks raised interest rates in 2022 as it had done in 2021, albeit more moderately. The European Central Bank set its official interest rate at 2%, suggesting that it may surpass 3%. The Bank of England left its official interest rate at 3.5%; but it is expected to peak at 4%. The Federal Reserve raised its fed funds rate to 4.25%-4.50% and expects to take it to 5-5.25% or even higher.

In this context, main indices closed the year in the red, despite a strong rebound in Q4. European banking indices closed the year positively, having benefited from interest rate hikes. Banco Santander's share ended Q4 with a positive total return of 19.5%, slightly above the 18.5% of Europe's main banking index, the DJ Stoxx Banks.

Our share price ended the year with a return of -0.8%, slightly below the eurozone's main banking index, the EuroStoxx Banks



(up 1.8%) and the DJ Stoxx Banks (up 2.5%). Meanwhile, the MSCI World Banks fell 9.4%, the Ixex 35 2.0% and the DJ Stoxx 50 1.1%.

Market capitalization and trading

By 30 December 2022, Banco Santander's market capitalization of EUR 47,066 million was the second largest in the eurozone and 36th largest in the world among financial institutions.

14,217 million Banco Santander shares traded in the year for an effective value of EUR 40,262 million and a liquidity ratio of 84%.

The Banco Santander share

	2022	2021
Shares (million)	16,794.4	17,340.6
Price (EUR)		
Closing price	2.803	2.941
Change in the price	(5%)	16%
Maximum for the period	3.482	3.509
Date of maximum for the period	10/02/2022	03/06/2021
Minimum for the period	2.324	2.375
Date of minimum for the period	15/07/2022	28/1/2021
Average for the period	2.795	3.055
End-of-period market capitalization (EUR million)	47,066	50,990
Trading		
Total volume of shares traded (million)	14,217	13,484
Average daily volume of shares traded (million)	55.3	52.7
Total cash traded (EUR million)	40,262	41,195
Average daily cash traded (EUR million)	156.7	160.9



3. Shareholders. Engagement and general meeting

→ One share, one vote, one dividend

→ No takeover defences in our Bylaws

→ High shareholders' participation and engagement at our general meetings

3.1 Shareholder communication and engagement

Policy on communication and engagement with shareholders and investors

Banco Santander aims to ensure its interests are in line with shareholders', long-term share value and the long-term confidence of investors and society. We provide information to shareholders and investors that satisfies their expectations and upholds our culture and values. We also communicate and engage with them regularly so that their views will be considered by senior managers and governance bodies.

The principles of Banco Santander's policy on communication and engagement with shareholders and investors are:

- **Protection of rights and lawful interests of all shareholders.** We enable them to exercise their rights, provide them with information and give them opportunities to have a say in our corporate governance.
- **Equal treatment and non-discrimination.** We treat all investors equally.
- **Fair disclosure.** We make sure that the information we disclose to investors is transparent, truthful and consistent. Any inside or relevant information given to investors will have been previously disclosed except when applicable regulation provides otherwise.
- **Appropriate disclosure of information.** We report the right information to meet our investors' needs and expectations. We make sure to give investors clear, concise, reliable and tailored information.
- **Compliance with our Bylaws and corporate governance rules,** as well as the principles of cooperation and transparency with regulators and supervisors, in accordance with internal guidelines. We adhere closely to the laws and regulations on insider and price-sensitive information in addition to our own Code of conduct in securities markets, the General Code of Conduct and the Rules and regulations of the board of directors.

The policy further describes:

- The **roles and responsibilities** of Banco Santander's main bodies and functions involved in communication and engagement with shareholders and investors.
- The **channels for disclosing information** and communicating with shareholders and investors.

- The **ways Banco Santander engages** with shareholders and investors, which are covered below.

The policy also applies to relations with the financial, environmental, social and corporate governance analysts, proxy advisers, rating agencies and other agents whom our shareholders and investors consult and we consider essential.

Our policy on communication and engagement with shareholders and investors is available on our corporate website.

Banco Santander has board-approved frameworks on branding and communications, and accounting and financial information and management. They set out the general principles, roles and key processes on the communication of financial, non-financial and corporate information, helping ensure that all our shareholders and other stakeholders are properly informed about our strategy, targets and results, and culture and values, thus maximizing the disclosure and quality of the information available to the market.

Engagement with shareholders in 2022

In keeping with our policy, we engaged with our shareholders as follows:

- **The annual general meeting.** Our most important annual event for our shareholders. We strive to encourage all our shareholders to, in an informed way, attend and participate. See '[Shareholder participation at general meetings](#)' and '[Right to information](#)' in section 3.2.

At the annual general meeting, the chair reports on the year's most significant changes to the Group's corporate governance, supplementing this corporate governance report. She also addresses any questions raised by shareholders about the agenda items and the relevant information disclosed to the market since the last general meeting.

The CEO presents on the Group's strategy execution and performance (overall and by region, country and business) and the main priorities for the following year.

The chairs of the audit, nomination, remuneration and, since the 2022 AGM, the responsible banking, sustainability and culture committees also report to the annual general meeting on their operations and elaborate the information provided in this chapter on the committees they chair.

Shareholders may attend the annual general meeting both in person and remotely. The meeting is broadcasted in real time on our corporate website, where its recordings are also



published in full thereafter. This allows shareholders who are not present and all stakeholders to be fully informed of the deliberations and approved resolutions.

Our 2022 AGM was hybrid, allowing shareholders to attend both in person and remotely. Our general meeting attendance app enables shareholders to exercise their rights to attend and participate in real time and remotely. They can watch the entire meeting through a live feed, vote, make remarks, propose resolutions and contact the notary public. The high shareholder meeting participation in the last meetings proved the effectiveness of our electronic means of attendance, delegation and remote voting prior to the meeting.

In addition, the excellent *quorum* and voting results at our 2022 AGM speak to the importance we place on shareholder engagement at annual general meetings. See section [3.4 '2022 AGM'](#).

Banco Santander's management system for the 2022 AGM received once again AENOR certification for sustainable events in compliance with UNE-ISO 20121:2013, as well as AENOR's declaration of protocol verification against covid at events.

- **Quarterly results presentations.** Every quarter we present our results on the same day we make them public. Our presentation can be followed live, via conference call or webcast in our corporate website. We release the related quarterly financial report and presentation material before the market opens. During the presentation, questions can be asked or emailed to: investor@gruposantander.com.

In 2022, we gave our first, second and third quarter results presentations on 26 April, 28 July and 26 October, respectively. Our fourth quarter results presentation was on 2 February 2023.

- **Investor and strategy days.** We organize investor and strategy days where senior managers explain our strategy to investors and stakeholders in a broader context than in results presentations. Investors can interact directly with senior managers and some directors, which is increasingly important and speaks to our strong governance. As recommended by the CNMV, we publish announcements about meetings with analysts and investors, as well as related documents, in advance. On 28 February 2023 we hold our Investor Day in London, which we last held in April 2019. It is the first shareholder and investor event attended by Héctor Grisi as our new CEO. The information made available at those events is not included in this annual report nor considered part of it.
- **Meetings and conferences.** Our Shareholder and Investor Relations team discusses financial and other issues at meetings with investors and conferences organized by third parties throughout the year.

Notwithstanding the principle of equal treatment and non-discrimination, we have learned that one size does not fit all when engaging with investors. Therefore, we tailor these engagements to meet the needs and expectations of our institutional investors, fixed-income investors, analysts and rating agencies, as well as retail shareholders:

- **Lead Independent Director engagement with key investors.** Our Lead Independent Director, Bruce Carnegie-Brown, keeps regular contact with investors in Europe and North America,

particularly in the months prior to the annual general meeting. He gathers their insights and gauges their concerns, especially regarding our corporate governance, which are duly considered by nomination committee. In 2022 and early 2023, he met with 28 investors, who accounted for approximately 30% of our share capital. In our annual board assessment, board members highly value Mr Carnegie-Brown's role in integrating new international best practices in corporate governance, fostering tailored relations with our institutional investors. The nomination committee is informed about the feedback received from investors, as the board's committee specialized in corporate governance.

- **Investor roadshows.** Our Investor Relations team keeps in constant contact with institutional investors and analysts to promote constructive dialogue on shareholder value, better governance and remuneration schemes, and sustainability.

In 2022, Shareholder and Investor Relations engaged 862 times (both in person and virtually) with 527 institutional investors from 155 locations. 73 of those meetings focused on environmental, social and governance topics. It engaged with 40% of the share capital, which is over 56% of the capital held by institutional investors.

We issued over 650 communications to increase dialogue and transparency with shareholders and investors about our performance, results and Banco Santander's shares.

- **Interaction with retail shareholders.** We offer special means of communication for retail shareholders, regardless of their stake. In 2022, the Shareholder and Investor Relations organized 201 events with retail shareholders (63 virtually; 137 in-person; and one in hybrid format). 7,589 people, accounting for 412,457,915 shares (5.20% of our retail shareholders' capital in Spain), attended. Shareholders engaged with the Chief Financial Officer (CFO) at several of these events.

The team also responded to 163,761 queries received via our shareholder and investor helplines, mailboxes, WhatsApp and bilateral meetings on the Virtual Attention Channel. Satisfaction surveys revealed 91% would recommend our customer service.

Lastly, we received 276,198 shareholder and investor opinions through quality surveys and studies.

Communication with proxy advisors and other analysts

We have always recognized the value our investors place on open and proactive dialogue with proxy advisors, ESG analysts and other influential entities. We make sure they understand our corporate governance, responsible banking and sustainability priorities and messages in order to convey them properly to investors.

In 2022, through our continuous engagement with the main proxy advisers, we duly reported on and explained proposed resolutions submitted to the 2022 AGM so they could make voting recommendations.

Corporate website

Our corporate website enables us to communicate effectively with all our shareholders and stakeholders worldwide. Its



design means we can be transparent and helps users get quality information about Santander.

As required by law, it has information on corporate governance. In particular, (i) Banco Santander's key internal regulations (Bylaws, Rules and regulations of the board, Rules and regulations of the general meeting, etc.), (ii) the board of directors and its committees, as well as directors' skills and professional biographies, and (iii) all the information related to general meetings.

Our information on corporate governance can be found at <https://www.santander.com/en/shareholders-and-investors/corporate-governance> (address included for reference purposes only). The content of our corporate website is not included in this annual report nor considered part of it.

Other channels

We have an app (Santander Accionistas e Inversores) for Android and iOS with vast insight into the Group so all shareholders and investors can stay well informed.

We also post information about Banco Santander regularly on our official Twitter and LinkedIn accounts.

3.2 Shareholder rights

Our Bylaws provide for one share class only (ordinary shares, which grant all shareholders the same rights). Each Banco Santander share entitles holders to one vote.

Banco Santander's Bylaws do not dictate a voting cap and fully conform to the notion of one share, one vote, and one dividend.

This section highlights certain key rights our shareholders have.

No restrictions on voting rights and free shares transfers in our Bylaws

The law and our Bylaws only place restrictions on voting rights when shareholders violate regulations.

There are no non-voting or multiple-voting shares; shares that give preferential treatment in dividend payouts; shares limiting the number of votes a single shareholder can cast; or *quorum* requirements or qualified majorities other than those the law dictates.

Neither our Bylaws nor any laws or regulations restrict the transferability of shares. Our Bylaws also do not restrict voting rights (unless acquired in violation the law or regulations).

Furthermore, our Bylaws do not include any neutralization provisions as defined in the Spanish Securities Market Act which would apply in tender offers or takeover bids.

Please note that the shareholders' agreement mentioned in section [2.4 'Shareholders' agreements'](#) contains transfer and voting restrictions on shares that are subject to it.

Legal and regulatory restrictions on the acquisition of significant holdings

Banco Santander is subject to legal and regulatory provisions because banking is a regulated sector. Thus, the acquisition of significant holdings or influence is subject to regulatory approval or non-objection. As Banco Santander is a listed

company, cases aimed at acquiring control over it and/or any other lawful scenarios must come through a tender offer or takeover bid for its shares.

The acquisition of significant ownership interests is regulated mainly by:

- Regulation (EU) 1024/2013 of the Council of 15 October 2013, conferring specific tasks on the ECB relating to the prudential supervision of credit institutions.
- Spanish Securities Market Act.
- Act 10/2014 (articles 16 to 23) and its implementing regulation, Spanish Royal Decree 84/2015, of 13 February (articles 23 to 28).

The acquisition of a significant stake in Banco Santander may also require approval by other domestic and foreign regulators with supervisory powers over Banco Santander or its subsidiaries' operations, shares listings or other actions concerning such regulators or subsidiaries; and other authorities pursuant to foreign investment regulations (including those imposed due to covid) in Spain or other countries where we operate.

Shareholder participation at general meetings

All holders of shares found on record at least five days prior to the day of general meetings are entitled to attend. Banco Santander allows shareholders to exercise their rights to attend, delegate, vote and participate in general meetings using remote communications systems.

Shareholders can attend general meetings remotely. They can watch it through a live feed, vote, make remarks, propose resolutions and contact the notary public.

The electronic shareholders' forum, available on the corporate website at the time of the meeting, allows shareholders to add to the agenda items included in the notice of call, requests for support for their proposals, initiatives to reach the percentage required to exercise minority shareholder rights legally, and offers or requests to act as a voluntary proxy.

Supplement to the annual general meeting notice

Shareholders representing at least 3% of the share capital are able to request the publication of a supplement to the annual general meeting notice, adding one or more items to the agenda, with an explanation or substantiated proposal and any other relevant documents.

Shareholders representing at least 3% of the share capital may also propose reasoned resolutions on any matters that have been, or should be, added to the agenda of a called annual general meeting.

To exercise these rights, shareholders must send a certified notice to Banco Santander's registered office within five days after the annual general meeting announcement notice is posted.

Any shareholder, irrespective of its percentage of participation in the share capital, can also request that the meeting addresses the removal of directors or bringing corporate liability action against any of them, despite not being included in the agenda.



Right to information

From the time the general meeting notice is posted until the fifth day before the general meeting on first call, shareholders can submit written requests for information or clarification, or any written questions they deem relevant to the items on the meeting agenda. Within the same period, they can submit written requests for clarification about price-sensitive information Banco Santander has sent to the CNMV since the last general meeting or about auditor's reports. Banco Santander posts any information or answers it provides on the corporate website.

Shareholders may also exercise the right to information at the meeting. If it cannot be provided in the course of the meeting, or requests are made by shareholders attending remotely, it will be issued in writing within seven days after the general meeting.

Quorum and majorities for passing resolutions at general meeting

The *quorum* and majorities set out in our Bylaws and Rules and regulations for general meeting in order to hold a valid meeting and adopt corporate resolutions is according to Spanish law.

On first call, shareholders accounting for at least 25% of the subscribed share capital with voting rights must be in attendance (except for certain matters mentioned below) for the valid constitution of the general shareholders' meeting. If sufficient *quorum* is not reached, general meetings will be held on second call, which does not require a *quorum*.

In accordance with our Rules and regulations for general meetings, shareholders voting by remote means, cast by post or direct delivery or by electronic means, before the meeting are counted as present in order to determine the general meeting *quorum*.

With the exception of certain matters mentioned below, general meeting resolutions pass when shareholders in attendance or by proxy cast more votes in favour than against.

The *quorum* and majorities required to amend the Bylaws, issue shares and bonds, approve structural changes and vote on other significant resolutions permitted by law are set out below. Furthermore, laws applying to credit institutions dictate that, if over 50% of the share capital is present at a general meeting, a qualified two-thirds majority is required to raise the proportion of variable remuneration components to fixed components for executive directors and other top executives above 100% (up to 200%); otherwise, a three-quarters majority will be necessary.

Our Bylaws do not require shareholder approval at general meetings for decisions about acquiring core assets, selling them off or transferring them to another company, or similar corporate transactions, unless the law dictates otherwise.

Rules for amending our Bylaws

The general meeting is the competent body to approve any amendment to the Bylaws. However, only the board can decide to change the registered office within Spain.

The board or, as applicable, the shareholders who have drafted a proposed amendment to the Bylaws, must write it out in full and prepare a report justifying it; and provide them to

shareholders at the time the meeting to debate the proposed amendment is announced.

The general meeting notice must clearly state the items to be amended as well as the rights of all shareholders to examine the full text of proposed amendments and the related report at Banco Santander's registered office or to have them delivered free of charge.

If shareholders are convened to debate amendments to the Bylaws, the *quorum* on first call will be reached if 50% of the subscribed share capital with voting rights is present. If a sufficient *quorum* cannot be reached, the general meeting will be held on second call, where 25% of the subscribed share capital with voting rights must be present.

When less than 50% of the subscribed share capital with voting rights is present, resolutions on amendments to the Bylaws can only be validly adopted if two-thirds of shareholders attending the meeting in person or by proxy vote for them. However, when 50% or more of the subscribed share capital with voting rights is present, resolutions may pass by way of absolute majority.

Resolutions to amend the Bylaws that involve new obligations for shareholders must be accepted by those affected.

The Single Supervisory Mechanism (SSM) must authorize us to amend our Bylaws. However, amendments that are exempt from authorization but must still be reported to the SSM include changing the registered office within Spain, raising share capital, adding imperative or prohibitive laws or regulations to the Bylaws, changing the wording in order to comply with court or administrative rulings and any others the SSM has declared exempt due to a lack of materiality in response to prior consultations.

3.3 Dividends and shareholder remuneration

Distribution charged against 2022 results

For 2022, the board continued the policy of allocating approximately 40% of the Group's underlying profit to shareholder remuneration, split in approximately equal parts between cash dividends and share buybacks.

- **Interim remuneration.** On 27 September 2022 the board agreed to:
 - Pay an interim cash dividend of 5.83 euro cents per share entitled to receive dividends (equivalent to approximately 20% of the Group's underlying profit in H1'22), charged against 2022 results; it was paid on 2 November 2022.
 - Implement the First 2022 Buyback Programme worth approximately EUR 979 million (approximately 20% of the Group's underlying profit in H1'22). It was approved by the ECB on 17 November 2022 and ran from 22 November 2022 to 31 January 2023. Banco Santander bought back 340,406,572 shares, which was 2.03% of its share capital at that time (see '[First 2022 Buyback Programme](#)' in section 2.5). The First 2022 Buyback Programme aimed to reduce share capital by cancelling the shares that were acquired. Under the share capital reduction agreement approved at the 2022 AGM, on 1 February 2023 the board agreed to



reduce the share capital by EUR 170,203,286 (cancelling the 340,406, 572 shares acquired).

- **Final remuneration.** On 27 February 2023, pursuant to the 2022 shareholder remuneration policy, the board of directors decided to:
 - Submit a resolution at the 2023 AGM to approve a final cash dividend in the gross amount of 5.95 euro cents per share entitled to receive dividends. If approved at the 2023 AGM, the dividend would be payable from 2 May 2023.
 - Implement a Second 2022 Buyback Programme worth EUR 921 million, for which the appropriate regulatory authorization has already been obtained and that will be executed from 1 March 2023. For more details, see '[Second 2022 Buyback Programme](#)' in section 2.5.

Once the above mentioned actions are completed, the shareholder remuneration for 2022 will have been EUR 3,842 million (approximately 40% of the underlying profit in 2022) split in approximately equal parts in cash dividends (EUR 1,942 million) and share buybacks (EUR 1,900 million). These amounts have been estimated assuming that, after the execution of the Second 2022 Buyback Programme, the number of outstanding shares entitled to receive the final dividend will be 16,190,866,119. Therefore, the total dividend will be higher if fewer shares than planned are acquired in the buyback programme and will be lower in the opposite scenario.

Shareholder remuneration policy for 2023 results

The shareholder remuneration policy the board has approved for the 2023 results is to pay out a shareholder remuneration of approximately 50% of the Group reported profit (excluding non-cash, non-capital ratios impact items), distributed in approximately 50% in cash dividend and 50% in share buybacks.

The execution of the shareholder remuneration policy is subject to future corporate and regulatory approvals.

3.4 2022 AGM

We held our annual general meeting on 1 April 2022, on second call, both in person and by electronic means.

Quorum and attendance

The *quorum* (among shareholders present and represented) was 68.776%, which was a historical high *quorum*, surpassing the record-breaking attendance *quorum* achieved at the general meeting in 2019.

Quorum breakdown

Present	3.368 %
In person and virtual attendance	0.712 %
Remote voting	
Cast by post or direct delivery	0.574 %
By electronic means	2.082 %
Represented	65.408 %
Cast by post or direct delivery	7.505 %
By electronic means	57.903 %
Total	68.776 %

Voting results and resolutions

All items on the agenda were approved. Votes in favour of the board's proposals averaged 98.40%. 99.71% of votes approved the corporate management for 2021 and 93.93% of the votes approved the directors' remuneration policy for years 2022, 2023 and 2024. None of the agenda items listed in the notice convening the meeting received less than 88.00% of votes in favour.



The following chart summarizes the resolutions approved and voting results:

	VOTES ^A				Quorum ^D
	For ^B	Against ^B	Blank ^C	Abstention ^C	
1. Annual accounts and corporate management					
1A. Annual accounts and directors' reports for 2021	99.73	0.27	0.06	2.77	68.78
1B. Consolidated statement of non-financial statements for 2021	99.71	0.29	0.06	2.75	68.78
1C. Corporate management 2022	99.71	0.29	0.07	2.97	68.78
2. Application of results	99.66	0.34	0.06	2.76	68.78
3. Appointment, re-election or ratification of directors					
3A. Setting of the number of directors	99.63	0.37	0.08	2.78	68.78
3B. Appointment of Mr Germán de la Fuente	99.60	0.40	0.08	2.81	68.78
3C. Re-election of Mr Henrique de Castro	99.51	0.49	0.08	2.80	68.78
3D. Re-election of Mr José Antonio Álvarez	99.58	0.42	0.07	2.82	68.78
3E. Re-election of Ms Belén Romana	99.52	0.48	0.07	2.80	68.78
3F. Re-election of Mr Luis Isasi	97.09	2.91	0.07	2.82	68.78
3G. Re-election of Mr Sergio Rial	98.32	1.68	0.07	2.81	68.78
4. Re-election of the external auditor for financial year 2022	99.67	0.33	0.06	2.81	68.78
5. Amendment of the Bylaws					
5A. Relating to the form and the transfer of the shares	99.63	0.37	0.06	2.80	68.78
5B. Relating to the capital reduction	99.64	0.36	0.06	2.76	68.78
5C. Relating to the issuance of other securities	99.61	0.39	0.07	2.83	68.78
5D. Relating to right to attend the meeting	96.61	3.39	0.07	2.79	68.78
5E. Relating to the secretary of the board and the presiding committee of the general shareholders' meeting	99.66	0.34	0.07	2.82	68.78
5F. Relating to the executive chair	99.64	0.36	0.07	2.81	68.78
5G. Relating to the audit committee	99.69	0.31	0.07	2.80	68.78
5H. Relating to remuneration matters	99.52	0.48	0.07	2.81	68.78
5I. Delegation to the prior authorisation for the payment of dividends other than in cash or own funds instruments	99.63	0.37	0.06	2.76	68.78
6. Amendment of the Rules and regulations of the general meeting					
6A. Relating to the information available as of the date of the call to meeting	99.71	0.29	0.06	2.80	68.78
6B. Relating to the presiding committee of the general shareholders' meeting	99.70	0.30	0.07	2.81	68.78
6C. Relating to remote attendance at the meeting by electronic means	90.35	9.65	0.06	2.78	68.78
6D. Relating to presentations	98.58	1.42	0.08	2.81	68.78
7. Share capital					
7A. Authorisation to the board of directors to increase the share capital on one or more occasions and at any time, within a period of 3 years, by means of cash contributions and by a maximum nominal amount of € 4,335,160,325.50	95.62	4.38	0.05	2.78	68.78
7B. Reduction in share capital in the amount of € 129,965,136.50, through the cancellation of 259,930,273 own shares	99.63	0.37	0.05	2.74	68.78
7C. Reduction in share capital in the maximum amount of € 865,000,000, through the cancellation of a maximum of 1,730,000,000 own shares	99.54	0.46	0.05	2.72	68.78
7D. Reduction in share capital in the maximum amount of € 867,032,065, equivalent to 10% of the share capital, through the cancellation of a maximum of 1,734,064,130 own shares	99.59	0.41	0.05	2.72	68.78
8. Remuneration					
8A. Directors' remuneration policy	93.83	6.17	0.06	2.83	68.78
8B. Maximum total annual remuneration of directors in their capacity as directors	98.17	1.83	0.06	2.78	68.78
8C. Maximum ratio of fixed and variable components in executive directors' total remuneration	98.74	1.26	0.06	2.79	68.78
8D. Deferred multiyear objectives variable remuneration plan	97.14	2.86	0.06	3.84	68.78
8E. Application of the Group's buy-out regulations.	98.65	1.35	0.08	2.89	68.78
8F. Annual directors' remuneration report (consultative vote).	88.01	11.99	0.06	2.82	68.78
9. Authorization to implement the resolutions approved	99.68	0.32	0.06	2.76	68.78
10. Corporate action to demand director liability^E	0.00	100.00	0.00	0.04	66.12
11 to 25. Dismissal and removal of directors^F	0.00	100.00	0.00	0.04	66.12

A. Each Banco Santander share grants one vote.

B. Percentage of votes for and against.

C. Percentage of share capital present and attending by proxy at the 2022 AGM.

D. Percentage of Banco Santander's share capital on the date of the 2022 AGM.

E. Item not included on the agenda.

F. Items 11 to 25 (not included on the agenda) were put to a separate vote. Each item refers to the proposal to dismiss and remove each acting director at the 2022 AGM.

The full texts of the resolutions passed at the 2022 AGM can be found on our corporate website and on the CNMV's website, as they were filed as other relevant information on 1 April 2022.



3.5 Our next AGM in 2023

The board of directors agreed to call the 2023 AGM on 30 March on first call or on 31 March on second call, proposing these resolutions:

- **Annual accounts and corporate management.** To approve:
 - The annual accounts and the directors' reports of Banco Santander and its consolidated Group for the financial year ended on 31 December 2022. For more details, see ['Consolidated financial statements'](#).
 - The consolidated non-financial statement for the financial year ended on 31 December 2022 that is part of this consolidated directors' report. See the ['Responsible banking'](#) chapter.
 - The corporate management for the financial year 2022.
- **The application of results obtained during financial year 2022.** See section [3.3 'Dividends and shareholder remuneration'](#).
- **Appointment of directors.**
 - Setting the number of directors at 15, within the maximum and minimum limits stated in the Bylaws.
 - Ratification and reelection of Héctor Grisi as executive board member and of Glenn Hutchins as an independent director (see section [1.1 'Board skills and diversity'](#)) and re-electing Pamela Walkden, Ana Botín, Sol Daurella, Gina Díez Barroso and Homaira Akbari for a three-year period. See section [4.1 'Our directors'](#).
- **External auditor.** Re-electing the firm PricewaterhouseCoopers Auditores, S.L. as auditor for financial year 2023. See ['External auditor'](#) in section 4.5.
- **Authority to acquire treasury shares.** To authorize the board of directors to acquire treasury shares, expressly including the possibility of executing share buyback programmes. See section [2.5 'Treasury shares'](#) and section [3.3 'Dividends and shareholder remuneration'](#).
- **Authority to issue convertible securities.** To delegate the board of directors the authority to issue fixed-income securities, preferred interests or debt instruments of a similar nature (including warrants) that are convertible into shares. See section [2.1 'Share capital'](#).
- **Share capital reduction** for these purposes:
 - Cancelling a maximum of 1,514,451,957 treasury shares purchased under the Second 2022 Buyback Programme.
 - Cancelling a maximum of 1,645,399,501 treasury shares acquired through one or more share buyback programmes or by other legally permitted means, whereby the board of directors will be authorized to cancel them on one or several occasions in a maximum timescale of one year or by the date of the next annual general meeting.

See section [2.5 'Treasury shares'](#).

- **Remuneration policy.** To approve the director remuneration policy for 2023, 2024 and 2025. For more details, see section [6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'](#).
- **Director remuneration.** To approve directors' fixed annual remuneration. See section [6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'](#).
- **Variable remuneration.** To approve a maximum ratio of 200% of variable components to fixed components of total remuneration for executive directors and certain employees belonging to professional categories that have a material impact on the Group's risk profile. For more details, see section [6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'](#).
- **Remuneration plans for executive directors.** To approve remuneration plans for executive directors that involve the delivery of shares or share options or are share-value based. For more details, see section [6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'](#).
- **Annual directors' remuneration report.** Holding a non-binding vote on the annual directors' remuneration report. For more details, see section [6. 'Remuneration'](#).

The related documents and information are available for consultation on our corporate website on the date the meeting notice is published. We will also broadcast our 2023 AGM live, as it was done for the 2022 AGM.

Since attendance at general meetings is not paid, a general policy in this regard is not necessary. However, Banco Santander offers shareholders that participate in our general meeting a commemorative courtesy gift, as has been tradition for decades.

4. Board of directors

A balanced and diverse board

- 15 directors: 13 non-executive and 2 executive
- Majority independent directors (66.67%)
- Balanced presence of women and men (40%-60%)

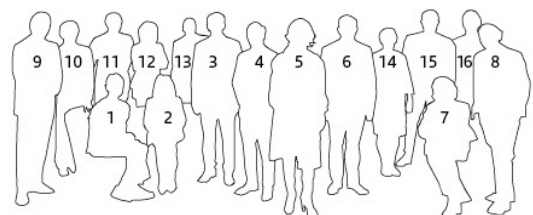
Effective governance

- Specialized committees advising the board
- The responsible banking, sustainability and culture committee evidences the board's commitment to this matter
- Complementary functions and effective controls: Executive Chair, CEO and Lead Independent Director



- | | | | | | | | |
|--|--|---|--|--|--|--|---|
| <p>1 Sol Daurella
Member
Non-executive director
(independent)
■ ■ *</p> | <p>2 Homaira Akbari
Member
Non-executive director
(independent)
● ▲ *</p> | <p>3 José Antonio Álvarez
Vice chair
Non-executive director
● ▲</p> | <p>4 Héctor Grisi
CEO
Executive director
● ▲</p> | <p>5 Ana Botín
Executive Chair
Executive director
● P ▲ P</p> | <p>6 Bruce Carnegie-Brown
Vice Chair and Lead Independent Director
Non-executive director
(independent)
● ■ P ■ P ▲</p> | <p>7 Belén Romana
Member
Non-executive director
(independent)
● ● ▲ P ▲ *</p> | <p>8 Jaime Pérez Renovales
General secretary and secretary of the board</p> |
| <p>9 Javier Botín
Member
Non-executive director</p> | <p>10 Ramiro Mato
Member
Non-executive director
(independent)
● ● ▲ * P</p> | <p>11 Henrique de Castro
Member
Non-executive director
(independent)
● ■ ▲</p> | <p>12 Gina Díez Barroso
Member
Non-executive director
(independent)
■ *</p> | <p>13 Luis Isasi
Member
Non-executive director
● ■ ▲</p> | <p>14 Pamela Walkden
Member
Non-executive director
(independent)
● P ▲</p> | <p>15 Germán de la Fuente
Member
Non-executive director
(independent)
● ▲</p> | <p>16 Glenn Hutchins
Member
Non-executive director
(independent)
■ ■ ▲</p> |

- Executive committee
- Audit committee
- Nomination committee
- Remuneration committee
- ▲ Risk supervision, regulation and compliance committee
- ▲ Innovation and technology committee
- * Responsible banking, sustainability and culture committee
- P Chair of the committee



4.1 Our directors



Ana Botín-Sanz de Sautuola y O'Shea
GROUP EXECUTIVE CHAIR
Executive director

Ms Botín joined the board in 1989.

Nationality: Spanish. Born in 1960 in Santander, Spain.

Education: Degree in Economics from Bryn Mawr College of Pennsylvania.

Experience: Ms Botín joined Banco Santander, S.A. after working at JP Morgan (New York, 1980-1988). In 1992, she was appointed senior executive vice-president. Between 1992 and 1998, she led Santander's expansion into Latin America. In 2002, she was appointed Executive Chair of Banesto. Between 2010 and 2014, she was Chief Executive Officer of Santander UK PLC and was a non-executive director until April 2021. In 2014 she was appointed Executive Chair of Santander. She was also a non-executive director of Santander UK Group Holdings PLC (2014-2021) and Chair of the European Banking Federation from 2021 to February 2023.

Other positions of note: Ms Botín is a member of the board of directors of The Coca-Cola Company and Chair of the Institute of International Finance (IIF). She is also founder and Chair of the CyD Foundation (which supports higher education) and the Empieza por Educar Foundation (the Spanish subsidiary of international NGO Teach for All), and sits on the advisory board of the Massachusetts Institute of Technology (MIT).

Positions in other Group companies: Ms Botín is a Chair of PagoNxt, S.L, Universia España Red de Universidades, S.A. and Universia Holding, S.L; and a non-executive director of Santander Holding USA, Inc., Santander Bank, N.A.

Membership of board committees: Executive committee (Chair) and innovation and technology committee (Chair).

Skills and competencies: She has extensive international experience in top executive roles in banking. She has also led Grupo Santander's strategic and cultural transformation, and her philanthropy underscores her ongoing commitment to sustainable and inclusive growth.



Héctor Grisi Checa
CHIEF EXECUTIVE OFFICER
Executive director

Mr Grisi joined the board in 2023.

Nationality: Mexican. Born in 1966 in Mexico City, Mexico.

Education: Degree in finance from the Universidad Iberoamericana of Mexico City.

Experience: Mr Grisi joined the Group in 2015 as Executive Chair and Chief Executive Officer of Santander México and Grupo Financiero Santander México, and in 2019, he was additionally named Regional Head for North America, whose primary markets are Mexico and the US. Before joining Santander, he had spent 18 years at Crédit Suisse in several leadership roles, including head of investment banking for Mexico, Central America and the Caribbean, as well as Executive Chair and Chief Executive Officer of Crédit Suisse México. He also managed corporate and investment banking at Grupo Financiero Invermexico and at Casa de Bolsa Inverlat. From 2011 to 2014, Mr Grisi was Vice Chair of Asociación de Bancos de México.

Other positions of note: Mr Grisi is a non-executive Chair of Cogrimex, S.A. de C.V.

Positions in other Group companies: Mr Grisi is a non-executive director of Grupo Financiero Santander México, S.A. de C.V. and PagoNxt, S.L.

Membership of board committees: Executive committee and innovation and technology committee.

Skills and competencies: Mr Grisi has gained vast experience and unique strategic vision from his many years of executive service at several banking and financial institutions. He is well-versed in Grupo Santander's businesses and global strategy, especially in relation to Mexico and the US, two key markets. He brings to the board diversity and a strong, international track record of management, leadership, business transformation and connectivity between the Group's markets.

**Bruce Carnegie-Brown**

VICE CHAIR & LEAD INDEPENDENT DIRECTOR
Non-executive director (independent)

Joined the board in 2015.

Nationality: British. Born in 1959 in Freetown, Sierra Leone.

Education: Master of Arts in English Language and Literature from the University of Oxford.

Experience: Mr Carnegie-Brown was non-executive Chair of Moneysupermarket.com Group PLC (2014-2019), a non-executive director of Jardine Lloyd Thompson Group PLC (2016-2017), Santander UK plc and Santander UK Group Holdings PLC (2019-2021) and non-executive Chair of Aon UK Ltd (2012-2015). He was the founder and managing partner of the quoted private equity division of 3i Group PLC, and Chair and CEO of Marsh Europe, S.A. He was also Lead Independent Director at Close Brothers Group PLC (2006-2014) and Catlin Group Ltd (2010-2014). He previously worked at JP Morgan Chase for 18 years and Bank of America for four years.

Other positions of note: Mr Carnegie-Brown is the non-executive Chair of Lloyd's of London and of Cuvva Limited, a member of the investment committee of Gresham House PLC, Chair of Marylebone Cricket Club (MCC) and of TheCityUK leadership council.

Membership of board committees: Executive committee, nomination committee (Chair), remuneration committee (Chair) and innovation and technology committee.

Skills and competencies: Mr Carnegie-Brown has a lengthy background in banking (particularly investment banking) and considerable expertise in insurance. He also possesses significant international experience in top management positions in Europe (UK), the Middle East and Asia. His top-management insight provides the board with know-how in regard to remuneration, appointments and risk. As Lead Independent Director, he has also gained an excellent understanding of investors' expectations, as well as managing relations with them and financial entities.

**José Antonio Álvarez Álvarez**

VICE CHAIR
Non-executive director ()*

Mr Álvarez joined the board in 2015.

Nationality: Spanish. Born in 1960 in León, Spain.

Education: Degree in Economics and Business Administration. MBA from the University of Chicago.

Experience: Mr Álvarez joined Santander in 2002, was appointed senior executive vice president of the Financial Management and Investor Relations division in 2004 (Group Chief Financial Officer) and was CEO of Group from 2015 to 2022. He served as director at SAM Investments Holdings Limited, Santander Consumer Finance, S.A. and Santander Holdings US, Inc. He also sat on the supervisory boards of Santander Consumer Bank AG, Santander Consumer Holding GmbH and Santander Bank Polska, S.A. He was a board member of Bolsas y Mercados Españoles, S.A.

Positions in other Group companies: Mr Álvarez is a non-executive director of Banco Santander (Brasil) S.A. and PagoNxt, S.L.

Membership of board committees: Executive committee and innovation and technology committee.

Skills and competencies: Mr Álvarez is a highly qualified and talented leader with a distinguished career in banking. He brings significant strategic and international management expertise, in particular financial planning, asset management and consumer finance. He has vast experience and an established reputation with such key stakeholders as regulators and investors.

(*) Until 31 December 2022 executive director. See ['Other external directors'](#) in section 4.2.

**Homaira Akbari***Non-executive director (independent)*

Ms Akbari joined the board in 2016.

Nationality: American and French. Born in 1961 in Tehran, Iran.

Education: PhD in Experimental Particle Physics from Tufts University of Massachusetts and MBA from Carnegie Mellon University.

Experience: Ms Akbari was a non-executive director of Gemalto NV and Veolia Environment, S.A. She was Chair and CEO of SkyBitz, Inc., managing director of TruePosition Inc. and a non-executive director of Covisint Corporation and US Pack Logistics LLC. She has also held various posts at Microsoft Corporation and Thales Group and was non-executive Chair of WorkFusion, Inc.

Other positions of note: Ms Akbari is CEO of AKnowledge Partners, LLC and an independent director of Landstar System, Inc. and Temenos, AG. She is also a trustee of the French Institute Alliance Française.

Positions in other Group companies: Ms Akbari is a non-executive director of Santander Consumer USA Holdings Inc. and PagoNxt, S.L.

Membership of board committees: Audit committee, innovation and technology committee and responsible banking, sustainability and culture committee.

Skills and competencies: Ms Akbari brings significant executive experience from technology companies. Her knowledge about digital transformation challenges is an asset to the board. She also has extensive experience in diverse regions and knowledge of water, energy and waste management and treatment, which are of particular value to the Group's sustainability policy.

**Javier Botín-Sanz de Sautuola y O'Shea***Non-executive director*

Mr Botín joined the board in 2004.

Nationality: Spanish. Born in 1973 in Santander, Spain.

Education: Degree in Law from the Complutense University of Madrid.

Experience: Mr Botín founded JB Capital Markets, Sociedad de Valores, S.A.U. in 2008 and has been its Executive Chair ever since. He was co-founder and executive director of the equities division of M&B Capital Advisers, S.V., S.A. (2000-2008). Previously, he had been a legal adviser within the International legal department of Banco Santander, S.A. (1998-1999).

Other positions of note: In addition to the financial sector, Mr Botín works with several not-for-profit organizations. He has been Chair of the Botín Foundation since 2014 and is also a trustee of the Princess of Girona Foundation.

Skills and competencies: Mr Botín brings international and managerial expertise to the board, particularly in finance and banking. He also brings a deep understanding of Grupo Santander, its operations and its strategy from his tenure as a non-executive director.



Sol
Daurella Comadrán
Non-executive director (independent)

Ms Daurella joined the board in 2015.

Nationality: Spanish. Born in 1966 in Barcelona, Spain.

Education: Degree in Business and MBA from ESADE.

Experience: Ms Daurella Comadrán served on the board of the Círculo de Economía of Barcelona and was an independent non-executive director at Banco Sabadell, S.A., Ebro Foods, S.A. and Acciona, S.A. She was also Consul General of Iceland in Barcelona (1992-2021).

Other positions of note: Ms Daurella is Chair of Coca-Cola Europacific Partners PLC and Executive Chair of Olive Partners S.A. She also holds several roles at Cobega Group companies and is Chair of the board of trustees of the FERO Oncology Research Foundation and Vice Chair of Instituto de la Empresa Familiar.

Membership of board committees: Nomination committee, remuneration committee, and responsible banking, sustainability and culture committee.

Skills and competencies: Ms Daurella brings to the board excellent strategy and high-level management skills from her international top-executive experience at listed and large privately-held entities, particularly distributors. She has vast knowledge of corporate governance as the former Chair of several boards. She also possesses audit experience, having served on several audit committees. In addition, as a trustee at various health, education and environmental foundations, she provides responsible business and sustainability insight to the board.



Henrique
de Castro
Non-executive director (independent)

Joined the board in 2019.

Nationality: Portuguese. Born in 1965 in Lisbon, Portugal.

Education: Degree in Business Administration from the Lisbon School of Economics & Management and MBA from the University of Lausanne .

Experience: Mr de Castro was Chief Operating Officer at Yahoo. Previously, he had been the manager of worldwide devices, media and platforms at Google, European sales and business development manager at Dell Inc. and a consultant at McKinsey & Company. He has also been an independent director at First Data Corporation.

Other positions of note: Mr de Castro is an independent director of Fiserv Inc.

Positions in other Group companies: Mr de Castro is a non-executive director of PagoNxt, S.L.

Membership of board committees: Audit committee, remuneration committee, and innovation and technology committee.

Skills and competencies: Due to his executive roles at the world's top technology companies, he brings to the board valuable international experience in technological and digital strategy.



**Germán
de la Fuente Escamilla**

Non-executive director (independent)

Mr de la Fuente joined the board in 2022.

Nationality: Spanish. Born in 1964 in Madrid, Spain.

Education: Degree in Economics and Business Administration with a diploma in auditing from the Complutense University of Madrid.

Experience: Mr de la Fuente has developed his professional career at Deloitte, where he has been managing partner of Audit & Assurance in Spain since 2007 and Chair and CEO of Deloitte, S.L. from 2017 until March 2022. He was also a member of the global board of directors of the firm from 2012 to 2016 and of the global audit and risk services committee until June 2021. He has been involved in auditing major Spanish companies and in multiple consulting and advisory projects.

Membership of board committees: Audit committee and risk supervision, regulation and compliance committee.

Skills and competencies: Mr de la Fuente brings extensive experience in the auditing industry and sound knowledge in auditing, accounting and internal and risk control, as well as in the banking sector .



**Gina
Díez Barroso Azcárraga**

Non-executive director (independent)

Ms Díez joined the board in 2020.

Nationality: Mexican. Born in 1955 in Mexico City, Mexico.

Education: Degree in Design from Centro de Diseño of Mexico City.

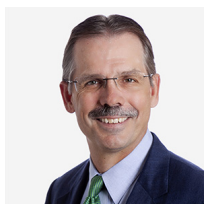
Experience: Ms Díez Barroso until April 2020, she was an independent director of Banco Santander México, S.A. and several Grupo Santander companies in Mexico. She has been member of the board of directors of Americas Society and Council of the Americas, Laurel Strategies and Qualitas of Life Foundation. She was also a founder and a trustee of the Pro-Educación Centro and Diarq foundations.

Other positions of note: Ms Díez Barroso is the founder and non-executive Chair of Grupo Diarq, S.A. de C.V. and Centro de Diseño y Comunicación, S.C. (Universidad Centro). In addition, she is a non-executive director of Bolsa Mexicana de Valores (BMV) and Dalia Women, S.A.P.I de C.V. (Dalia Empower), member of Comité de 200 (C200) and represents Mexico at the W20, the G20 women's initiative.

Positions in other Group companies: Ms Díez Barroso is a non-executive director of Univerisia México, S.A. de C.V.

Membership of board committees: Nomination committee and responsible banking, sustainability and culture committee.

Skills and competencies: Ms Díez Barroso brings to the board vast experience in the real estate and education sectors, and has extensive knowledge of responsible business and sustainability as a result of having been a charter member and trustee of foundations that focus on education, gender diversity and social support.

**Glenn Hogan Hutchins***Non-executive director (independent)*

Mr Hutchins joined the board in 2022.

Nationality: American. Born in 1955 in Virginia, US.

Education: Graduated with a AB, MBA and JD from Harvard University.

Experience: Mr Hutchins co-founded US technology and investment firm, Silver Lake, where he was CEO until 2011. Prior, Mr Hutchins had been a senior managing director at The Blackstone Group (1994-1999) and Thomas H. Lee Co. (1985-1994), and a consultant at Boston Consulting Group. He has also served on the boards of SunGard Data Systems (Chair, 2005-2015), NASDAQ (2005-2017) and Virtu Financial (2017-2021). He served as a director and Chair of the audit and risk committee of the Federal Reserve Bank of New York from 2011 to 2021. Additionally, he served on the board of the Harvard Management Company, which manages Harvard University's endowment. Furthermore, Mr Hutchins worked with President Clinton in the transition of power and the White House as special advisor on economic and healthcare policy.

Other positions of note: Mr Hutchins is non-executive Chair of investment firm North Island Ventures and an independent director of AT&T. He is a member of the international advisory board and investment board of Singapore's Government Investment Corporation (GIC), co-Chair of the Brookings Institution, Chair of CARE, and Vice Chair of the Obama Foundation. He also serves on the executive committee of the Boston Celtics Basketball Team.

Membership of board committees: Nomination committee, remuneration committee, and innovation and technology committee.

Skills and competencies: Mr Hutchins, as a long-time investor in technology and fintech companies, has expertise in financial markets and is well-known among investors and stakeholders. He brings to the board his acumen in technology, telecommunications, innovation, finance and investment as well as extensive knowledge of financial regulation as a result of his leadership roles in government, especially with financial regulators and supervisors. He works closely with not-for-profit entities committed to fighting poverty, designing effective public policy and promoting social justice.

**Luis****Isasi Fernández de Bobadilla***Non-executive director (*)*

Mr Isasi joined the board in 2020.

Nationality: Spanish. Born in 1956 in Jerez de la Frontera, Spain.

Education: Degree in Economics and Business Administration and MBA from Columbia Business School.

Experience: Mr Isasi began his career at Abengoa, before holding various executive positions at JP Morgan in New York and First National Bank of Chicago in London. In 1987, he joined Morgan Stanley as managing director of investment banking for Europe and, from 1997 to February 2020, was Chair and country head for Spain. He is now a senior adviser there. He has also been director of Madrileña Red de Gas, S.A. and Sociedad Rectora de la Bolsa de Madrid, S.A., as well as an independent director of Grifols, S.A.

Other positions of note: Mr Isasi is a non-executive Chair of Santander España and an independent director of Compañía de Distribución Integral Logista Holdings, S.A. (Logista).

Membership of board committees: Executive committee, remuneration committee, and risk supervision, regulation and compliance committee.

Skills and competencies: Mr Isasi has vast experience in a wide range of sectors and international markets (in particular, finance and investment banking) as well as a strong institutional network within Spain.

(*) In the opinion of nomination committee and board of directors, Mr Isasi meets the requirements to be considered independent, despite being categorized as other external based on a standard of prudence. For more information, see subsection ["Other external directors"](#), section 4.2.



**Ramiro
Mato García-Ansorena**
Non-executive director (independent)

Mr Mato joined the board in 2017.

Nationality: Spanish. Born in 1952 in Madrid, Spain.

Education: Degree in Economics from the Complutense University of Madrid and graduate of Harvard University's Management Development Programme.

Experience: Mr Mato held several roles in Banque BNP Paribas, including Chair of BNP Paribas Group in Spain. Previously, he had held several top roles in Argentaria. He sat on the board of the Spanish Banking Association (AEB, representing Banque BNP Paribas) and Bolsas y Mercados Españoles, S.A. He has also been a member of the board of trustees of Fundación Española de Banca para Estudios Financieros (FEBEF).

Other positions of note: Mr Mato is Chair of Ansorena, S.A., senior advisor of ACON Southern Europe Advisory, S.L. and Vice Chair of the board of trustees of Fundación Esperanza y Alegría.

Membership of board committees: Executive committee, audit committee, risk supervision, regulation and compliance committee, and responsible banking, sustainability and culture committee (Chair).

Skills and competencies: Mr Mato has had an extensive professional career in banking and capital market sectors. He has held senior executive and non-executive roles and brings considerable expertise in top management, audit, risk and strategy, mainly within the financial sector. He has also been active on the boards of trustees of several foundations to promote education.



**Belén
Romana García**
Non-executive director (independent)

Belén Romana joined the board in 2015.

Nationality: Spanish. Born in 1965 in Madrid, Spain.

Education: Degree in Economics and Business Administration from Universidad Autónoma de Madrid and State Economist.

Experience: Ms Romana was formerly senior executive vice-president of Economic Policy and director-general of the Treasury of the Spanish Ministry of Economy, and director at Banco de España and the CNMV. She was also a director at the Instituto de Crédito Oficial and other entities on behalf of the Ministry of Economy. She served as a non-executive director at Banesto and as Executive Chair of Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria, S.A. (SAREB). She has also been non-executive director of Aviva PLC and Aviva Italia Holding S.p.A. She has also been co-Chair of the board of trustees of the Digital Future Society and advisory board member at Inetum and TribalData.

Other positions of note: Ms Romana is an independent director of SIX Group AG and its subsidiary Bolsas y Mercados Españoles, Sociedad Holding de Mercados y Sistemas Financieros, S.A.U. She is also the non-executive Chair of its other subsidiaries, SIX Digital Exchange AG and SDX Trading AG. Furthermore, she is an independent director of Werfen, S.A.; an advisory board member at Rafael del Pino Foundation; senior adviser to Artá Capital; and academic director of the IE Leadership & Foresight Hub Programme.

Membership of board committees: Executive committee, audit committee, risk supervision, regulation and compliance committee (Chair), innovation and technology committee, and responsible banking, sustainability and culture committee.

Skills and competencies: Given her background as a government economist and overall executive and non-executive experience in finance (particularly from serving on the audit committees of listed companies), Ms Romana is a recognised financial expert. Having held key positions in credit institutions and the regulatory and supervisory bodies of the financial industry and securities markets in Spain, she also provides strategic insights into banking, financial regulations and government relations in Spain and Europe.

**Pamela Walkden***Non-executive director (independent)*

Mrs Walkden joined the board in 2019.

Nationality: British. Born in 1960 in Worcester, England.

Education: Master's Degree in Economics from Cambridge University.

Experience: Mrs Walkden has served in a number of senior management positions at Standard Chartered Bank, including as Group Head of Human Resources, Chief Risk Officer, Group Treasurer, Group Head of Asset and Liability Management and Regional Markets, Group Head of Internal Audit, Group Head of Corporate Affairs and Group Manager of Investor Relations. In addition, she served as an independent member of the UK Prudential Regulation Authority (PRA) Regulatory Reform Panel and as member of the European Banking Authority Stakeholder Group and was a lay member of the Welfare and Ethics Committee of the Royal Veterinary College.

Other positions of note: Mrs Walkden is a member of the advisory board of JD Haspel Limited.

Positions in other Group companies: Mrs Walkden is an independent non-executive director of Santander UK PLC and of Santander UK Group Holdings PLC.

Membership of board committees: Audit committee (Chair) and risk supervision, regulation and compliance committee.

Skills and competencies: Mrs Walkden is qualified as a financial expert, based on her broad, international experience in banking and auditing.

**Jaime Pérez Renovales***General secretary and secretary of the board*

Jaime Pérez Renovales joined the Group in 2003.

Nationality: Spanish. Born in 1968 in Valladolid, Spain.

Education: Degree in Law and Business Administration from Universidad Pontificia Comillas (ICADE E-3) and state attorney.

Experience: Jaime Pérez Renovales was director of the office of the second deputy prime minister for Economic Affairs and Minister of Economy, deputy secretary to the Spanish Prime Minister, Chair of the *Spanish State Official Gazette* and the committee for Government Reform. Previously, he had been vice general counsel and vice secretary of the board. He was also head of Grupo Santander's legal department, general counsel and secretary of the board at Banesto and deputy director of legal services at the CNMV. He is the Banco Santander representative on the board of trustees of the Princess of Asturias Foundation and is a member of the jury for its award for Social Sciences. He is Chair of the ICADE Business Club and member of the board of trustees of the Fundación Universitaria Comillas-I.C.A.I.

Jaime Pérez Renovales is the secretary of all board committees.

4.2 Board composition

Size

As of 1 January 2023, the board of directors comprises the 15 members whose profile and background are described in section 4.1 'Our directors'. The Bylaws dictate it can have between 12 and 17 members.

Composition by director type

The board of directors has a balanced composition between executive and non-executive directors, most of whom are independent. Each director's status has been verified by the nomination committee and submitted to the board.

Executive directors

- Ana Botín, Group Executive Chair
- Héctor Grisi, Chief Executive Officer^A

Section 4.3 provides a detailed description of their respective roles and duties under '[Group Executive Chair and Chief Executive Officer](#)'.

Independent directors

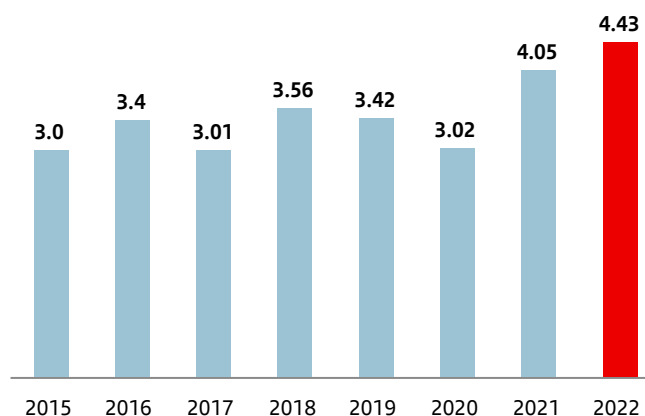
- Homaira Akbari
- Bruce Carnegie-Brown (Lead Independent Director)
- Sol Daurella
- Henrique de Castro
- Germán de la Fuente
- Gina Díez Barroso
- Glenn Hutchins
- Ramiro Mato
- Belén Romana
- Pamela Walkden

Every year, the nomination committee verifies the independence of the board members in this category and informs the board of its findings. It considers potentially significant business relations that could affect their independence and other pertinent circumstances. This analysis is described further in section 4.6 '[Nomination committee activities in 2022](#)' and in subsection C.1.3 in section 9.2 '[Statistical information on corporate governance required by the CNMV](#)'.

Independent non-executive directors account for 66.7% of board members. This conforms to best corporate governance practices as well as to the board's Rules and regulations, which require that the board be predominantly made up of non-executive directors with at least 50% independent directors.

At the end of 2022, the average term of independent non-executive directors was 4.43 years. See '[Board skills and diversity matrix](#)' in this section 4.2. Likewise, see '[Tenure and equity ownership](#)' chart also in section 4.2.

Term of independent directors



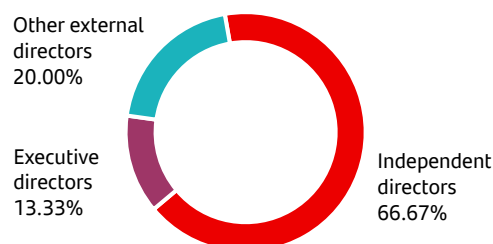
Other external directors

- José Antonio Álvarez
- Javier Botín
- Luis Isasi

These directors cannot be classified as independent directors:

- Mr Álvarez, because he has been the former CEO of Banco Santander until 31 December 2022.
- Mr Botín, because he has been director for over 12 years.
- Mr Isasi, because it is considered preferable to classify him as an external director under prudent criteria, although the nomination committee and the board believe he meets the requirements to be classed as an independent director, in view of his remuneration as non-executive chair of Santander España, his entitlements as a director and the special nature of this body as supervisor of a business unit without its own corporate identity separate to Banco Santander.

Our board composition



A. José Antonio Álvarez held the Chief Executive Officer position until 31 December 2022.



Tenure and equity ownership^A

Board of directors		Tenure			Banco Santander shareholding ^D				
		Date of first appointment ^B	Date of last appointment	End date ^C	Direct	Indirect	Shares represented	Total	% of share capital
Executive Chair	Ana Botín	04/02/1989	03/04/2020	03/04/2023	1,150,433	30,849,567		32,000,000	0.191%
Chief Executive Officer	Héctor Grisi	20/12/2022	20/12/2022	20/12/2025	551,064			551,064	0.003%
Vice Chair and Lead Independent Director	Bruce Carnegie-Brown	25/11/2014	26/03/2021	26/03/2024	59,940			59,940	0.000%
Vice Chair	José Antonio Álvarez	25/11/2014	12/04/2019	12/04/2022	2,288,410			2,288,410	0.014%
	Homaira Akbari	27/09/2016	26/03/2021	26/03/2024	67,826	100,913		168,739	0.001%
	Javier Botín	25/07/2004	26/03/2021	26/03/2024	5,502,083	19,471,101	155,904,169 ^E	180,877,353	1.077%
	Sol Daurella	25/11/2014	03/04/2020	03/04/2023	149,483	476,837		626,320	0.004%
	Henrique de Castro	12/04/2019	12/04/2019	12/04/2022	2,982			2,982	0.000%
	Germán de la Fuente	01/04/2022	01/04/2022	01/04/2025	10,000			10,000	0.000%
Members	Gina Díez	22/12/2020	22/12/2020	03/04/2023				0	0.000%
	Glenn Hutchins	20/12/2022	20/12/2022	20/12/2025				0	0.000%
	Luis Isasi	03/04/2020	03/04/2020	03/04/2023				0	0.000%
	Ramiro Mato	28/11/2017	26/03/2021	26/03/2024	506,860			506,860	0.003%
	Belén Romana	22/12/2015	12/04/2019	12/04/2022	208	4		212	0.000%
	Pamela Walkden	29/10/2019	03/04/2020	03/04/2023	2,608			2,608	0.000%
	Total				10,291,897	50,898,422	155,904,169	185,094,488	1.102%
General secretary and secretary of the board	Jaime Pérez Renovales								

A. Figures from 1 January 2023.

B. The date of first appointment referred herein may not match with the date of acceptance of the position.

C. For more details, see '[Election, renewal and succession](#)' in section 4.2. The periods provided do not take into account the additional period that may apply under article 222 of the Spanish Companies Act nor the annual renewal of one-third of the board established in article 55.1 of the Bylaws.

D. Banco Santander's shareholding policy aims to align our executive directors and shareholders' long-term interests. It includes the obligation for each executive director to maintain a significant investment in Banco Santander's shares, equivalent to twice their annual salary. Executive directors have five years from the time they were appointed to reach the required level of investment. Until then, any shares they receive as remuneration are subject to a mandatory three-year holding period from their date of delivery, unless they already hold the mentioned investment equivalent (in addition to the regulatory obligation not to sell them for one year from delivery, which applies in all cases).

E. Includes shares owned by Fundación Botín (chaired by Javier Botín) and syndicated shares. It includes shares corresponding to Ana Botín that are also included within their direct or indirect shareholdings, but excluding Javier Botín's syndicated shares. See section 2.4 '[Shareholders' agreements](#)'. In subsection A.3 of section 9.2 '[Statistical information on corporate governance required by the CNMV](#)', we adapted this information to the CNMV's format and, therefore, added all the syndicated shares as Javier Botín's shareholdings.

For more details, see section 9.2 '[Statistical information on corporate governance required by the CNMV](#)'.

Diversity

Diversity is essential to making the board of directors effective. Mixed skills and experiences create an environment with varied points of view that improves the quality of decision-making. Thus, we seek to achieve a sound balance of technical expertise.

Our policy on the selection, suitability assessment and succession of directors helps make our board more diverse from different perspectives, for instance, in terms of gender, age, geographical provenance, experience and knowledge. It follows the European Banking Authority (EBA) and the European Securities and Markets Authority's (ESMA) joint guidelines on suitability assessments of board members and key functions holders.

In 2019, we added a gender equality target in the board of 40%-60% representation of either gender. The policy was later amended amid a general review of the succession process for directors and other executive positions, and after the last amendment of the CNMV's Corporate Governance Code to include age diversity as other additional diversity criteria in the qualitative composition of the board.

Our selection policy aims to diversify the board of directors in these terms:

- **Country of origin or international education.** Selection considers cultural diversity and international education and experience, especially in the Group's main geographies.
- **Gender equality.** The nomination committee and the board of directors understand the importance of fostering equal opportunity as well as the need for women board members who possess the necessary skills, suitability and commitment to the role. They make a conscious effort to find women candidates with the required profile. Our policy fosters a selection of directors to maintain a balanced presence of women and men on the board.

On 2019, the board established the target of achieving a balanced gender composition in the board with a representation of both genders between 40% to 60%, which was met at year-end of the same year representing women a 40% of the board.



This number of women board members is above the average for large listed companies in Spain and Europe. According to figures published by the CNMV in September 2022, based on annual corporate governance reports for 2021, IBEX 35 companies in Spain had an average 31.3% women directors. Furthermore, according to data published by Eurostat (the European Commission's statistical office), in February 2022, the percentage of female directors in large listed companies was, on average, 30.6% for all European Union countries.

- **Age:** The policy on the selection, suitability assessment and succession of directors also considers that selection process must promote age diversity. There are no age limits for becoming a director or holding any role on the board, including the chair and the chief executive officer.
- **Education and career:** Selection ensures that candidates are qualified to understand our Group's businesses, structure and markets individually and collectively; and that they fit within the Santander culture. The appointment process ensures that candidates will have skills and expertise in such areas deemed important for the Group. It takes into account education and work experience. In addition to professional experience, it considers their academic education.
- Our policy has no implicit bias that could lead to discrimination due to **race, disability and/or ethnicity**.

Board skills and diversity matrix

The board's skills matrix reflects the balance of the knowledge, skills, qualifications, diversity and experience required to design and pursue our long-term strategy in an ever-changing market.

Our goal is to contribute the maximum feasible information for our investors and other stakeholders, giving visibility to the skills on our board. Furthermore, it follows the recommendations from the EBA and ESMA guidelines on the suitability assessment of board members and key functions holders, as well as the ECB Guide to fit and proper assessments.

The matrix (below) follows the following structure:

- We separate **thematic** and **horizontal skills**.
- We include a separate **diversity section** that details gender, country of origin and/or international education, and age.
- Finally, we also show **board tenure**.

The skills matrix discloses each board member's skills and competence as a sign of our commitment to transparency. Section [4.1 'Our directors'](#) provides a section on the skills and competencies of each counselor to more clearly identify the support of this matrix.

The board diversity and skills matrix which is shown below shows that there are no substantial gaps with regard to the qualitative composition of the board and ensures robust board skills diversity. However, the ongoing need for coverage of Banco Santander's strategic markets as well as knowledge and expertise in technology, digital strategy, banking, finance, regulation, data management and sustainability remain important, as evidenced by our most recent board appointments. The appropriateness of board skills and diversity will continue to be monitored.

Lastly, the '[Committees' skills and diversity matrix](#)' also shows the balanced diversity of skills on each board committee. This enables the board committees' overall effectiveness to be evaluated as it refers to the significant presence of the skills relevant to each committee's scope.

Board skills and diversity matrix

	Ana Botín	Héctor Grisi	Bruce Carnegie-Brown	José Antonio Álvarez	Homaira Akbari	Javier Botín	Henrique de Castro	Sol Daurella	Gina Díez Barroso	Germán de la Fuente	Glenn Hutchins	Luis Isasi	Ramiro Mato	Belén Romana	Pamela Walkden
	Executive Chair	CEO	Vice Chair Lead Independent Director	Non-executive Vice Chair	Independent	Non-executive	Independent	Independent	Independent	Independent	Independent	Non-executive	Independent	Independent	Independent
SKILLS AND EXPERIENCE															
THEMATIC SKILLS															
Banking (93.3%)	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Other financial services (86.7%)	•	•	•	•	•	•	•		•	•	•	•	•	•	•
Accounting, auditing and financial literacy (100%)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Retail (80%)	•	•	•	•	•	•		•		•		•	•	•	•
Digital & information technology (60%)	•	•	•	•	•		•				•		•	•	
Risk management (86.7%)	•	•	•	•	•	•		•		•	•	•	•	•	•
Business strategy (100%)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Responsible business & sustainability (73.3%)	•	•	•	•	•	•		•	•		•		•	•	
Human resources, culture, talent & remuneration (93.3%)	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Legal and regulatory (13.3%)											•			•	
Governance and control (86.7%)	•	•	•	•	•	•		•		•	•	•	•	•	•
International experience	Continental Europe (73.3%)	•	•	•	•	•	•	•		•		•	•	•	•
	US/UK (93.3%)	•	•	•	•	•	•	•		•	•	•	•	•	•
	Latam (66.7%)	•	•		•	•	•		•	•		•	•		•
	Others (40%)			•				•	•	•			•		•
HORIZONTAL SKILLS															
Top management (100%)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Government, regulatory and public policy (13.3%)											•			•	
Academia and education (40%)	•		•		•			•	•				•		
Significant directorship tenure (86.7%)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DIVERSITY															
Female (40%)	•				•			•	•					•	•
Country of origin/ international education	Continental Europe (60%)	•		•	•	•	•	•		•		•	•	•	•
	US/UK (66.7%)	•		•	•	•			•		•	•	•	•	•
	Latam (13.3%)		•						•						
	Others (6.7%)					•									
Age	Less than 55 (6.7%)					•									
	From 55 to 65 (66.7%)	•	•	•	•	•	•	•		•				•	•
	More than 65 (26.7%)								•		•	•	•		
BOARD TENURE															
0 to 3 years (46.7%)		•							•	•	•	•			•
4 to 11 years (40%)			•	•	•			•					•	•	
12 years or more (13.3%)	•					•									

Committees skills and diversity matrix

		Executive committee	Audit committee	Nomination committee	Remuneration committee	Risk supervision, regulation and compliance committee	Innovation and technology committee	Responsible banking, sustainability and culture committee
SKILLS AND EXPERIENCE								
THEMATIC SKILLS								
Banking		100%	83.3%	100%	80%	100%	87.5%	100%
Other financial services		100%	83.3%	75%	80%	80%	100%	80%
Accounting, auditing and financial literacy		100%	100%	100%	100%	100%	100%	100%
Retail		100%	83.3%	50%	80%	80%	87.5%	80%
Digital and information technology		85.7%	66.7%	50%	60%	40%	100%	60%
Risk management		100%	83.3%	75%	80%	100%	87.5%	80%
Business strategy		100%	100%	100%	100%	100%	100%	100%
Responsible business and sustainability		85.7%	50%	100%	60%	40%	87.5%	100%
Human resources, culture, talent and remuneration		100%	100%	100%	100%	100%	100%	100%
Legal and regulatory		14.3%	16.7%	25%	20%	20%	25%	20%
Governance and control		100%	83.3%	75%	80%	100%	87.5%	80%
International experience	Continental Europe	85.7%	83.3%	50%	80%	80%	75%	80%
	US/UK	100%	100%	75%	100%	100%	100%	80%
	Latam	71.4%	66.7%	25%	40%	60%	62.5%	60%
	Others	28.6%	66.7%	50%	60%	60%	25%	40%
HORIZONTAL SKILLS								
Top management		100%	100%	100%	100%	100%	100%	100%
Government, regulatory and public policy		14.3%	16.7%	25%	20%	20%	25%	20%
Academia and education		42.9%	33.3%	75%	40%	20%	37.5%	80%
Significant directorship tenure		100%	66.7%	100%	100%	60%	100%	100%
DIVERSITY								
Female		28.6%	50%	50%	20%	40%	37.5%	80%
Country of origin/international education	Continental Europe	71.4%	66.7%	25%	60%	80%	50%	60%
	US/UK	85.7%	66.7%	75%	60%	80%	75%	80%
	Latam	14.3%	–	25%	–	–	12.5%	20%
	Others	–	16.7%	–	–	–	12.5%	20%
Age	Less than 55	–	–	–	–	–	–	–
	From 55 to 65	71.4%	83.3%	50%	60%	60%	87.5%	60%
	More than 65	28.6%	16.7%	50%	40%	40%	12.5%	40%
BOARD TENURE								
0 to 3 years		28.6%	50%	50%	60%	60%	37.5%	20%
4 to 11 years		57.1%	50%	50%	40%	40%	50%	80%
12 years or more		14.3%	–	–	–	–	12.5%	–



Election, renewal and succession of directors

Election of directors

Our directors are appointed for three-year terms. However, one-third of board members are renewed each year in order of their tenure. Outgoing directors may be re-elected. Each appointment, re-election and ratification is submitted to a separate vote at the general meeting.

Appointing, re-electing, evaluating and removing directors

Our internal policy for the selection, suitability assessment and succession of directors dictates standards for the board's quantitative and qualitative composition, how it is revised and how new candidates are identified, selected and appointed.

Shareholders appoint and re-elect directors at the general meeting. Furthermore, if directors step down during their term of office, the board of directors may provisionally designate another director by co-option until the general meeting confirms the appointment at the earliest subsequent meeting.

Proposals for appointment, re-election and ratification of directors, regardless of their category, which the board of directors submits to the shareholders, as well as appointments of the board in cases of co-option, should be preceded by the corresponding reasoned proposal of the nomination committee.

Proposals to be submitted to the general shareholders' meeting must include a duly substantiated report by the board, containing an assessment of the qualifications, experience and merits of the proposed candidate. Re-election and ratification proposals will also provide an assessment of the work and dedication to the position during the last period in which the proposed director held office. If the board disregards the nomination committee's opinion, it must explain its decision and record its reasons in meeting minutes.

Directors must meet specific requirements dictated by laws for credit institutions and our Bylaws. Upon taking office, they must formally undertake to fulfil the obligations and duties prescribed therein and in the Rules and regulations of the board.

Our directors must be of renowned business and professional integrity, and have the knowledge and experience needed to perform their role and exercise good governance. Director candidates will also be selected on the basis of their professional contribution to the entire board.

For more information see section [4.1 'Our directors'](#) and the ['Board skills and diversity matrix'](#) in section 4.2.

The board of directors will endeavour to have significantly more external or non-executive directors than executive directors, and for the number of independent directors to make up at least half of all members.

Our directors shall cease to hold office when the term for which they were appointed ends (unless they are re-elected), when the general meeting so resolves, or when they resign. When a director ceases to hold office prior to the end of their term (i.e. by general meeting resolution or by resignation), they shall explain the reasons for resignation or, in the event of non-executive directors, their opinion on the reasons for their cessation in office by the general meeting in a letter to the other board members unless he/she reports them at a meeting of the board and this is recorded in the minutes. When appropriate,

the resignation shall be publicly reported, including a reference to the reasons or circumstances provided by the director. When appropriate, it will publicly disclose the cessation in office, including sufficient information on the director's reasons or circumstances provided by the director.

Directors must tender their resignation to the board and formally step down from their position if the board, on the nomination committee's recommendation, deems it appropriate in cases that may adversely affect the board's functioning or Banco Santander's credit or reputation. In particular, they must resign if they find themselves in a circumstance of ineligibility or prohibition provided by law, irrespective of Royal Decree 84/2015, which implements Act 10/2014, and on the honourability requirements for directors and the consequences for directors who subsequently fail to meet them.

Directors must notify the board as soon as possible of any circumstances affecting them (whether related to their performance in Banco Santander or not) that might damage Santander's credit or reputation, especially when under criminal investigation; and of the developments of any criminal proceedings. When the board is informed or becomes otherwise aware of any such situations, it will examine them as soon as possible and decide, based on the particulars and on a report from the nomination committee, any measures to adopt, such as opening an internal investigation, calling on directors to resign or proposing their dismissal.

Proprietary directors must also tender their resignation when the shareholder they represent sells off or significantly reduces its equity holding.

Succession planning

Succession planning is a key element of our good governance as it ensures orderly role transitions as well as board continuity and stability and its adequate renewal and independence. It is a yearly cycle with a well-defined methodology and timelines, and a clear allocation of responsibilities. Our aim is to boost diverse talent pipelines across functions which contribute to an adequate diversity and balance of skills in the board.

Banco Santander's policy on director selection, suitability assessment and succession focuses on:

- Quantitative and qualitative board and committee composition criteria that are set by the Bylaws, the Rules and regulations of the board of directors and the board itself, including suitability and diversity standards and targets and the policy for the suitability assessment.
- A periodic review of the quantitative and qualitative composition of the board of directors and its committees that includes an overall suitability assessment of the board.
- Process of identification of potential board member candidates.
- The board member and related roles selection, suitability and nomination procedure.

The policy has specific core performance indicators, reviewed each year, for such aspects as succession effectiveness (vacancies filled by identified candidates); the number of internal and external candidates immediately available to succeed executive directors; training and development plans for



potential candidates to succeed executive directors in one to three years; gender diversity and country of origin or international education; updated board member tenure; the strength of the list of successors to executive directors, committee chairs and the lead independent director; and the percentage of candidates to succeed directors who are immediately available (or candidates for a one-to-three year period).

The nomination committee and the board prioritize succession planning, with sound and appropriate plans in place that are regularly revisited to make sure they meet regulatory requirements and align with industry best practice.

4.3 Board functioning and effectiveness

Highest decision-making body and focuses on supervision

Banco Santander's board of directors is our highest decision-making body, except in matters reserved to shareholders at the general meeting. It performs its duties with unity of purpose and independent judgement.

The board's policy is to designate executive bodies and managers to run day-to-day operations and implement the strategy. It focuses on general supervision and other function it cannot delegate by law, the Bylaws or the Rules and regulations of the board, including:

- General policies and strategies (including capital and liquidity, new products, operations and services; corporate culture and values, including policies on responsible business and sustainability and, in particular, on environmental and social matters; control and risk management; remuneration policy; and compliance).
- Financial and non-financial reporting, and information reported to shareholders, investors and the general public, as well as the processes and controls that ensure full disclosure.
- Policies on reporting and communication with shareholders, markets and public opinion, and supervision of the disclosure of information.
- The selection, succession and remuneration of directors, senior management and other key positions.
- Effectiveness of Grupo Santander's corporate and internal governance system, including the GSGM, corporate frameworks and internal regulations.
- Significant corporate transactions and investments.
- Calling the general shareholders' meeting.
- Related-party transactions.

Board's regulation

The board is governed by the rules set out in the Bylaws and the Rules and regulations of the board, both of which are available on our corporate website.

- **Bylaws.** Dictate the basic rules that apply to the composition and operation of the board and its members' duties, and are

supplemented and implemented by the Rules and regulations of the board. They can be amended only by the general meeting. See '[Rules for amending our Bylaws](#)' in section 3.2.

- **Rules and regulations of the board.** Set the rules for running and internally organizing the board of directors and its committees through the development of applicable laws and Bylaws' provisions and good governance recommendations. They set out the principles governing its actions and the duties of its members.

As stated in the report for the 2021 financial year, on 24 February 2022 the board adapted the Rules and regulations of the board, subject to the effectiveness of the corresponding amendments to the articles of Bylaws approved by the 2022 AGM, to introduce fundamentally technical amendments and:

- Acknowledge that the board may establish that executives other than the chair to report directly to the board or its committees.
- Bolster coordination mechanisms between the audit committee and the responsible banking, sustainability and culture committee.
- Harmonize it with the articles of Bylaws for whose amendment were approved at the 2022 AGM. See section [3.4 '2022 AGM'](#).

The Rules and regulations of the board adhere to all legal provisions as well as the principles and recommendations set out in the Spanish Corporate Governance Code; Corporate Governance Principles for Banks of the Basel Committee on Banking Supervision; and the EBA's in Guidelines on internal governance.

Our rules on the audit committee also adhere to the good operating practices set out in CNMV's Technical Guide 3/2017 on Audit Committees of Public Interest Entities; as well as with the applicable regulations because our shares are listed as ADS on the NYSE and, in particular, with Rule 10A-3 under the Securities Exchange Act (SEA) on standards relating to audit committees.

Our rules on the nomination and the remuneration committees also adhere to the good operating practices set out in the CNMV's Technical Guide 1/2019 on Nomination and Remuneration Committees.

Structure of the board

The board's corporate governance structure ensures that it discharges its duties effectively. This structure can be split into these four dimensions:

- **Group Executive Chair and Chief Executive Officer**, who are the most senior executives in the Group's strategic and ordinary management, which the board is responsible for overseeing, ensuring that their roles are clearly separated and complementary. Both report exclusively to the board of directors.
- **A Lead Independent Director**, who is responsible for coordinating non-executive directors effectively and making sure they serve as an appropriate counter-balance to executive directors.



- **A board committee structure**, which supports the board in:
 - Managing the Group by exercising decision-making powers in the executive committee.
 - Formulating strategy for core areas in the responsible banking, sustainability and culture committee, and in the innovation and technology committee.
- In supervising and making important decisions in the audit committee, nomination committee, remuneration committee and risk supervision, regulation and compliance committee.
- **A board secretary**, who supports the board, its committees and our chair, and is also General Secretary of the Group.

Group Executive Chair and Chief Executive Officer

Our Executive Chair is Ana Botín and our Chief Executive Officer is Héctor Grisi as of 1 January 2023. Their respective roles and responsibilities were updated in February 2022 in order to accelerate the execution of the Group's strategy and operations and to align with governance best practices.

The roles of our Group executive chair and chief executive officer are clearly separated, and can be summarized as follows:

Roles of the Executive Chair and the Chief Executive Officer

Executive Chair	Chief Executive Officer
<ul style="list-style-type: none"> • The Chair is the highest-ranking executive in Grupo Santander and its main representative with regulators, authorities and other major stakeholders. • The Chair is responsible for the long-term strategy of the Group, including new tech and digital growth engines, namely PagoNxt and the Digital Consumer Bank. • The Chair is also responsible for other corporate functions and units that help drive the Group's long-term strategy and transformation, comprising Technology and Data & Architecture, Human Resources, Talent, Financial Accounting & Control, Strategy and Corporate Development, General Secretariat and Communications & Corporate Marketing. • The Chair also leads the appointment and succession planning of Grupo Santander senior management, to be submitted to the nomination committee and board for approval. 	<ul style="list-style-type: none"> • The Chief Executive Officer is entrusted with the day-to-day management of the business with the highest executive functions and reports exclusively to the board in this regard. • Accordingly, the Chief Executive Officer's direct reports are the senior managers in charge of the business units: the regional heads (Europe, North America and South America) and those in charge of the global businesses (Wealth Management & Insurance, Corporate & Investment Banking, Cards & Digital Solutions), encompassing the relevant support and control functions. • As responsible for day-to-day management, the CFO and head of Investment Platforms & Corporate Investments also report to the CEO. • Additionally, the Chief Executive Officer is responsible for Regulatory & Supervisory Relations and for embedding the Group's sustainability policy in the day-to-day management of Group businesses and the support and control functions.

The duties of the Executive Chair, the Chief Executive Officer, the board, and its committees are clearly separated. Various checks and balances give Santander's corporate governance structure the appropriate equilibrium. In particular:

- The board and its committees supervise both the Executive Chair and the Chief Executive Officer.
- The board of directors has delegated all its powers to the Executive Chair and the Chief Executive Officer, except for those that cannot be delegated by law and under the Bylaws and the Rules and regulations of the board. The board directly exercises those powers to perform its general supervisory function.
- The Lead Independent Director leads the Group Executive Chair's succession and appointment.
- The audit committee is chaired by an independent director who is considered a 'financial expert' as defined in Regulation S-K of the Securities and Exchange Commission (SEC).
- The Executive Chair may not simultaneously act as Banco Santander's Chief Executive Officer.
- The corporate Risk, Compliance and Conduct, and Internal Audit functions report as independent units to a committee or a member of the board of directors and have direct, unfettered access to the board.

Lead Independent Director

The role of the Lead Independent Director is key to our governance and makes sure that non-executive directors serve as an appropriate counter-balance to the executive directors.

The following chart illustrates the Lead Independent Director's functions and activities in 2022. He provided a detailed report summarizing his activities and the discharge of his duties more generally, to the nomination committee and board of directors.

Duties of the Lead Independent Director and activities during 2022

Duties	Activities in 2022
Facilitate discussion and open dialogue among independent directors, coordinating private meetings of non-executive directors without the executive present and proactively engaging with them to consider their views and opinions.	Held five meetings with non-executive directors without executive directors present, where they were able to voice their views and opinions. The meetings were also a valuable opportunity to discuss such other matters board training topics, strategy execution, executive director and key management performance, succession planning and reflections on areas for continuous improvement with regard to the effectiveness and culture of the board and its committees.
Direct the periodic evaluation of the Chair of the board of directors and coordinate her succession plan.	Led the Chair's annual evaluation in order to determine her variable pay. Furthermore, played a key coordination role with regard to ongoing succession planning activity, as additionally facilitated through his chairmanship of the nomination committee.
Engage with shareholders and other investors to learn about their concerns, in particular with regard to Banco Santander's corporate governance.	See section 3.1 'Shareholder communication and engagement' for full details of the lead independent director's activities.
Replace the Chair in her absence, with such key rights as the ability to call board meetings under the terms of the Rules and regulations of the board.	Though the Lead Independent Director did not have to replace the Chair of the board at any board meeting, he remained fully committed to ensure its proper functioning.
Request a board meeting or that new items be added to the agenda thereof.	While the Lead Independent Director did not need to request additional board meetings to be called, he remained fully engaged and informed on board meeting agendas, made suggestions regarding the same and encouraged constructive challenge.

Structure of board's committees

The board currently has seven committees and one international advisory board with the following characteristics:

	Mandatory committees (required by Law, the Bylaws or the Rules and regulations of the board)			Voluntary committees
	Decision-making powers	Supervision, information, advice and recommendations regarding functions in risk, financial reporting and audit, nomination and remuneration matters		Support and proposal in strategic areas
Board committees	Executive committee	Audit committee	Nomination committee	Responsible banking, sustainability and culture committee
		Risk supervision, regulation and compliance committee	Remuneration committee	Innovation and technology committee
External advisory board				International advisory board (members are non-directors)



Secretary of the board

Jaime Pérez Renovales is the secretary of the board. He assists the chair and ensures the formal and substantial legality of all the board's actions. He also makes sure good governance recommendations and procedures are observed and regularly reviewed.

The secretary of the board is also the General Secretary of Banco Santander. He acts as the Secretary of all board committees and facilitates a fluid and effective relationship between the committees and the Group's units that must collaborate with them. The secretary does not necessarily need to be a director.

The appointment of the secretary of the board is a matter for the board to approve, taking into account the prior opinion of the nomination committee.

The board has three vice secretaries, F. Javier Illescas Fernández-Bermejo (head of Group Corporate Legal), Julia Bayón Pedraza (head of Group Business Legal) and Adolfo Díaz-Ambrona Moreno (General Secretary of Santander España). They assist the secretary with his duties on the board and its committees, and replace him in the event of absence, inability to act or illness.

Board operation

The board of directors held 14 meetings (12 ordinary and two extraordinary) in 2022. The Rules and regulations of the board dictate that it must hold at least nine annual ordinary meetings and one quarterly meeting.

Although board meetings follow a calendar set annually and a provisional agenda of items to discuss, new items can be added and additional meetings can be called. Directors may also propose items to be added to the agenda and are duly informed of changes to the calendar and meeting agendas.

The board keeps a formal list of matters that only it can address. It prepares a plan to distribute them among the ordinary meetings scheduled in the annual calendar it has approved.

To help directors prepare effectively for each meeting, they are given relevant documents sufficiently in advance and in a secure electronic format. In the board's opinion, these documents are thoroughly detailed and received in good time.

The Rules and regulations of the board of directors also expressly recognize directors' rights to request and obtain information on anything related to Banco Santander and its domestic and foreign subsidiaries. They also recognise their right to inspect the books, files, documents and any other records of corporate transactions, in addition to premises and facilities. Furthermore, directors can request and obtain any information and advice they deem necessary from the secretary in order to perform their duties.

Additionally, the board meets at the Chair's discretion or at the request of at least three directors. The Lead Independent Director is also authorized to request a board meeting or that new items be added to the agenda for a meeting that has already been called.

Directors must attend meetings in person and endeavour to limit their absence to situations of absolute necessity. The nomination committee checks that directors attend at least 75%

of board and committee meetings and that any absence has a valid excuse without raising doubt about the director's commitment to good governance. For more details, see '[Board and committee preparation and attendance](#)' in this section 4.3.

If directors are unable to physically attend a meeting, they can designate (in writing and on a special basis for each session) another director to act on their behalf. Proxies are granted with instructions. Non-executive directors may only be represented by other non-executive directors. A director can hold more than one proxy.

The board may meet in various rooms at the same time, provided that members can interact in real time ensuring the interactivity and intercommunication via audio-visual means or telephone.

Board meetings are validly quorate when more than half of its members attend in person or by proxy.

Resolutions are adopted by absolute majority of directors in attendance. The chair has the casting vote in the event of a tie. The Bylaws and the Rules and regulations of the board only require the qualified majorities according to Law.

The secretary of the board keeps the board's documents on file and records the content of meetings in meeting minutes. Meeting minutes of the board and committees include statements members expressly request to be put on record.

The board may hire legal, accounting or financial advisers and other experts at Banco Santander's expense for assistance with their duties.

The board should encourage communication between its committees, especially the risk supervision, regulation and compliance committee and the audit committee. It should also promote dialogue between the risk supervision, regulation and compliance committee and the remuneration committee and the responsible banking, sustainability and culture committee, given the relevance of their respective work with each other.

Some committees hold joint meetings throughout the year. Though they cannot vote, any director can attend and participate in meetings of committees on which they do not serve if invited by the chair of the board and the chair of the respective committee, after having asked the chair of the board. Furthermore, all board members who are not executive committee members may attend executive committee meetings at least twice a year, for which they are to be called by the chair.



Comparison of number of meetings held^A

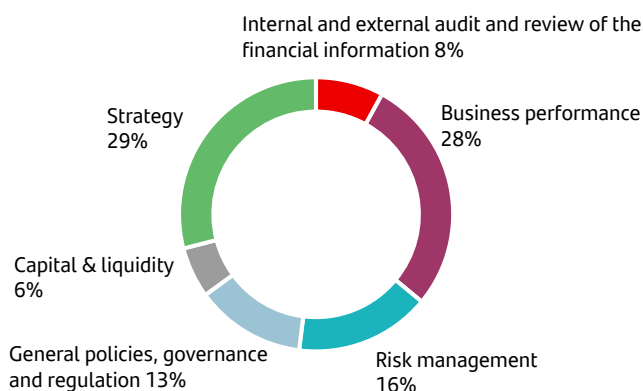
	Santander	Average Spain	US average	UK average
Board	14	11.1	8.3	9.7
Executive committee	32	9.8	—	—
Audit committee	12	8.8	8.2	5.4
Nomination committee	12	6.5	4.7	4.2
Remuneration committee	13	6.5	6.0	5.4
Risk supervision, regulation and compliance committee	17	NA	NA	NA

A. Source: Spencer Stuart Board Index 2022 (Spain, United States and United Kingdom).

NA: Not available.

The following chart shows the board’s approximate time allocation to each function in 2022.

Approximate allocation of the board’s time in 2022



Committee operation

Board committees follow a calendar that includes at least four meetings (except for the innovation and technology committee, which holds at least three meetings) and an annual work plan established every year. Each committee meets as often as is required to fulfil its duties.

A committee meeting is quorate if it is attended by more than half the committee’s members in person or through an appointed proxy. A committee resolution passes with a simple majority of votes. In the event of a tie, the committee chair has the casting vote. Committee members may appoint a proxy to vote for them and, in board meetings, non-executive directors can only appoint a non-executive director proxy.

Committee members are given relevant meeting materials sufficiently in advance of each meeting to facilitate solid meeting preparation therefore promoting overall committee effectiveness.

Committees have the authority to summon executives, who will appear at meetings at the invitation of, and under the terms dictated by, the chair. Furthermore, committees may also submit a request to the General Secretary to hire legal, accounting or financial advisers or other experts to assist with their duties at Banco Santander’s expense.

The role of committee secretary is non-voting and falls on the General Secretary and secretary of the board. This fosters a fluid and efficient relationship with the units that must work with, and report to, committees.

Committee chairs report on committees’ meetings and activities at all board meetings. Furthermore, all board members are given a copy of committee meeting minutes and all documents provided for meetings.



Board and committee preparation and attendance

The table following shows the attendance rate of board and committee meetings in 2022.

Directors	Committees							
	Board	Executive	Audit	Nomination	Remuneration	Risk supervision, regulation and compliance	Innovation and technology	Responsible banking, sustainability and culture
Average attendance	98%	90%	99%	92%	92%	97%	89%	95%
Individual attendance								
Ana Botín ^A	14/14	30/32	–	–	–	–	3/3	–
Héctor Grisi ^B	0/0	0/0	–	–	–	–	0/0	–
Bruce Carnegie-Brown	14/14	18/32	–	12/12	13/13	–	2/3	–
José Antonio Álvarez	14/14	32/32	–	–	–	–	2/3	–
Homaira Akbari	14/14	–	12/12	–	–	–	3/3	5/5
Javier Botín	13/14	–	–	–	–	–	–	–
Sol Daurella	13/14	–	–	9/12	11/13	–	–	4/5
Henrique de Castro	14/14	–	11/12	–	11/13	–	3/3	–
Germán de la Fuente ^C	10/10	–	8/8	–	–	0/0	–	–
Gina Díez Barroso	13/14	–	–	12/12	–	–	–	–
Glenn Hutchins ^D	1/1	–	–	1/1	0/0	–	0/0	–
Luis Isasi	14/14	31/32	–	–	13/13	16/17	–	–
Ramiro Mato	14/14	32/32	12/12	–	–	17/17	–	5/5
Belén Romana	14/14	29/32	12/12	–	–	17/17	3/3	5/5
Pamela Walkden	13/14	–	12/12	–	–	16/17	–	–

Note: This table shows each director's in-person attendance at ordinary and extraordinary board or committee meetings except when they attended by proxy. The nomination committee was informed of directors' excused absences and verified that they raised no doubt about their capability of good governance. Some directors did not attend extraordinary meetings that were not scheduled in the annual meeting calendar.

A. Appointed chair of the innovation and technology committee on 19 April 2022.

B. Member of the board and member of the executive and innovation and technology committees since 1 January 2023.

C. Member of the board and member of the audit committee since 21 April 2022. Member of the risk supervision, regulation and compliance committee since 1 January 2023.

D. Member of the board and of the nomination, remuneration and innovation and technology committees since 20 December 2022.

The table following shows the average preparation of directors in the exercise of their functions in the board and committees in 2022:

	Meetings	Average of hours per member ^A	Average of hours per chair ^A
Board	14	144 ^B	288 ^B
Executive committee	32 ^C	160	320
Audit committee	12	120	240
Nomination committee	12	48	96
Remuneration committee	13	52	104
Risk supervision, regulation and compliance committee	17	170	340
Responsible banking, sustainability and culture committee	5	25	50
Innovation and technology committee	3	12	24

A. Includes hours of meeting preparation and attendance.

B. Of the 12 ordinary meetings of the board held in 2022.

C. It has met every two weeks since September 2022.

Directors' average time commitment is calculated by taking the number of members on the board and on each committee, the number of times each body meets during the year, average meeting length, and an estimate of the time each director needs to prepare for every meeting. We estimate that the Group Executive Chair and the committee chairs have a greater time commitment than the other directors because of the added functions their roles require. We consider the average time that directors not living in Spain must take to travel to board and committee meetings, but it is not factored into their average time commitment.

On average, directors dedicate approximately 55 eight-hour days a year to preparing and attending board and committee meetings.

Directors must report to the nomination committee any professional activity or role that they are going to do outside the Group so that the committee can check that they can dedicate enough time to the Group and the professional activity or role does not pose conflicts of interest.

The annual suitability reassessment our nomination committee conducts (see section [4.6 'Nomination committee activities in 2022'](#)) enables updates information on the estimated time directors dedicate to roles or professional activities outside the Group and demonstrates their ability to exercise good governance.



This makes sure the number of board roles that our directors have at once is within the legal limit (i.e. no more than one executive and two non-executive roles, or four non-executive roles; roles in the same group are considered a single role and roles in not-for-profit or non-commercial organizations are not included).

Director training and induction programmes

The board has an annual training and development programme to help directors continue to develop skills and increase their understanding of the Group and industry, taking into account existing skills, competencies and knowledge of directors. The board chooses contents based on feedback, effectiveness reviews, supervisory and regulatory requirements as well as on cyber, risk management, climate change and other topics.

In 2022, programme workshops were discharged on a collective basis and covered, in at least one session per year, the following items:

- **Climate change** and Net Zero momentum, with a focus on portfolio alignment and climate risk management, which was covered in two sessions throughout 2022.
- **Risk appetite statement** review and associated methodology, with a focus on the decarbonization target and power generation metrics, as well as an overview of new metrics for 2023.
- **Financial crime compliance**, bribery and corruption risks, sanctions and anti-money laundering regulation.
- **New ways of working** and Flexiworking, with a focus on talent attraction and retention.
- **Duties and requirements for directors** under Spanish law (refresher course).
- **Credit risk** and key factors in credit losses, with detailed insights on accounting and prudential classification of loans.
- **Reputational risk**, with a focus on forward looking trends and the management model.
- **Cyber**, with a focus on trends and risk development.

Directors can also request one to one and ad-hoc training on specific topics, if deemed helpful. The objective of such sessions would be to enable directors to deep dive into specific areas in order to ensure that their knowledge is optimal.

The Group shares its training, induction and development methodology with subsidiaries to promote best practices and drive consistency of approach on a group-wide basis. Top executives ran special sessions for subsidiary directors throughout the year to keep them up to speed with relevant Group matters.

In addition, the board has sound induction programmes so new directors can better understand industry and Santander's business model and structure, risk profile and governance arrangements, taking into account their existing skills, competencies and knowledge. They normally are completed within six months after taking up their position as new directors. Induction and development needs are facilitated through different methods, including document reviews, tailored

meetings, site visits, training sessions with senior managers of the Group and other methods decided from time to time.

In 2022, Germán de la Fuente (July) and Héctor Grisi (November) completed their induction programmes which were tailored to their experience and particular needs.

"The induction program was very effective as part of my onboarding and in preparing me as a member of the board and audit committee. The materials prepared were focused and dealt with the most relevant issues providing me with an integral vision of the Group. I have also had the opportunity to meet a number of business senior management around the world, which provided me with important insights into the Group's values, culture, strategy, and overall group-wide commitment to help people and businesses prosper, to attend to the social mandate that being a member of the board entails."

Germán de la Fuente

Board effectiveness review in 2022

The board undergoes a yearly assessment of its performance and effectiveness, composition, quality of its work and individual performance of its members. The assessment includes its committees and is conducted at least every three years by an external consultant, whose independence is assessed by the nomination committee. In 2022, the assessment was conducted internally.

The scope of the internal assessment included the structure of the board, its organisation and functioning, dynamics and internal culture and the functioning and effectiveness of its committees. In addition, the assessment covered the individual performance of the Executive Chair, Chief Executive Officer, Lead Independent Director and General Secretary. The assessment also facilitated the opportunity for performance feedback on the remaining individual directors.

The Executive Chair and Vice Chair Lead Independent Director led the assessment, which followed the methodology and structure of previous internal reviews, based on a confidential questionnaire that was fully completed by all board members.

The results of the 2022 assessment process, the findings and specific actions to address those findings were discussed by the nomination committee and the board of directors in January 2023, with a consensus view that the results were positive and that the board and its committees operate effectively. In particular, the results revealed the following:

- The board remains appropriately composed, with a depth and variety of board skills and high degree of diversity.
- The board engages in open and transparent discussions which facilitates rigorous decision-making processes, leveraging the skills and diversity of the board.
- The committee structure, composition and overall functioning is considered to be both effective and efficient and in particular, the support provided to the board is appreciated and rated positively.



- The Executive Chair, Chief Executive Officer, Lead Independent Director and General Secretary performed positively, effectively and with the competence expected.
- The remaining directors performed positively with an overall effective contribution.
- Directors consider that the management of the meetings, as well as the information provided is effective, helping them to focus on key strategic and business issues and constructively challenge management.

As a result of the review, the board of directors discussed potential areas for improvement and approved an associated action plan in January 2023. Each committee will be engaged on specific actions applicable to their remit to ensure effective and efficient operation.

The key action plan highlights can be summarised as follows:

- **Structure of the board:** as part of any future board refreshment, a continued focus will be placed on maintaining an appropriate balance of finance and technological profiles and international and gender diversity.
- **Corporate governance:** consolidate the enhancements delivered as part of the action plan executed in 2022 following the review of our governance arrangements, with a special focus on the interaction with the Chief Executive Officer, given his recent appointment.
- **Organization and functioning of the board:** continue to drive a better balance between strategic, technological, business and customer orientated topics versus regulatory and operational content. This will ensure a deep focus on long-term strategy and talent requirements. This will also ensure that board time is used in an optimal manner.
- **Board dynamics and internal culture:** combine in person meetings with virtual / hybrid meetings in an efficient manner, being aware of the implications of each format. Furthermore, remain focused on culture and its implications on future business dynamics.
- **Committees:** keep committee composition under review, ensuring optimal performance and effectiveness. Specifically, review the composition of the responsible banking, sustainability and culture committee with a view of complementing the existing membership; this specific action was completed in January 2023 following the appointment of Gina Díez Barroso to the committee.

The resulting actions and associated outcomes of the review have supported our continued priority focus on effective governance. See ['Board assessment and actions to continuously improve its operation'](#) in section 1.2.

4.4 Executive committee activities in 2022

Composition

Position		Category	Appointed on
Chair	Ana Botín	Executive	11/12/1989 ^A
	Héctor Grisi	Executive	01/01/2023
	Bruce Carnegie-Brown	Independent	12/02/2015
Members	José Antonio Álvarez	Other external	03/01/2015
	Luis Isasi	Other external	20/05/2020
	Ramiro Mato	Independent	28/11/2017
	Belén Romana	Independent	01/07/2018
Secretary	Jaime Pérez Renobales		

A. Committee Chair since 10 September 2014.

Functions

The executive committee is a key governance body in Banco Santander and the Group. The board delegated to it all its powers except those that cannot be delegated by the law or under the Bylaws and Rules and regulations of the board. Its meeting frequency and its business as usual nature of its decisions allows the board to focus on general oversight. It also reports regularly to the board on its core matters and provides all directors with the minutes and documents from its meetings.

Committee performance

The board, supported by its nomination committee, determines the committee's size and composition, to ensure its effectiveness based on board composition guidelines. As well as the board, the committee has an external director majority, including three independent directors, ensuring a balance of opinions and compliance with Recommendation 37 of the Spanish Corporate Governance Code. Its secretary is the secretary of the board.

As part of the organizational changes announced on 24 February 2022, the operating rhythm and content of the committee was revisited to continue ensuring ongoing effectiveness and proper coordination with other committees and the board. The review identified specific opportunities for improvement, with no loss of appropriate governance. Therefore, with effect from September 2022, the executive committee generally meets every two weeks. However, it can meet as many times as required by the Chair in order to ensure the discharge of its duties.

The change in committee frequency was driven by a review of the business being conducted, the materiality and delegation thresholds being applied in order to optimise the volume of matters being presented and improve its effectiveness. In addition, leveraging the already established work of other board committees has enabled the committee to meet less frequently than prior years.

Main activities in 2022

In 2022, the executive committee addressed a breadth of matters relating to the business of the Group and its main subsidiaries, risk management, corporate transactions and main proposals that were subsequently submitted to the board of directors. It covered:

- **Results:** It regularly reviewed the Group's results and investors and analysts reaction to them.



- **Business performance:** The committee regularly received management reports on the performance of the Group's business areas and other related matters.
- **Information reported by the Chair:** The board's Chair, who also chairs the executive committee, regularly reported on the Group's management, strategy and institutional issues.
- **Information reported by the CEO:** The CEO reported on the Group's performance, budget and execution of units and global businesses' plans reporting to him.
- **Corporate transactions:** The committee analysed and approved (where appropriate) corporate transactions on investments and divestments, joint ventures and capital transactions.
- **Risks:** The committee received regular holistic risk and compliance reports. Within the framework of the risk governance model, the committee authorized or declined transactions that it had to approve due to their materiality taking into account the above-mentioned streamlining of reporting. It also examined the credit impact relating to the war in Ukraine, economic sanctions and other significant macroeconomic matters.
- **Subsidiaries:** The committee received updates on subsidiary performance against agreed plans, as well as relevant unit updates. This helped the committee support the board with the oversight and control of its subsidiary operations.
- **Capital and liquidity:** The committee received regular reports on capital ratio and the optimization measures; pricing (originations) and portfolio profitability. By virtue of the board's delegation and within capital and funding plans, the committee agreed non-convertible debt issuances and securitizations.
- **Supervisors and regulatory matters:** The committee reviewed regulatory developments, the yearly supervisory agenda and projects to ensure compliance with supervisory recommendations and regulatory reforms.
- **Governance matters:** The committee approved specific internal regulation under its remit and ensured the effectiveness of the executive first level committee structure.

In 2022, the executive committee held 32 meetings as a result of the above-mentioned change in committee frequency. See ['Board and committee preparation and attendance'](#) in section 4.3 for members' meeting attendance and the estimated average time each one spent on meeting preparation and attendance.

2023 priorities

The committee set the following priorities for 2023:

- Monitor the performance of the Group's global businesses and subsidiaries, including progress in the execution of their strategic plans.
- Continue to assess proposed corporate transactions relating to investment and divestments, joint ventures and capital transactions
- Oversee the execution and achievement of specific agreed public commitments assumed with stakeholders, and in particular, those disclosed at the Investor Day.
- Continue to facilitate timely and efficient decision making, supporting the board and enabling it to focus on general oversight and strategy matters.
- Continue to ensure committee's effectiveness and efficient coordination with the board, its committees and the executive first level committees.

4.5 Audit committee activities in 2022

'The increasingly volatile global environment has created increased risks and a more difficult economic environment. Many individuals and businesses are concerned about the rising costs of living and energy and, at the same time, there are increased risks associated with supply chain disruption, financial crime compliance and cybercrime. We will do every possible to anticipate future risks and adapt our plans to ensure our internal controls remain appropriate.

We have also continued to supervise enhancements to our reporting of ESG information to ensure its consistency and our preparedness for the greater independent assurance required.

The committee continued to benefit from a great mix of experience and skills, and I was delighted to welcome Germán de la Fuente, who joined us in April 2022. Germán brings, among other things, very valuable accounting and audit experience to the committee.

As we have done in previous years, we shared concerns and views with our subsidiary audit committees, which enabled us to harness their vast collective expertise. We also commissioned an external review of the most relevant elements of our Internal Audit function, which rated them "best in class" in all the areas under scope. This is a great outcome which is a credit to the team'.

Pamela Walkden

Chair of the audit committee



This section is the report the audit committee prepared on 17 February 2023 regarding its activities. The board of directors approved it on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Pamela Walkden	Independent	29/10/2019 ^A
	Homaira Akbari	Independent	26/06/2017
	Henrique de Castro	Independent	21/10/2019
Members	Germán de la Fuente	Independent	21/04/2022
	Ramiro Mato	Independent	28/11/2017
	Belén Romana	Independent	22/12/2015
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 26 April 2020.

The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

For more details, see section 4.1 'Our directors' and 'Board skills and diversity matrix' in section 4.2.

According to SEC Regulation S-K, committee Chair Pamela Walkden is considered a financial expert based on her training and experience in accounting, auditing and risk management, past leadership positions at entities where accounting expertise and risk management were essential, and international experience (primarily in the UK and Asia).

Germán de la Fuente was appointed to the committee on 21 April 2022.

External auditor

Our external auditor is PricewaterhouseCoopers Auditores, S.L. (PwC). Its registered office is at Paseo de la Castellana, 259 B, Madrid, and its Tax ID Code is B-79031290. It is registered with the *Registro Oficial de Auditores de Cuentas* (Official Registry of Account Auditors) of the *Instituto de Contabilidad y Auditoría de Cuentas* (Accounting and Audit Institute or ICAC) of the Ministry of Economic Affairs and Digital Transformation under number S0242.

Lead audit partner Julián González, PwC's banking sector audit leader, has experience as a global group audit partner (mainly in Spain and the UK) and a strong background in the Spanish financial sector. He also participates in various international banking supervisory and regulatory forums.

Report on the independence of the external auditor

The audit committee verified the external auditor's independence on 17 February 2023 before the 2022 auditor's report on the financial statements was issued in line with section 4.f) of Article 529 *quaterdecies* of the Spanish Companies Act, and with Article 17.4.c) (iii) of the Rules and regulations of the board. It had considered the information included in the corresponding subsection 'Duties and activities in 2022' in this section on:

- The external auditor's remuneration for audit and other services;
- All non-audit services rendered by the external auditor, verifying that they met independence requirements under European and Spanish law, the SEC rules and the rules of the Public Company Accounting Oversight Board (PCAOB); and
- The personal circumstances, as the financial dealings, that the auditor or persons performing the audit may have with the Group, analysing threats and taking appropriate safeguarding measures.

Likewise, the committee received written confirmation from the external auditor on its independence from Banco Santander in accordance with applicable European and Spanish law, the SEC and the PCAOB.

In view of the above, the audit committee concluded that, by its judgement, it had no objective reason to question the external auditor's independence.

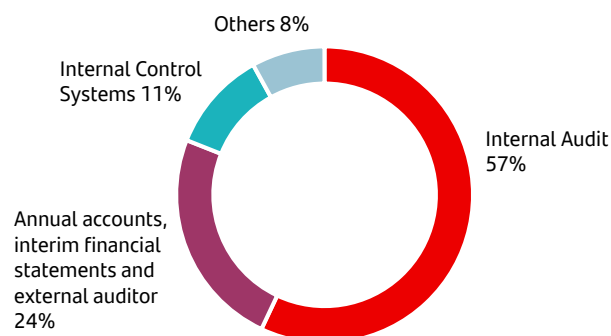
Proposed re-election of the external auditor for 2023

As indicated in section 3.5 'Our next AGM in 2023', the board of directors will submit a resolution to re-elect PwC as external auditor for 2023 at our 2023 AGM, following the proposal the audit committee had issued in November 2022. Mr González will continue as lead audit partner.

Time allocation

In 2022, the audit committee held 12 meetings, including two joint sessions with the risk supervision, regulation and compliance committee. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:





Duties and activities in 2022

This section summarizes the audit committee's activities in 2022.

Duties

Actions taken

Financial statements and other financial and non-financial information

Review the financial statements and other financial and non-financial information

- Reviewed the individual and consolidated financial statements and directors' report for 2022 and submitted them to the board of directors for approval. Monitored compliance with legal requirements and accounting principles, and ensured that the external auditor issued a report on the effectiveness of the Group's system of internal control over financial reporting (ICFR).
- Reviewed quarterly financial information (dated 31 December 2021, 31 March, 30 June and 30 September 2022, respectively), before it was approved by the board and subsequently released to the market and supervisory bodies.
- Reviewed such other financial information included in the annual report; share registration document filed with the CNMV; Form 20-F filed with the SEC; and the half-yearly financial information filed with the CNMV and with the SEC as Form 6-K.
- Oversaw and assessed the preparation and reporting processes, as well as the integrity of non-financial reporting according to applicable regulation and international standards, in coordination with the responsible banking, sustainability and culture committee; and informed the board accordingly.
- Reviewed the annual 'Green Bond' report on investments for each green bond issuance before board approval, assessing the integrity of such disclosure and the external auditor opinion on it.

Report to the board about applied tax policies

- Reported to the board on tax policies based on the Code of Good Tax Practices and on the filing of the 2021 Tax transparency report with the Spanish tax agency (*Agencia Estatal de Administración Tributaria*).
- Received information on emerging tax developments and regulation, and its potential impacts.
- Reviewed and endorsed the tax strategy and policy on control and management of risk, including tax risk and recommended it to the board for approval.

Relations with the external auditor

Receive information on the external audit plan

- Received updates on the planning, progress and execution of the audit plan.
- Discussed improvements to financial reporting in light of new accounting standards and best practice.
- Obtained the external auditor's confirmation of its full access to all information to conduct the audit.
- Analysed the audits for the annual financial statements before the external auditor submitted them to the board of directors.
- Received reports on ESG information reporting process, evolution of reporting requirements, their impact on timelines and assurance scope of the independent external verification of such information.

Interaction with the external auditor

- Met twice with the lead audit partner without executives present to ensure fluent communication and the independent performance of its function.
- The lead audit partner, who met periodically with the committee Chair, attended all committee meetings, which facilitated communication between the external auditor and the board.

Assessment of the external auditor's performance

- Performed the final assessment of the external auditor and how it has contributed to financial reporting integrity considering its work and the opinions of the controllers of main local units or relevant subgroups and the main entities' audit committee chairs.
- Received the PwC 2022 Transparency report from the lead audit partner who informed the committee on other relevant investigations and confirmed that no inspections from the ICAC on PwC were expected in 2022 as part of the former's regular quality control processes.

**Duties****Actions taken****External auditor's independence. Possible threats and protective measures****PwC's remuneration for audit and non-audit services**

- Monitored PwC's remuneration, including the following fees for audit and non-audit services provided to the Group:

EUR million	2022	2021	2020
Audit	113.4	104.6	99.4
Audit-related services	6.4	6.0	6.0
Tax advisory services	0.5	0.7	0.8
Other services	4.8	2.4	1.2
Total	125.1	113.7	107.4

The 'Audit' heading mainly includes audit fees for the individual and consolidated financial statements of Banco Santander and its subsidiaries, of which PwC or another firm in its network is the statutory auditor; for interim consolidated financial statements of Banco Santander; for integrated audits prepared in order to file Form 20-F for the annual report with the SEC in the US regarding required entities; the internal control audit (SOx) for required Group's entities; the limited review of the financial statements; and the regulatory auditor's reports on Grupo Santander's geographies.

The main fees under 'Audit-related services' include, comfort letters, verifying financial and non-financial information (as required by regulators), and other reviews of documents that, due to their nature, the external auditor provides to be submitted to domestic or foreign authorities.

The fees included under the heading 'Tax services' mainly related to tax compliance and advisory services provided to Group companies outside Spain, which are permitted in accordance with independence regulations; none were for tax planning advice.

The 'Audit' heading includes the fees for the year's audit, regardless of the date the audit was completed. Any subsequent adjustments, which are not significant, and for purposes of comparison, are shown in note 47.b) in the 'Notes to the consolidated financial statements' for each year. The fees corresponding to the rest of the services are shown by when the audit committee approved them.

- Verified that the ratio of PwC's total fees paid for all services for the Group to its annual revenue in Spain and worldwide in 2022 did not exceed 15% for three consecutive years. The ratio stood at 0.3% of PwC's total revenues in worldwide. Banco Santander has been complying with the requirement that, over three or more consecutive years.
- Verified every quarter, according to Regulation (EU) No 537/2014 of the European Parliament and of the Council, that the fees approved in 2022 for non-audit services provided by PricewaterhouseCoopers Auditores, S.L. (PwC) (including for 'Other services' and 'Audit-related services', and not including services that the external auditor is required to perform under domestic or EU laws) were significantly less than 70% of the average fees paid specifically to PwC in the past three consecutive years for the 'Audit' of Banco Santander and its subsidiaries in Spain (not including fees for reviews with more limited assurance than required for accounts auditing, which are included as non-audit services). At 2022, non-audit service fees were 32.12% of the average fees paid to PwC; they would be 20.43% if they included services approved for PwC and other firms in its network by Grupo Santander in and outside Spain.

See subsection C.1.32 of section 9.1. '[Reconciliation with the CNMV's corporate governance report model](#)' for the reconciled amounts of the abovementioned fees listed, with the numerator and denominator values of each ratio found in section C.1.32 of section 9.2 '[Statistical information on corporate governance required by the CNMV](#)'.

- In 2022, Grupo Santander contracted for services by audit firms other than PwC in amount of EUR 185.5 million (EUR 263.8 and 172.4 million in 2021 and 2020, respectively).

Non-audit services

- Verified that all non-audit services rendered by the Group's external auditor met independence requirements under applicable regulation.

Personal and financial relations

- Received written confirmation from PwC that the designated audit team, PwC as external auditor, everyone else that forms part of PwC or firms in its network, and all applicable extended relations to them complied with regulation on external auditor independence.
- The committee was also informed about an internal review of potential financial ties with PwC and its related companies, which had found none that compromised the independence of PwC as external auditor.

External auditor independence report

- After considering the information above, the committee issued its '[Report on the independence of the external auditor](#)' at the beginning of this section.

**Duties****Actions taken****Re-election of the external auditor**

Re-election of the external auditor	<ul style="list-style-type: none"> Recommended to the board, for subsequent submission to the 2023 AGM, the re-election of PwC as the external auditor of Banco Santander and its consolidated Group for 2023.
--	---

Internal audit**Oversight of the Internal Audit function**

- Supervised the Internal Audit function and ensured its independence and effectiveness in 2022.
- Commissioned and reviewed the external assessment of the Internal audit function according to Internal Audit Standards 1312 to further ensure the effectiveness of the function and its alignment with best practice and monitored implementation of the associated action plan.
- Held meetings with the Group Chief Audit Executive (CAE) and internal audit officers, including one private meeting with the CAE without other executives or the external auditor present.
- Proposed a 2022 Internal Audit function budget, ensuring the resources the function needed to its duties effectively.
- Was kept apprised of audit hub projects and internal audit digital initiatives.
- Assessed the preparedness and effectiveness of the Internal Audit function to fulfil its duties.
- Reviewed and reported to the board on the CAE's 2022 objectives.
- Reviewed the CAE's performance in 2022 and reported to the remuneration committee and to the board to set his variable remuneration.
- Was engaged in the appointment of new subsidiary CAEs, ensuring their proper oversight and control, in coordination with the nomination committee.

Monitoring of internal audit activities

- Reported on the internal audit plan, internal audit recommendations and ratings of units and corporate functions. Each unit CAE reported to the committee at least once in 2022.
- Reviewed the strategic audit plan for 2022-2025 and recommended it to the board for approval, ensuring that it covered the Group's relevant risks.
- Received regular information on the internal audit activities carried out in 2022, highlighting an overall improvement in audit ratings, as a result of the continued focus on a stronger control environment; and conducted an additional review of issued audit reports, requiring that relevant business areas present action plans.
- Continued promoting the first-line's further involvement in internal audit recommendations and ensured that senior management and the board understood the conclusions of internal audit reports.
- Received holistic reviews of internal audit coverage of financial crime, model risk, ESG and vendor management and other topics, to ensure proper oversight, with second line of defence representatives invited to provide additional feedback.

Internal control systems**Monitoring the assessment of internal control systems**

- Received information on the Group's internal control system and monitored related action plans, together with the internal control strategic plan.
- Received reports and certification on the Group's 2021 internal control system (ICS) and assessed its effectiveness in compliance with CNMV Internal Control over Financial Reporting regulation (SCIIF) and the SEC Sarbanes-Oxley Act (SOx).

Whistleblowing channel (Canal Abierto)

- Received information in a joint meeting with the risk supervision, regulation and compliance committee on *Canal Abierto*, the Group's whistleblowing channel with a special focus on matters within the committee's area of authority to ensure the Group's culture empowers employees and other persons related to Banco Santander can talk straight and report irregular practices without fear of reprisal.

Coordination with Risk and Compliance and Conduct

- Held two joint meetings with the risk supervision, regulation and compliance committee to discuss the Group's risk control environment assessment, risk model, financial crime compliance, risk culture, whistleblowing, third-party supplier risk management and other topics of mutual interest.
- Received biannual reports on legal risk, in coordination with the risk supervision, regulation and compliance committee.
- Invited the CRO to all 2022 committee meetings.
- The chairs of the audit committee and the risk supervision, regulation and compliance committees met regularly.

Other activities

- Endorsed the Pillar III disclosures report, which was submitted to the board for approval.
- Received reports from Santander España audit committee on the main items covered at its meeting to remain sighted on its activities.

Related-party and corporate transactions**Creation or acquisition of special-purpose vehicles and entities based in countries considered non-cooperative jurisdictions**

- Was informed of the activities of the Group's offshore entities by the Head of Tax, in accordance with Spanish regulations. See note 3.c) in the 'Notes to the consolidated financial statements'.
- Received a report on the creation of special purpose entities and reported favourably to the board on the proposals presented.

**Duties****Actions taken****Authorization and oversight of related-party transactions**

- Reviewed the details and balances of the related-party transactions that appear in the annual and half-yearly financial statements. Checked that those transactions were carried out under market conditions.
- Conducted bi-annual reviews to check that related-party transactions complied with the law, the Rules and regulations of the board and the conditions set by board resolution, and met the requirements to be considered fair, reasonable and transparent. Reported its findings to the board.
- Reviewed and recommended to the board changes and a wider scope for the rules for authorizing related-party transactions, in particular in relation to non-typically banking transactions and those whose approval has not been delegated by the board of directors.
- Issued the Related-party transactions report, which can be found in section [4.12 'Related-party transactions and other conflicts of interest'](#).

Transactions involving structural or corporate changes

- Reviewed the corporate transactions that the Group planned in 2022 prior to their submission to the board of directors, analysing their economic conditions, accounting and internal audit impact.

Information for general meetings and corporate documents**Shareholder information**

- Was represented by Pamela Walkden in reporting at the 2022 AGM on the committee's activities in 2022.

Corporate documents for 2022

- Prepared this activities report which includes a performance review of the committee's functions and key priorities identified for 2023.

Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee considered the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see '[Board effectiveness review in 2022](#)' in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Welcomed Germán de la Fuente as a new member. He complements the skills and background of committee members with additional accounting and audit experience and strong knowledge of banking and financial services.
- Increased the overall committee effectiveness, ensuring proper mechanisms remained in place to coordinate and share information with the risk supervision, regulation and compliance committee and others.
- Proactively reviewed its forward-looking planning to ensure committee time was used optimally and aligned with member expectations, and its responsibilities were discharged in line with its assigned functions.
- Enabled the Group and subsidiary chairs to participate in each other's committee meetings, and held a meeting of audit committee Chairs of Grupo Santander to discuss global initiatives and topical matters of mutual interest.
- Oversaw the internal audit plan and the Group's environmental strategic initiatives, the Internal Audit function, the internal control systems as well as the measurement of emerging risks identified by management.
- Oversaw key judgements made in preparing the Group's financial statements, including the oversight of the integrity of financial reporting and controls.

2023 priorities

The committee set the following priorities for 2023:

- Continue to monitor the impact of the current volatile environment on key aspects within the committee's remit. These include the macroeconomic scenarios which flow

through to the key management judgements and estimates, such as provisioning, that are made in preparing the Group's financial statements, as well as the heightened risks around, for example, supply chain and cyber.

- Continue to supervise the Group's units and global businesses, with a special focus on those more relevant to the digital transformation, such as PagoNxt and Digital Consumer Bank, to ensure that appropriate controls are in place.
- Continue to focus on the oversight of the internal audit plan execution, ensuring appropriate amendments to address future risks and appropriateness of the internal controls to manage these risks.
- Review our enhanced ESG disclosures to ensure consistency and coherence in a complex legislative framework and monitor the greater independent assurance required in the coming years, by both the SEC Climate disclosure and Corporate Sustainability Reporting Directive.
- Remain focused on the independence and effectiveness of both the Internal Audit team and the committee itself ensuring that their roles are discharged effectively, and maintain a strong working relationship with the other committees, as well as the subsidiary audit committees.

4.6 Nomination committee activities in 2022

'Board composition and succession were high on our agenda last year. In particular, significant time was devoted to our CEO succession process around a number of other senior roles impacted by Héctor's move to the CEO role. For all key board and senior appointments, the committee continues to oversee a robust succession process which has an appropriate focus on the diversity of candidates under consideration.

The skills and training of Group directors, the executive, senior management and workforce talent strategy, and gender and broader diversity criteria remained top priorities in the committee's succession planning discussions.

The effectiveness of the board, its committees and our overall governance remained a key priority in the year. We focused on the delivery of actions that arose from the 2021 external advisors' governance review and ensured that this was completed to our satisfaction. In this regard, the committee is committed to continuously improving board and committee governance and designed the 2022 board effectiveness review, which was conducted internally.

Lastly, R. Martín Chávez left the board and Glenn Hutchins joined the board and this committee, among others, on 20 December 2022. On behalf of the committee, I would like to thank R. Martín Chávez for his hard work and commitment and extend a warm welcome to Glenn Hutchins'.

Bruce Carnegie-Brown
Chair of the nomination committee

This section is the report the nomination committee prepared on 20 February 2023 regarding its activities. The board of directors approved it on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Bruce Carnegie-Brown	Independent	12/02/2015 ^A
	Sol Daurella	Independent	23/02/2015
Members	Gina Díez Barroso	Independent	22/12/2021
	Glenn Hutchins	Independent	20/12/2022
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 12 February 2015.

Duties and activities in 2022

This section summarizes the nomination committee's activities in 2022.

Duties

Actions taken

Board and committees composition and succession planning

Selection succession and renewal of the board and its committees

- Ensured board member selection procedures guaranteed directors' individual and collective suitability; fostered diversity in its broadest sense (gender, geographical provenance, age, experience and skills); and analysed the required expertise, skills and time commitment for effective board membership.
- Continued playing a leading role in the appointment of board and committee members and planning their succession.
- Assessed the composition of the board committees and the international advisory board in order to ensure they had the right skills and experience to perform their duties successfully.
- Continued monitoring the board of directors' overall skills and competencies, either thematic or horizontal, including the need to cover Grupo Santander's strategic markets and such areas as technology, digital strategy, banking, finance, regulation, data management and sustainability; and verified that the overall composition of the board of directors and its committees remain appropriate.
- Ensured an up-to-date candidate pool identification for any proposal of appointment, considered diversity in its broadest sense.

The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

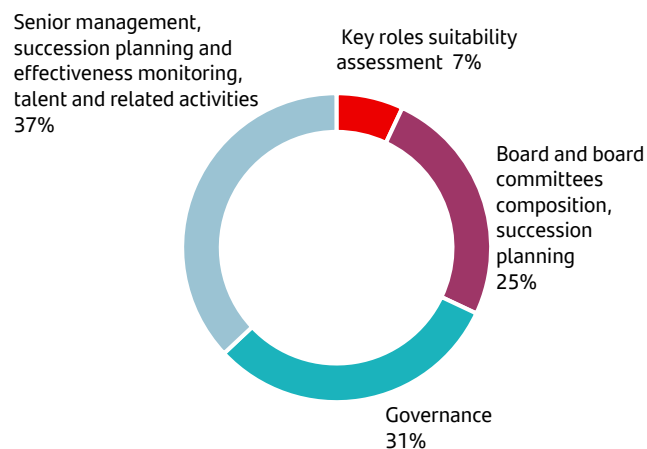
For more details, see section 4.1 'Our directors' and 'Board and committees skills and diversity matrix' in section 4.2.

R. Martín Chávez stepped down as member of the committee on 1 July 2022 and Glenn Hutchins was appointed to the committee on 20 December 2022.

Time allocation

In 2022, the nomination committee held 12 meetings, including one joint session with the remuneration committee. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:



**Duties****Actions taken****Appointment, re-election and confirmation of directors and committee members**

- Considered areas of expertise and experience required to complement the board of directors by reference to the board skills and diversity matrix as well as the board effectiveness review in order to commission the relevant recruitment.
- Oversaw a rigorous and comprehensive process to facilitate the orderly succession of the Chief Executive Officer position, taking into account and constructively challenging all relevant factors. As a result, confirmed the suitability of Héctor Grisi for the position of director and CEO and proposed his nomination to the board of directors.
- Recommended that José Antonio Álvarez should remain as Vice Chair once he steps down from his executive duties on 1 January 2023.
- Was apprised of the resignations from R Martín Chávez (effective on 1 July 2022) and from Sergio Rial (effective on 1 January 2023) as directors of the board, which they had tendered in order to pursue other professional interests.
- Recommended the nomination of Glenn Hutchins as independent director, effective from 20 December 2022, in light of his expertise in different areas, such as financial supervision, banking and technology.
- Proposed composition changes for certain committees to further enhance their performance and support to the board in their areas of authority.

Annual verification of the status of directors

- Verified each director category (i.e. executive, independent and other external) and submitted a proposal to the board of directors for it to be confirmed in the annual corporate governance report and at the 2023 AGM. See section 4.2 'Board composition'.
- Assessed directors' independence, verifying there were no significant business ties between the Group and companies in which they are or have been significant shareholders, directors or senior managers, in particular regarding financing extended by the Group to such companies. In all cases, the committee concluded that existing ties were not significant because (i) financing (a) did not constitute economic dependency for such companies because other sources of funding were available, and (b) was consistent with the Group's share of the relevant market; and because (ii) business ties did not reach comparable materiality thresholds used in other jurisdictions as benchmarks (e.g. New York Stock Exchange (NYSE), Nasdaq and Canada's Bank Act), among other reasons.

Directors' potential conflicts of interest and other professional activities

- Examined the information provided by directors about their intention to carry out other professional activities or positions outside the Group held in order to assess related time commitment and the compliance with the maximum number of boards to which they may belong according to the applicable legislation. Concluded that those commitments did not interfere with their obligations as Banco Santander directors nor entail any conflict of interest.

Director induction, training and development programmes

- Assessed the effectiveness of the Group's director induction, training and development programmes based on the Rules and regulations of the board, ESMA and EBA's joint guidelines and the Spanish Governance Code guaranteeing that such programmes are designed according to each director's circumstances and needs and identified areas for improvement and additional training topics for the 2023 training programme.

Senior management, succession planning and effectiveness monitoring, talent and related activities**Succession planning for executive directors and senior management**

- Oversaw the discipline applied to senior executive succession planning (which included key positions in subsidiaries) and made sure plans were being implemented for the orderly succession of senior managers through a rigorous, transparent, merit-based and objective process that promotes diversity in its broadest sense.
- Oversaw appointments of key positions and the regular strategic review of leadership succession plans.

Appointment of key officers

- Recommended the following nominees, later appointed by the board:
 - Felipe García Ascencio as CEO of Santander México and Country Head
 - Román Blanco as CEO of Santander Chile and Country Head.
 - Ángel Rivera as CEO of Santander España and Country Head.
 - Cristina Ruiz as Head of Transformation of Santander España.
 - Matías Sánchez as Global Head of Cards & Digital Solutions.
 - Mahesh Aditya as Group CRO, subject to customary approvals.
- Issued favourable opinions on director and senior manager appointments in the Group's core subsidiaries.

Talent and culture matters

- Discussed Human Resources' activities and progress with the 2021 diversity, equity and inclusion strategy, new proposals for 2022; and reviewed the Group's STEM (science, technology, engineering and mathematics) talent strategy.
- Assessed and challenged proposals on top-leadership goals, career development plans & mobility.

**Duties****Actions taken****Governance****Board effectiveness review**

- Reviewed the execution of the action plan to address the areas for improvement revealed in the 2021 board effectiveness annual review.
- Oversaw the 2022 board effectiveness review, which was performed internally and the resulting action plan. See '[Board effectiveness review in 2022](#)' in section 4.3.

Internal governance

- Assessed the suitability of certain key position nominees for the subsidiaries, subject to the Group's appointments and suitability procedure.
- Oversaw subsidiary board composition to ensure consistent suitability in line with expectations across the Group.
- Coordinated the appointments of specific subsidiary CAEs, CROs and CCOs with audit and risk supervision, regulation and compliance committees, ensuring their proper oversight and control.
- Remained apprised on new governance regulation, trends, best practices and implications for the Group. In this regard received proposed amendments to the GSGM and other applicable internal regulation, which were endorsed and recommended to the board for approval.
- Verified that subsidiaries followed the GSGM on board and committee structure and their functions pursuant best practices. In addition, the committee tracked subsidiary actions and progress in implementing internal regulation dictated by the Group.
- Endorsed Group director nominations for subsidiary boards to ensure board members representing the significant shareholder were suitable and correctly perform their duties.
- Reviewed the subsidiary board and board Chairs annual effectiveness reviews.
- Endorsed the proposal to streamline the number of board meetings during the year whilst maintaining robust governance discipline and all times.

Corporate governance

- Oversaw the implementation of the action plan resulting from the external holistic review of our governance model commissioned in 2021.
- Reviewed the highlights and results from the 2022 AGM.
- Reviewed the work of the Lead Independent Director, ensuring the discharge of his duties, as evidenced through a summary of his activities in the year, which was also submitted to the board.
- Reviewed the work and presentations of the Shareholder and investor relations team, as well as the Lead Independent Director's engagement with investors' and shareholders and proxy advisors, and the feedback received from them on the Group's corporate governance arrangements.
- Reviewed the independence of the external advisers hired by the nomination and remuneration committees in 2022 in line with the CNMV Technical Guide 1/2019 on nomination and remuneration committees, analysing the services the advisers provided, the amounts they received and other items.
- Reviewed the annual corporate governance report to verify that information contained therein conforms to the Law and that the corporate governance system promotes corporate interests and considers the legitimate interests of all stakeholders.

Key roles suitability assessment**Annual suitability re-assessment of directors and key function holders**

- Assessed the suitability of directors, senior management, head of internal control function heads and Group's key position holders, confirming their continued business and professional good reputes and appropriate knowledge and experience to perform their duties.
- Concluded that board members are capable of good governance of Banco Santander. To this effect, it has supervised that the attendance of the directors at the meetings of the board and the committees was not less than 75% and, in the specific cases of lower attendance, that the absences were duly justified and do not undermine their capacity to devote sufficient time to discharge their functions. Likewise, it has verified an average board attendance of 98.47%. See '[Board and committee preparation and attendance](#)' in section 4.3.
- Based on the information it had received from the directors, confirmed the absence of circumstances that could harm the Group's credit and reputation.

Information for general meetings and corporate documents**Shareholder information**

- Was represented by Bruce Carnegie-Brown in reporting at the 2022 AGM on the committee's activities in 2021.

Corporate documents for 2022

- Prepared this activities report, which includes a performance review of the committee's functions and key priorities identified for 2023.

Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee considered the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see '[Board effectiveness review in 2022](#)' in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Reviewed board and senior executive succession planning (including CEO and other key positions at Group and subsidiary level) regularly; ensured plans were in place for the



orderly succession of senior management positions and that the succession procedure was rigorous, transparent and based on meritocracy and objective criteria, as well as promoting diversity in its broadest sense.

- Monitored the skills, competencies and training needs of the directors and reviewed their induction, development and training programmes designed to continuously improve the knowledge of the most important topics of the organization and industry, and meet to regulatory requirements.
- Received information on talent strategy, focused on leading the workforce transformation of Santander to ensure its readiness for emerging challenges, with a focus on STEM talent attraction.
- Ensured delivery of actions that arose from the 2021 external advisor's governance review and ensured that those were completed, ensuring the continuous improvement of our governance arrangements.
- Oversaw engagement with shareholders and investors about governance.

2023 priorities

The committee set the following priorities for 2023:

- Continue to review the senior executive and board member succession plans based on Group's strategic needs, including potential challenges the business may face. This will include ensuring the continued development of internal succession pipeline.
- Continue to promote gender and broader diversity in our succession policy and talent strategy, acknowledging that building a more diverse and inclusive workforce is critical to business sustainability and success.
- Continue to monitor board members' expertise and training needs, as well as the board's development.
- Review the process for the appointment of a successor to the Lead Independent Director.
- Keep corporate governance arrangements under constant review ensuring that the expectations of all stakeholders with strategic relevance for the Group are considered; closely monitoring shareholder engagement and, together with the lead independent director, considering their feedback and insights.
- Continue to ensure the ongoing application of the GSGM and related internal regulation across Santander, and as a consequence, robust oversight and control of the Group's subsidiaries.
- Remain focused on the overall effectiveness of the committee ensuring that its role is discharged with appropriate rigour.

4.7 Remuneration committee activities in 2022

'We continued to oversee the drafting and implementation of remuneration policies and schemes, ensuring they promote effective risk management, strong performance, meritocracy, our culture and our T.E.A.M.S. corporate behaviours. We commissioned an external review of our remuneration arrangements, which concluded that the Group's policies, procedures and practices fully comply with applicable legislation.

The committee holds the belief that a diverse workforce and an inclusive workplace are key to fulfilling the Group's strategic ambitions, and for such purposes, it continued to oversee that the remuneration policy addressed those principles.

We benefited from our members' mix of experience and skills, leveraging their collective insights to ensure best possible outcomes. They each provided appropriate advice and challenge to management on the matters presented. Fluid and effective communication with executives and non-executives enabled us to continue monitoring our incentive structures and measures, maintain alignment with our targets, culture and behaviours, and support the delivery of our strategic transformation agenda'.

Bruce Carnegie-Brown

Chair of the remuneration committee

This section is the report the remuneration committee prepared on 20 February 2023 regarding its activities. The board of directors approved it on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Bruce Carnegie-Brown	Independent	12/02/2015 ^A
	Sol Daurella	Independent	23/02/2015
	Henrique de Castro	Independent	29/10/2019
Members	Glenn Hutchins	Independent	20/12/2022
	Luis Isasi	Other external	19/05/2020
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 12 February 2015.



The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

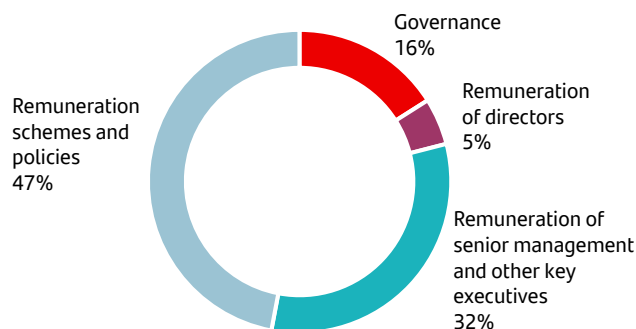
For more details, see section 4.1 'Our directors' and 'Board and committees skills and diversity matrix' in section 4.2.

R. Martín Chávez stepped down as a member of the committee on 19 April 2022 and Glenn Hutchins was appointed to the committee on 20 December 2022.

Time allocation

In 2022, the remuneration committee held 13 meetings, including two joint sessions, one with the nomination committee and one with the risk supervision, regulation and compliance committee. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:



Duties and activities in 2022

This section summarizes the remuneration committee's activities in 2022.

Duties	Actions taken
Remuneration schemes and policies	
Remuneration policy for executive directors, senior management and other key executives	<ul style="list-style-type: none"> Remained focused on simplifying executive directors and top management remuneration, shaping remuneration schemes consistent with Banco Santander's Simple, Personal and Fair values, with long term ESG-related metrics in coordination with the responsible banking, sustainability and culture committee. Proposed to the board global annual variable remuneration for 2021 (payable immediately) and deferred executive remuneration, based on achievement of previously set quantitative and qualitative targets. Recommended individual remuneration of members of senior management, based on annual performance targets and their weightings as set by the board. Reviewed the calibration of executives' performance reviews for the Executive Chair, the CEO and the CFO in coordination with non-executive directors; for the CRO and CCO with the risk supervision, regulation and compliance committee; and the CAE with the audit committee. Made sure remuneration for senior management remained fair and competitive, recommending adjustments where appropriate to the board, based on a benchmark analysis. Established the annual performance indicators to calculate variable remuneration for 2023 in order to maintain the simplification of the bonus pool scorecard approved for the previous year, with a continued focus on customer centric, risk, capital and sustainable profitability. Set the achievement scales for the annual and multi-year performance targets and weightings for submission to the board.
Assist the board of directors in supervising compliance with remuneration policies	<ul style="list-style-type: none"> Checked that remuneration schemes were appropriate to the Group's results, corporate culture and risk appetite and created no incentive to breach risk appetite. Reported to the board on Group remuneration practices and assessed their effectiveness receiving confirmation on the alignment of Group-wide remuneration practices with the Group remuneration policy. Reported to the board that an external advisor assessment based on Act 10/2014 and EBA guidelines, found that the Group's policies, procedures and practices complies with the regulatory requirements for credit institutions. Endorsed proposed changes to the remuneration policy based on updates of EBA guidelines on the data collection exercise for high earners and remuneration benchmarking . Reviewed and proposed to the board of directors for approval a retention plan proposal to ensure timely decisions in connection with staff retention measures in a resolution scenario. Reviewed the adoption of ex post risk adjustments, including the application of <i>malus</i> and clawback arrangements within the Group.

**Duties****Diversity, equity and inclusion****Actions taken**

- Reviewed policies on diversity, gender pay gap reduction and equal pay with a view to promoting greater diversity in its broadest sense, acknowledging progress made in the number of women in senior positions.
- Reviewed internal “equal pay for equal work” data against the previous year and targets and focused on measures to enhance them in each country.
- Received information on inclusion indicators and initiatives launched to continue promoting a culture of inclusion in the Group and ensured the avoidance of pay gaps in this regard.

Remuneration of senior management and other key executives**Fixed remuneration for executive directors**

- Checked that executive directors' fixed remuneration remained appropriate to their duties based on market rates which resulted in no adjustments.
- Reviewed and proposed to the board the compensation for the newly appointed CEO.

Variable remuneration for executive directors and senior management

- Proposed to the board immediately payable and deferred amounts of variable remuneration for the preceding year.
- Reviewed and submitted a proposal to the board for approval, on annual performance indicators and targets to calculate 2023 variable remuneration.

Share plans

- Submitted a proposal to the board and to vote at the 2022 AGM regarding the approval of remuneration plans that involve the delivery to executive directors and senior management of shares or share options (deferred multiyear target variable remuneration plan; deferred and conditional variable remuneration plan; application of the Group buy-out policy).
- Reviewed the 2022 Digital Transformation Award, which was designed to attract and retain key talent to drive long-term share value creation based on the achievement of key digital milestones. As part of the 2022 Digital Transformation Award, the committee reviewed and submitted to the board incentive proposals for senior executives to foster collaboration between the Group and PagoNxt.
- Analysed and submitted to the board tailored incentive schemes for strategic businesses to drive talent retention and alignment with the Group's strategic priorities.

Remuneration of directors**Individual remuneration of directors in their capacity as such**

- Analysed and proposed adjustments to the directors' remuneration in their capacity as such, based on the positions they held on the collective decision-making body, their membership and attendance at committee meetings, benchmark information and other objective circumstances.

Remuneration of Identified Staff**Remuneration of other executives who are Identified Staff but not senior management**

- Reviewed the volume of the Identified Staff population, trends versus previous years and checked that fixed and variable remuneration ratios for control functions remained consistent with regulation and targets.
- Set key remuneration components for Identified Staff (Material Risk Takers) in coordination with the risk supervision, regulation and compliance committee.
- Maintained close coordination with the board and its committees to ensure that risks are correctly controlled and mitigated.
- Submitted a proposal to the board, for subsequent submission to the 2022 AGM, regarding the approval of maximum variable remuneration of up to 200% of the fixed component for Group employees whose activities have a material impact on Banco Santander or the Group's risk profile, including executive directors and senior management.
- Checked that remuneration schemes supported attraction and retention of key talent to help drive digitalization, the application of incentives implemented in the Group, and the achievement of long-term deferred remuneration metrics.

Governance**Coordination with subsidiaries**

- Received information on local market practices, remuneration trends and challenges in different local markets.
- Held a joint session with the risk supervision, regulation and compliance committee to review the subsidiary action plans on internal sales force pay and conduct risk for the external sales force and verified that remuneration schemes factor in capital and liquidity, and do not offer incentives to assume risks that exceed Banco Santander's tolerance, thus promoting and being compatible with adequate and effective risk management.
- Reviewed the remuneration practices for subsidiary directors.

Annual directors' remuneration report

- Assisted the board of directors in overseeing compliance with the director remuneration policy.
- Reviewed the lead independent director's report on engagement with key shareholders and proxy advisors regarding executive director remuneration.
- Reviewed and proposed to the board the annual directors' remuneration report for an advisory vote at the 2022 AGM.

**Duties****Actions taken****Information for general meetings and corporate documents**

Shareholders information	• Was represented by Bruce Carnegie-Brown in reporting at the 2022 AGM on the committee's activities in 2021.
Corporate documents for 2022	• Prepared this report, which includes a performance review of the committee's functions and key priorities identified for 2023.

Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee considered the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see ['Board effectiveness review in 2022'](#) in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Checked regularly that incentives remained consistent with corporate strategy, culture and T.E.A.M.S. behaviours and that remuneration schemes remained simple, effective and fair and met regulation.
- Reviewed proposals to continue to enhance our employee value proposition to attract and retain key talent. In particular, placed a further focus on the challenges encountered relating to the attraction and retention of STEM talent.
- Enhanced coordination and information exchange with the subsidiaries based on presentations from subsidiary Human Resources functions on local market practices and challenges.
- Continued prioritizing gender pay measurement and trends in the Group to set targets; and checked that the methodology to calculate gender equality metrics was accurate and action plans effectively narrowed the gender pay gap in the Group and its subsidiaries.

The director remuneration policy report

Pursuant to section 2 of Article 529 novodecies of the Spanish Companies Act, the remuneration committee issues this report on the resolution regarding the directors' remuneration policy for 2023, 2024 and 2025 that will be submitted by the board of directors at the 2023 AGM as a separate item on the agenda and is an integral part of this report. See sections [6.4 Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote](#) and [6.5 Preparatory work and decision-making for the remuneration policy; remuneration committee involvement](#).

Banco Santander's Remuneration function prepares the directors' remuneration policy based on requests, observations and suggestions it receives from the human resources committee, remuneration committee, board of directors and external advisers, proxy advisors and ESG analysts throughout the year (the policy for 2023, 2024 and 2025 includes suggestions from Willis Towers Watson). The remuneration committee receives a first draft of the policy every January to review and debate. During the meeting, it considers the inputs the chair and lead independent director receive through shareholder and stakeholder engagement during the year. It also considers any recommendations from regulators, legal requirements or regulation that has come to light since the last time the policy was submitted for approval at the annual general meeting. The committee also makes sure the policy is

consistent with the Group's culture and Simple, Personal and Fair values. The Remuneration function then prepares the final draft for the remuneration committee to submit to the board of directors for approval in February.

The remuneration committee believes the directors' remuneration policy for 2023, 2024 and 2025 included under section [6.4](#) is consistent with the Group's remuneration policy and with the remuneration scheme in the Bylaws.

The directors' remuneration policy has been reviewed. Several new features have been introduced, among them, share options as variable remuneration instruments (along with shares) to align executive pay with shareholders' interests. It now has updated long-term metrics to cover ESG aspects, RoTE and relative TSR (which was already included, but increasing the minimum threshold for pay) to be consistent with best practice and our shareholders' and investors' interests. Furthermore, it has reduced our annual pool metrics from four to three (i.e. customers, RoRWA and RoTE), with qualitative adjustments for risk, capital adequacy, competitor analysis, sustainable results and responsible banking commitments to sharpen our strategic focus.

2023 priorities

The committee set the following priorities for 2023:

- Keep incentive measures under continuous review to ensure that they continue to align with our strategic aims. This will include a continued focus on customers and sustainable profitability and drive our corporate culture and behaviours, balancing the needs of our different stakeholders, with strong shareholder support and appreciation from investors and proxy advisors.
- Continue to monitor external developments in executive remuneration best practices in the financial industry and broader market within regulation to enhance our employee value proposition. This will ensure that our remuneration schemes remain effective for attracting and retaining key talent for the Group's strategic ambitions. Make sure remuneration promotes meritocracy and effective risk management.
- Continue focusing on accelerating pay equality in the Group to support Santander's commitment to diversity, equity and inclusion.
- Remain focused on the overall effectiveness of the committee ensuring that its role is discharged with appropriate rigour.



4.8 Risk supervision, regulation and compliance committee activities in 2022

'2022 was another challenging year. The war in Ukraine added to an already tough macro environment, with rising inflation and interest rates, the energy crisis and price volatility across the globe causing significant market dislocation. The committee closely oversaw the actions to manage and face those circumstances.

We monitored everyday and more strategic, non-traditional emerging risks closely in all subsidiaries and in full coordination with the board and other committees. We focused on long-term strategic risks that could ultimately compromise Grupo Santander's business and risk profile. The committee held two strategy meetings in 2022, where it reviewed key emerging risks and the implications that the war in Ukraine would have, even before it started; the impact of inflation and stagflation on key economies and the financial system; the green energy transition; fiat money versus digital currencies; and the risks and challenges that China poses to the global economy.

Members' skills and experience, boosted by the appointment of Germán de la Fuente as a member, helped the committee operate effectively and offer constructive challenge and support to management. We will remain vigilant of the current uncertainty and future risks to ensure they are managed properly in our daily operations.

Finally, I welcome our newly appointed CRO, Mahesh Aditya, who will join us from Santander Consumer USA in March 2023. In turn, I would like to thank Keiran Foad for his relentless work on strengthening Santander risk culture over the last five years'.

Belén Romana

Chair of the risk supervision, regulation and compliance committee



This section is the report the risk supervision, regulation and compliance committee prepared on 16 February 2023 regarding its activities. The board of directors approved it on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Belén Romana	Independent	28/10/2016 ^A
	Germán de la Fuente	Independent	01/01/2023
Members	Luis Isasi	Other external	19/05/2020
	Ramiro Mato	Independent	28/11/2017
	Pamela Walkden	Independent	01/05/2021
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 1 April 2021.

The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

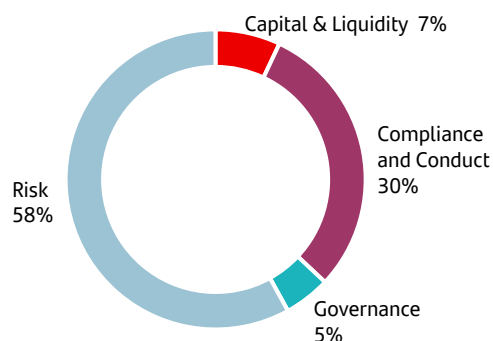
For more details, see section 4.1 'Our directors' and 'Board and committees skills and diversity matrix' in section 4.2.

R. Martín Chávez stepped down as a member of the committee and Germán de la Fuente was appointed to the committee on 1 January 2023.

Time allocation

In 2022, the committee held 17 meetings, including two strategy sessions in February and June, two joint sessions with the audit committee and one joint session with the remuneration committee. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:





Duties and activities in 2022

This section summarizes the risk supervision, regulation and compliance committee's activities in 2022.

Duties	Actions taken
Risk Assist the board in (i) defining the Group's risks policies, (ii) determining the risk appetite strategy and culture, and (iii) supervising their alignment with the Group's corporate values	<ul style="list-style-type: none"> Reviewed and proposed to the board for approval the annual risk appetite statement proposal, including the analysis of proposed new metrics and limits. Reviewed quarterly monitoring of risk appetite metrics, compliance with the limits and any breaches in the year. Reviewed social and environmental policies (in coordination with the responsible banking, sustainability and culture committee), which set out financing standards and prohibited activities in such industries as energy, mining and soft commodities. Reviewed the internal capital adequacy assessment process (ICAAP) and internal liquidity adequacy assessment process (ILAAP), the Strategic Plan, the 3-year strategic financial plan, the annual budget, the recovery and resolution plans before the board of directors approved them. Reviewed and challenged the identified risks and mitigating factors associated with those key processes, their consistency, and their overall alignment to the Group' risk appetite.
Risk management and control	<ul style="list-style-type: none"> Reviewed the Group's main risks, conducted specific analyses by unit and risk type; assessed proposals, issues and projects relating to risk management and control. Received risk updates from core subsidiaries and businesses. . Checked that the Group's risk control management, most notably the risk profile assessment (RPA) and the risk control self-assessment (RCSA) remained robust. Supervised the risks associated with the main corporate transformation programmes and their mitigation measures, with specific focus on new global businesses and strategic initiatives. Received regular updates on the identification of risk exercises to facilitate focus and discussion on top risks under management and the appropriateness of risk mitigating controls. Analysed the potential impact and opportunities associated with emerging risks and how they would affect different geographies, our subsidiaries and businesses. Supported the board in conducting stress tests of Banco Santander through the assessment of scenarios and assumptions, analysing the results and the measures proposed by the Risk function. Ensured that the stress test programme was aligned with the EBA Guidelines 2018/04 on institutions' stress testing. Continued to focus on non-performing loan and non-performing asset performance during 2022, in particular considering the evolution of the portfolios under the current macroeconomic environment, considering the energy crisis and inflationary trend, as well as their potential effect on credit provisions, liquidity and capital. Reviewed periodic reports on market, structural and counterparty risk. Reviewed reports on non-financial risks including operational risk, legal risk, reputational risk, environmental and social risks (including climate) and vendor risk management, which remained areas of focus. Reviewed biannual reports on legal risk, in coordination with the audit committee. Monitored, in full coordination with the innovation and technology committee, risks stemming from technological obsolescence and cybersecurity. Received reports on major IT developments and projects, including presentations on business continuity and contingency plans. Reviewed, supervised and challenged the risks of strategic projects before their submission to the board of directors. Supervised with the responsible banking, sustainability and culture committee the (i) the alignment of risk appetite and limits with corporate culture and values; (ii) non-financial risks; and (iii) new metrics related to climate that were proposed under the Risk Appetite Statement annual proposal.
Supervise the Risk function	<ul style="list-style-type: none"> Reviewed the Risk function's activities, strategy, strengths and potential areas for improvement. Ensured the ongoing independence and effectiveness of the Risk function, including the assessment of its staffing levels and overall appropriateness of its resourcing. Reviewed and reported to the board on the CRO's 2022 objectives. Reviewed the CRO's performance in 2022 against agreed risk appetite and strategy, at a joint session with the remuneration committee, and reported to the board to set his variable remuneration. Was engaged in the appointment of the new Group CRO and subsidiary CROs, ensuring their proper oversight and control, in coordination with the nomination committee.

**Duties****Actions taken****Collaboration to establish rational remuneration policies and practices**

- Held a joint session with the remuneration committee to review the subsidiary action plans on internal sales force pay and conduct risk for the external sales force and verified that remuneration schemes factor in capital and liquidity, and do not offer incentives to assume risks that exceed Banco Santander's tolerance, thus promoting and being compatible with adequate and effective risk management.
- Reviewed the ex-ante risk adjustment of total variable remuneration assigned to the units, based on actual risk outcomes and their management, in conjunction with the remuneration committee.
- Reviewed the 2022 bonus pool and results of the exercise carried out annually to identify employees whose professional activities had a material impact on the Group's risk profile (Identified staff or Material Risk Takers).

Regulatory and supervisory relations

- Reviewed relevant developments regarding regulatory and supervisory relations and maintained focus on the most relevant developments related to the SSM, the SRB, the supervisors of all the Group's subsidiaries and the SREP and specific on-site inspections related to risk and compliance matters, as appropriate.

Compliance and conduct**Supervise the Compliance and Conduct function**

- Reviewed the Compliance and Conduct function area's activities, strategy, development of the 2022 compliance programme, strengths and potential areas for improvement.
- Ensured the ongoing independence and effectiveness of the Compliance and Conduct function, including the assessment of its staffing levels and overall appropriateness of its resourcing.
- Reviewed monthly reports on regulatory issues, product governance and consumer protection, reputational risk, internal and external events, notifications and inspections by supervisors, updates on the One Financial Crime Compliance (One FCC) programme and other matters.
- Received updates on compliance and conduct risks from the Group's main subsidiaries and global businesses, with a special focus on the status of the implementation of the One FCC programme.
- Met with the CCO (twice in private, in addition to other informal meetings) to discuss strategic compliance topics as well as to report independently and directly to the committee on any potential material issue relating to the Compliance and Conduct function, if needed.
- Reviewed and reported to the board on the CCO's 2022 objectives.
- Reviewed the CCO's performance in 2022 against the agreed compliance plan and compliance and conduct strategy at a joint session with the remuneration committee, in order to assist their work in determining her variable remuneration.
- Was engaged in the appointment of new subsidiary CCOs, ensuring their proper oversight and control, in coordination with the nomination committee.

Regulatory compliance

- Reviewed the Dodd Frank Title VII update, the Volcker Rule compliance programme, the status of data protection under the GDPR and the Corporate Defense Model.
- Reviewed and submitted to the board for approval amendments to the General Code of Conduct consistent with the corporate culture and new T.E.A.M.S. corporate behaviours.

Supervise the whistle-blowing channel (*Canal Abierto*)

- Reviewed, in a joint meeting with the audit committee, the annual report on *Canal Abierto*, the ethical channel that effectively promotes the Group's culture (Speak up) and a work environment where employees and other persons related to Banco Santander can talk straight and report irregular practices without fear of reprisal.

Financial crime compliance (FCC)

- Oversaw the Group's observance of FCC regulations as well as the activities carried out by the function to ensure the ongoing delivery of the Group's One FCC programme. In particular:
 - Was provided with quarterly updates on progress on the One FCC implementation strategy and progress in the Group, providing support to the board in the oversight of financial crime risks.
 - Reviewed the sanctions screening activity as part of the quarterly updates on One FCC, with a special focus on the sanctions imposed to Russia due the war in Ukraine.
- Received recommendations and observations stemming from the annual independent expert report on Banco Santander in accordance with Act 10/2010 and Royal Decree 304/2014 (on anti-money laundering and terrorism financing).

Product governance and consumer protection

- Checked on customer complaints and action plans to address identified deficiencies.
- Reviewed subsidiary action plans for internal sales force pay and conduct risk from the external sales force at a joint meeting with the remuneration committee.
- Reviewed risk management and the main risks identified, as well as on concerns, priorities and actions taken by the Product Governance and Consumer Protection area regarding the management and mitigation of conduct risk with retail and vulnerable customers.

**Duties****Actions taken****Capital and liquidity****Assist the board in reviewing and approving capital and liquidity strategies and supervising their implementation**

- Reviewed and reported to the board on the annual ICAAP run by the Finance division and challenged by the Risk function in accordance with industry best practices and supervisory guidelines.
- Reviewed a capital plan according to the scenarios envisaged over a three-year period.
- Reviewed and reported to the board on the ILAAP, which was challenged by the Risk function and developed in line with the Group's business model and its liquidity needs.
- Reviewed liquidity risk and liquidity levels of the Group and its subsidiaries.
- Continuously monitored capital levels, capital management and associated tools, the 2022 securitizations plan and the analysis of the portfolio profitability versus the risk undertaken.

Governance**Corporate governance and internal governance**

- Received quarterly updates on the matters discussed at the responsible banking, sustainability and culture committee by the chair of this committee. Furthermore, the CRO provided updates on the work of the risk control committee in his capacity as chair of that executive committee.
- Maintained close interaction and communication with the audit committee and reviewed in a joint session, internal auditing of the Risk and Compliance and Conduct areas, the Group's risk control environment assessment, and reports on risk model, FCC, risk culture, whistleblowing and third-party supplier risk management.
- Received reports from Santander España risk committee on the main items covered at its meetings to remained sighted on its activities.

Information for general meetings and corporate documents**Shareholder information**

- Was represented by Belén Romana in reporting at the 2022 AGM committee's activities in 2021.

Corporate documents for 2022

- Prepared this activities report which includes a performance review of the committee's functions and key priorities identified for 2023.

Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee considered the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see '[Board effectiveness review in 2022](#)' in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Oversaw the risks generated by the war in Ukraine, inflation, price volatility in energy and commodities, interest rates hikes, among other market dislocations, and in particular, the market risk and liquidity risk on the Group's and subsidiaries' credit portfolios.
- Oversaw the risks associated with certain strategic projects, especially those relating to model risk, financial crime and anti-money laundering prevention, cybersecurity and climate change.
- Supervised the main risks of the core business units, geographies and new businesses, with an additional focus on emerging businesses that are relevant to the Group's strategy.
- Prioritized oversight of the Group's top risks, impacts and mitigation actions to ensure risks were appropriately managed and would remain within the board-approved risk appetite limits.
- Examined emerging and non-traditional risks to anticipate changes in business strategy (as discussed at its strategy meetings held in February and June 2022).
- Maintained close coordination with the board and its committees to ensure that risks were closely controlled and mitigated. Continued work on the committee's effectiveness

to make sure it is discharging its duties with the utmost efficacy. In particular, the committee heightened its coordination with other committees to examine matters that concerned them holistically and promoted greater presence of the first line of defence.

2023 Priorities

The committee set the following priorities for 2023:

- Continue to monitor the macroeconomic conditions, especially the energy crisis, inflation, interest rates hikes and potential recession in certain countries, and the potential impact on the Group.
- Continue to oversee the risks associated with certain strategic projects, PagoNxt and DCB, especially those relating to financial crime and money laundering prevention, IT obsolescence, climate change and model risk.
- Continue to monitor the Group's top risks, early warning indicators and mitigation actions to effective management of risks and Group's risk profile within risk appetite.
- Continue to identify emerging and non-traditional risks in order to anticipate potential impacts on our business model. Those risks will be a topic of debate at the committee's strategic meetings, which follows up on its strategic meetings held since 2020.
- Continue to enhance coordination and information exchange with core units and divisions, with Group and subsidiary-level committee chairs taking part in each other's risk supervision, regulation and compliance committee meetings. In addition, hold a convention of all chairs of the risk supervision, regulation and compliance committees of Grupo Santander to discuss global initiatives, expectations and relevant issues.



- Monitor and oversee the transition of new CRO and ensure that his onboarding is robust and effective, enabling him to be truly effective in role.
- Remain focused on the overall effectiveness of the committee ensuring that its role is discharged in the most tangible and effective manner.

4.9 Responsible banking, sustainability and culture committee activities in 2022

'The committee continued to drive the responsible banking agenda, including sustainability strategy, by helping the board strive towards being a more responsible bank which will in turn strengthen our customer loyalty. This included ensuring that environmental, social and governance factors were truly embedded within the Group's strategy and culture.

We reviewed actions proposed to align with the Task force on Climate-related Financial Disclosure (TCFD) recommendations, including targets to reduce emissions in emission intensive sectors, decarbonization strategy and commitments. Sustainable finance and green finance remained key areas of focus. The committee monitored the unit's progress and the key initiatives to swiftly integrate green finance within risk management, climate stress testing, and the new risk appetite in our three-year strategic plan.

We oversaw core initiatives, targets and metrics that underpin Santander's focus on culture, ethics, equality, diversity, wellbeing and financial inclusion. We maintained focus on vulnerable customers, support for education and our communities, and sustainability data quality and ESG reporting (in coordination with the audit committee).

We benefited from our members' mix of expertise and skills. Each provided appropriate advice, challenge to management and support to the board. I would like to thank them for their invaluable contributions during the year'.

Ramiro Mato

Chair of the responsible banking, sustainability and culture committee

This section is the report the responsible banking, sustainability and culture committee prepared regarding its activities on 20 February 2023. The board of directors approved it on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Ramiro Mato	Independent	01/07/2018 ^A
	Homaira Akbari	Independent	01/07/2018
Members	Sol Daurella	Independent	01/07/2018
	Gina Díez Barroso	Independent	31/01/2023
	Belén Romana	Independent	01/07/2018
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 1 July 2018.

The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

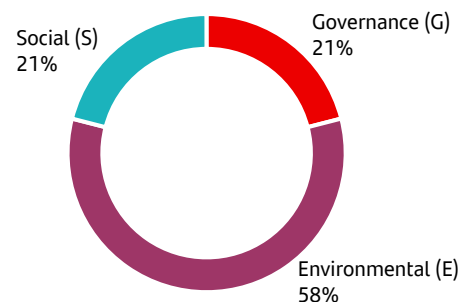
For more details, see section 4.1 'Our directors' and 'Board and committees skills and diversity matrix' in section 4.2.

Álvaro Cardoso stepped down as member of the committee on 1 April 2022 and Gina Díez Barroso was appointed to the committee on 31 January 2023.

Time allocation

In 2022, the responsible banking, sustainability and culture committee held five meetings. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:





Duties and activities in 2022

This section summarizes the responsible banking, sustainability and culture committee's activities in 2022.

Duties	Actions taken
Environmental (E)	
Portfolio alignment with Net Zero by 2050	<ul style="list-style-type: none"> Reviewed and provided input into the Group's climate change strategy, providing challenge to it to ensure that it remained a key enabler to achieve our ambition of net zero emissions by 2050. Reviewed three new decarbonization targets for 2030 in the energy, aviation and steel sectors. Monitored and assessed the Group's progress on its public commitments to ensure that its KPIs remained relevant and aligned with committee expectations. Reviewed climate projects and participation in the Net Zero Banking Alliance. Endorsed the priorities for 2022, such as aiding our customers' green transition and promoting a green culture. Reviewed actions proposed to align with the TCFD recommendations.
ESG in risk management	<ul style="list-style-type: none"> Reviewed the ECB's 2022 climate stress test and the feedback received from the supervisor. Analysed lessons learned and next steps in climate and environmental management. Reviewed ESG factors introduced in credit approval processes, action plans and accomplishments. Reviewed the risk appetite statement proposed to decarbonize the power generation credit portfolio.
Green Finance	<ul style="list-style-type: none"> Reviewed and discussed the status and key progress done, ambition and next steps of the Green Finance unit as well as its strategy, commitments, challenges and opportunities in retail and commercial bank and Santander Corporate & Investment Banking (SCIB). Checked on the status of the Green finance unit's initiatives on infrastructure, data, business projects, the market and considered the ambition to integrate green finance faster. Reviewed green bond issuances, annual disclosure requirements on the use of proceeds, and achievements from assigned projects. Reviewed and endorsed Santander Group Green, Social & Sustainability Funding Global Framework.
Biodiversity	<ul style="list-style-type: none"> Reviewed the biomass project to invest in a project to restore and conserve four million hectares of native forest in Brazil over the next 20 years.
Environmental Footprint	<ul style="list-style-type: none"> Reviewed the 2022 plan to offset emissions from its own activity and remain carbon neutral organization. Monitored the carbon footprint offsetting projects across the Group to fulfil public commitments.
Regulatory landscape	<ul style="list-style-type: none"> Reviewed relevant regulatory initiatives related to ESG sustainable finance in Europe which has evolved in recent years to maximize investment in transition to a low carbon economy by 2050 and increase transparency on business models and operations.
Social (S)	
Diversity, Equity and Inclusion	<ul style="list-style-type: none"> Reviewed diversity and inclusion strategy, initiatives and 2025 targets, and discussed the associated action plan for relevant dimensions of diversity, providing feedback and challenge on the same, as well as the Group's relative position in global rankings. Reviewed the talent management programme and employee wellbeing.
Customer financial wellbeing	<ul style="list-style-type: none"> Reviewed the vulnerable customers model and the guidelines for a common approach towards such customers, with awareness campaigns, fraud and over-indebtedness prevention, enhanced debt collection and mandatory training for our sales force. Reviewed a summary of initiatives developed in response to issues highlighted by elderly people in Spain, through campaigns like "Soy mayor, no soy idiota" ("I'm old, not stupid").
Financial inclusion and empowerment	<ul style="list-style-type: none"> Reviewed Santander's financial inclusion and empowerment approach to which each region and PagoNxt contributes. Discussed action plan to continue promoting financial inclusion and empowerment. Reviewed Santander Finance For All, our initiative to support financial inclusion and empowerment, and discussed its progress, targets and achievements through the access, finance and financial education lines of action. Considered opportunities to expand sustainable finance activities and financial inclusion activities.
Education and other support to communities	<ul style="list-style-type: none"> Reviewed strategy, targets and KPIs on support for education, employability and entrepreneurship at universities. Analysed the donation and contributions for social purposes, and in particular, reviewed the process to expedite the approval process of donations to help Ukrainians. Reviewed and endorsed responsible banking communications and the four key responsible banking communication pillars of diversity and inclusion, financial empowerment, climate change and Santander Universities.

**Duties****Actions taken****Governance (G)****Corporate governance**

- Worked with the remuneration and risk supervision, regulation and compliance committees to review corporate culture and values, responsible banking practices and sustainability.
- Reviewed, in coordination with the remuneration committee, a proposal for a responsible banking scorecard within the bonus pool qualitative assessment based and in the development of the long term incentives, key variable remuneration tools based on responsible banking targets, metrics and commitments.
- Endorsed the guiding principles of responsible banking governance for effective controls on sustainability and best practice in place to mitigate risks, including greenwashing, and harness opportunities.
- Reviewed the responsible banking progresses in the regions, units, global businesses and corporate areas on a regular basis to ensure good communication and best practices globally.
- Identified relevant ESG topics based on the outcomes of the ESG Materiality assessment, which the Responsible banking team conducts every year with other teams and an external consultant.
- Ensured that the proposed responsible banking agenda for 2022-2025 and commitments for 2025 remain aligned to Santander's strategy.
- Reviewed Banco Santander's global sustainability ratings, as well as its strengths, areas for improvement and focus points with ESG rating providers. Reviewed any resultant action plans after engaging with investors and NGOs on ESG matters.
- Checked with the remuneration committee that ESG-related metrics for senior management remuneration schemes conformed to market practice, shareholders' growing interests and corporate culture and Simple, Personal and Fair values.
- Assisted the board in ensuring that responsible banking objectives, metrics and commitments were embedded in the Group's remuneration schemes.

Culture, conduct and ethical behaviour

- Reviewed our *Canal Abierto* ethical channel, an anonymous way for employees and other persons related to Banco Santander to talk straight and report irregular practices without fear of reprisal in all Group units, in order to aid the Group's cultural transformation.
- Reviewed the findings of the new engagement survey ("Your Voice") and employee listening strategy.
- Reviewed the new T.E.A.M.S. corporate behaviours within our global culture, The Santander Way.

Policies and frameworks

- Reviewed the policies on environmental, social and climate change risk management, general sustainability, the defence sector and other responsible banking topics, ensuring that they remain up to date and effective.
- Reviewed the rationale for adding instruments to Santander global sustainable bonds framework based on best practices of the ESG funding market.
- Ensured that the new General Code of Conduct promotes the values, principles and commitments of Grupo Santander toward its employees, customers, vendors and society.
- Ensured that the corporate responsible banking framework, approved in 2021, was effectively embedded throughout the Group.

ESG reporting

- Supported the audit committee on the supervision and assessment of the preparation and presentation of non-financial information according to the applicable regulations and international standards.
- Reviewed the 2022 Group statement on non-financial information and, the independent expert's report. See the '[Responsible banking](#)' chapter.
- Reviewed the progress on responsible banking through specific KPIs to drive execution of the responsible banking agenda.
- Reviewed Santander's ESG requirements and plans to enhance Group reporting of our public commitments, with data collection in areas' BAU and systems, better controls and regular reporting and audit processes.
- Gave feedback on the key topics disclosed in Climate finance report, new targets for energy, metal and aviation sectors and an action plan for the power generation sector.
- Endorsed Banco Santander's 2021 Green Bond Report.

Information for general meetings and corporate documents**Shareholder information**

- Was represented by Ramiro Mato in reporting at the 2022 AGM committee's activities in 2021.

Corporate documents for 2022

- Prepared this activities report, which includes a performance review of the committee's functions and key priorities identified for 2023.



Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee considered the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see ['Board effectiveness review in 2022'](#) in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Assisted the board in monitoring climate change strategy and net zero carbon ambition for 2050, and continued to review risks and opportunities to develop sustainable finance proposals for a low-carbon economy. As part of that, the committee oversaw progress in relation to the implementation of the TCFD recommendations, including the introduction of targets to reduce emissions in certain climate-intensive sectors and the decarbonization strategy and commitments.
- Assisted the board in monitoring the development of green and sustainable finance propositions across the Group by monitoring unit's progress and their key initiatives.
- Assisted the board in monitoring the implementation of enablers to further embed ESG in the business and business-as-usual, including Banco Santander's performance of our responsible banking commitments and KPIs. Ensured that initiatives, targets and metrics were consistent with our commitments on diversity, equity and inclusion, financial inclusion and empowerment, vulnerability, talent management and ethical behaviour.
- Ensured that diversity and inclusion, The Santander Way, SPF values and T.E.A.M.S. corporate behaviours were being promoted throughout the Group; oversaw implementation of the associated strategic plans and monitored improvements in conduct, ethical behaviour, customer experience and satisfaction.
- Focused on ensuring the corporate responsible banking framework, approved in 2021, was effectively embedded throughout the Group.
- Oversaw the work undertaken with regulators on the stress test exercises, especially on climate risk.
- Monitored communications on the Group's achievements that built up a reputation as one of the world's most sustainable banks.

2023 Priorities

The committee set the following priorities for 2023:

- Continue to advise the board on the climate change strategy and our ambition to be net zero by 2050, monitoring the development of our green and sustainable finance proposition and customers' transition to a low-carbon economy.
- Oversee that actions and targets for climate material exposure and decarbonization strategy are consistent with the TCFD recommendations.
- Continue to assist the board in monitoring financial health and financial inclusion to foster the financial empowerment of the unbanked, underbanked and vulnerable customers.

- Review performance according on ESG analysts, addressing identified areas for improvement and specially focus on controversies and complaints received at Santander from customers or other stakeholders, to ensure root cause analysis and plan of actions are in place to remediate those.
- Provide support to the board in analysing and providing feedback on the ESG information for reporting, disclosure, and management purposes, in coordination with the audit committee.
- Remain focused on the overall effectiveness of the committee ensuring that its role is discharged in the most tangible and effective manner.

4.10 Innovation and technology committee activities in 2022

'The committee continued overseeing the overall role of technology in our business strategy with the aim of being the best open financial services platform. While monitoring execution of T&O vision, the committee has remained focused on ensuring that the strategy enables business initiatives by partnering with global businesses and supporting functions, reducing risks and improving cost efficiency.'

Cybersecurity and data strategy remained top priorities. We continued our work on moving towards a data-driven organization that embraces the use of data and advanced analytics in decision making while generating business value in a responsible way. The committee has covered cyber progress and our position, evolution of the key strategic cybersecurity pillars and initiatives, key trends and overall cyber threat landscape, including the challenges posed by the war in Ukraine.

An appropriate mix of members' skills, boosted by the appointment of Glenn Hutchins and Héctor Grisi, ensured that the committee remained well positioned to fulfil its responsibilities and operate effectively. I would like to take this opportunity welcome both Glenn and Héctor, and to thank R. Martín Chávez, who left the committee upon his resignation from the board, for his hard work, contributions and commitment.'

Ana Botín

Chair of the innovation and technology committee

This section is the report on the activities of the innovation and technology committee, as approved by the board of directors on 27 February 2023.

Composition

Position		Category	Appointed on
Chair	Ana Botín	Executive	23/04/2007 ^A
Members	José Antonio Álvarez	Other external	23/02/2015
	Homaira Akbari	Independent	27/09/2016
	Bruce Carnegie-Brown	Independent	23/02/2015
	Henrique de Castro	Independent	23/07/2019
	Héctor Grisi	Executive	01/01/2023
	Glenn Hutchins	Independent	20/12/2022
	Belén Romana	Independent	19/12/2017
Secretary	Jaime Pérez Renovales		

A. Committee Chair since 19 April 2022

The board of directors appointed the committee's members based on their expertise, skills and experience in the matters it handles.

For more details, see section 4.1 'Our directors' and 'Board and committees skills and diversity matrix' in section 4.2.

Ana Botín was appointed chair on 18 April 2022 replacing R. Martín Chávez who stepped down on the same date. Glenn Hutchins also joined the committee on 20 December 2022 and Héctor Grisi joined with effect from 1 January 2023.

Duties and activities in 2022

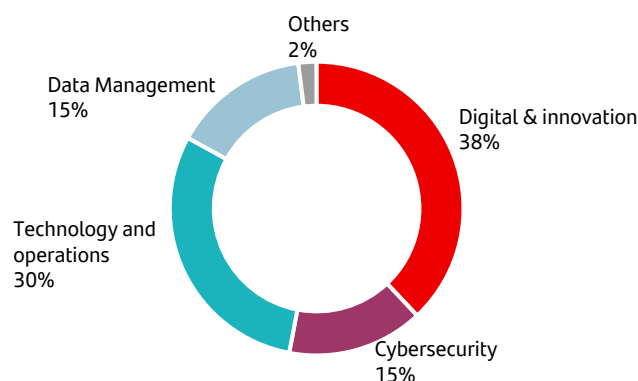
This section summarizes the innovation and technology committee's activities in 2022.

Duties	Actions taken
Digital & innovation	
Digital	<ul style="list-style-type: none"> • Boosted collaboration between subsidiaries, business units and the Technology and Operations (T&O) function on the different digital initiatives, overseeing their execution. • Monitored metrics in connection with the digital evolution and associated transformation, such as operations outflows, cost-to-income ratio, number of applications, cost per transaction, digital technical transaction, machine learning impact, number of application programming interfaces (BaaS APIs) and tech talent. • Reviewed core digital strategies to transform business and accelerate new businesses growth.
Innovation framework	<ul style="list-style-type: none"> • Reviewed the implementation of the Group's innovation agenda leveraging on our digital and data management capabilities. • Identified the Group's challenges and capabilities to increase end-to-end business agile transformation. • Identified new opportunities for accelerated innovation across the Group and increased the likelihood of success in new business models, technologies, systems and platforms.
Technology and operations	
Technology and operations	<ul style="list-style-type: none"> • Reviewed the global technology strategy plan, reported to the board on T&O planning and activities and ensured that T&O strategy was properly focused on the Group's relevant priorities. • Endorsed the Group's core strategic technology priorities to integrate key digital capabilities, leveraging five pillars: agile, cloud, core systems evolution, artificial intelligence and deep technology related skills and data. • Reviewed the strategy supported by a new operating model based on global products and a common architecture. • Assisted the board in supervising technological risks.

Time allocation

In 2022, the innovation and technology committee held three meetings. See 'Board and committee preparation and attendance' in section 4.3 for members' attendance and the estimated average time each one spent on meeting preparation and attendance.

The chart below shows the committee's approximate time allocation in 2022:



**Duties****Actions taken****Cybersecurity****Cybersecurity**

- Supervised defences against increasing threats and reviewed security controls and automated security processes.
- Analysed high-profile cyber incidents in Banco Santander and specific incidents outside the Group according to their relevance and impact, as appropriate.
- Monitored closely global cybersecurity and its associated impacts due to the Ukraine war that dominated the cyber threat landscape.
- Received regular updates on cybersecurity risks, with a special focus on exercises of crisis simulation, internal data leakage protection and such external threats as ransomware, in coordination with the risk supervision, regulation and compliance committee. Assisted the board in the supervision of cybersecurity risks.
- Reviewed the progress of Santander's cyber vision for 2025, the cyber strategy defined in 2021, focusing on the analysis of trends, protection techniques and responses and cyber solutions for our customers and stakeholders.
- Reviewed employee training, internal and external cyber awareness campaigns and other initiatives.
- Reviewed the annual external cybersecurity assessment, including the three lines of defense, performed by an external independent company on cyber threats, cybersecurity status and associated plans.

Data management**Data management**

- Reviewed the Models & Data unit's priorities for the year to stay fully apprised on the models and data value chain to ensure their contribution to the improvement of business growth and customer experience, risk control improvement, data model development and ethical necessary principles for the proper use of the artificial intelligence within the information management.
- Assessed the adequacy of the resources of the Data function, validating their appropriateness and effectiveness for the Group and its subsidiaries.

Information for general meetings and corporate documents**Corporate documents for 2022**

- Prepared this activities report, which includes a performance review of the committee's functions and key priorities identified for 2023.

Annual assessment of the committee

The 2022 internal board effectiveness review covered the committee's effectiveness. The committee will consider the findings and suggested areas for improvement resulting from the review and related to its remit. For more details, see ['Board effectiveness review in 2022'](#) in section 4.3.

Achievement of 2022 objectives

The committee took these actions planned for 2022:

- Continuously reviewed the Group's innovation strategy, especially in regard to a business-oriented T&O transformation model, maintaining its focus on trends arising from new business models, technology and products.
- Reviewed and discussed data management trends and regulations and analytical capabilities in the Group's businesses, based amongst others on the international advisory board's feedback, to ensure appropriate effectiveness and capabilities to support the Group's strategic priorities.
- Continued to strengthen the response and innovation strategies to react to an environment of ever-changing threats, including the challenges posed in terms of cyber by the war in Ukraine.
- Prioritized digital strategy through the implementation of multidisciplinary projects for the Group, assessing initiatives, targets, commitments, KPIs and proposed metrics on cross-projects evidencing such strategy.

2023 Priorities

The committee set the following priorities for 2023:

- Support the board on the Group innovation strategy, facing the trends resulting from new business models, technologies and products.
- Continue to review the effectiveness of data management and analytics as enablers for the Group to fulfil strategic priorities.
- Continue strengthening the Group's cybersecurity and fraud ecosystems while creating additional commercial value and service for clients.
- Continue to assess and provide suggestions on initiatives, targets, commitments, KPIs and proposed metrics on cross-cutting projects that conformed the Group's digital strategy.
- Remain focused on the overall effectiveness of the committee ensuring that its role is discharged in the most tangible and effective manner.



4.11 International advisory board

Composition

Position	Background	
Chair	Larry Summers	Former Secretary of the US Treasury and President Emeritus and Charles W. Eliot University Professor of Harvard University
	Sheila C. Bair	Former chair of the Federal Deposit Insurance Corporation and former president of Washington College
	Mike Rhodin	Supervisory board member of TomTom and director of HzO. Former IBM Watson senior vice president
	Francisco D'Souza	Managing Partner and co-founder at Recognize
	James Whitehurst	Senior Advisor at IBM and former Chief Executive Officer of Red Hat
Members	George Kurtz	CEO and co-founder of CrowdStrike. Former Chief Technology Officer of McAfee
	Nadia Schadlow	Former Deputy National Security Advisor for Strategy and former Assistant to the President of the United States
	Andreas Dombret	Former board member of Deutsche Bundesbank, Supervisory Board of the ECB former vice chair of Bank of America in Europe and former director of Bank for International Settlements
Secretary	Jaime Pérez Renovales	

Functions

Since 2016, Banco Santander's international advisory board has provided the Group with expert insight into innovation, digital transformation, cybersecurity, new technologies, capital markets, corporate governance, branding, reputation, regulation and compliance.

Its members are external and not members of the board. They are prominent and respected leaders who have extensive experience in the most relevant areas for the strategy of the Group, particularly in terms of innovation, digital transformation and the US and European markets.

Meetings

The international advisory board meets at least twice a year. In 2022, it met in May and October. It addressed such topics as simplifying the value proposition for consumers/ individuals with a new customer relationship model and an open efficient operating platform; data management strategy and intra-group data sharing; value-added cybersecurity and anti-fraud services for individuals and SMEs; and crypto strategy, web3 trends and applicable digital wallets.

4.12 Related-party transactions and other conflicts of interest

Related-party transactions

This section contains the related-party transactions report referred to in the recommendation six of the Spanish Corporate Governance Code, that the audit committee prepared on 17 February 2023.

Directors, senior managers and shareholders

Pursuant to the Rules and regulations of the board, a transaction that Banco Santander or its subsidiaries make with directors, shareholders who hold at least 10% of voting rights or sit on the board, and parties considered "related parties" under the International Financial Reporting Standards must be authorized:

- In the general meeting if it is worth 10% or more of assets on the last consolidated balance sheet; or
- By the board of directors in all other cases. Nonetheless, according to relevant rules and on the audit committee's recommendation, the board delegated authority to executive bodies, committees and competent proxies to approve related-party transactions if they:
 - are carried out under agreements with standard terms that would generally apply to customers who contract for the same product or service;
 - are made at prices or rates set by the supplier of such products or service or, where such products or service have no existing prices or rates, under regular market conditions as in business relations with similar customers; and
 - do not exceed 0.5% of the net annual income as stated in the last consolidated financial statements to have been approved at the general meeting.

The board approved an internal reporting and monitoring procedure in which the audit committee confirms twice a year that transactions authorized with delegated board powers are fair and transparent and meet the above-mentioned requirements.

The board also has an internal approval mechanism for non-banking and other transactions that do not meet the delegation requirements. It sets out minimum transaction terms and conditions in order to protect corporate and shareholder interests.

The board and audit committee check that transactions with related parties are fair and reasonable to Banco Santander and to the other shareholders.

If a related-party transaction must be approved at the general meeting or by the board, the law says that audit committee must issue a preliminary report about it. However, the law does not require the report for related-party transactions if they are approved under the board's delegated authority and meet the audit committee's requirements.

Board members must recuse themselves from all deliberations and votes on resolutions about a related-party transaction if they have a conflict of interest with it.

In 2022, the audit committee found that no director or related party, in the terms of International Financial Reporting Standards, carried out transactions deemed "significant" or material to Santander and the related party, or under non-market conditions.

The audit committee confirmed that all related-party transactions in 2022 had been performed correctly after conducting a bi-annual review on their conformity to the law,



the Rules and regulations of the board and the conditions set by board resolution, and met the requirements to be considered fair, reasonable and under market conditions (see the audit committee activities report under section [4.5 'Audit committee activities in 2022'](#)).

Banco Santander has a policy for the admission, authorisation and monitoring of financing transactions to directors and senior managers as well as to their spouse (or similar partner), a child who is a minor or legal adult and their financial dependent, or a company controlled by a director or a senior manager whose business is to hold assets for the sole purpose of managing their personal or family wealth. The policy also sets out general maximum borrowing rules, interest rates and other conditions that apply to related-party transactions, that are the same for all other employees. It dictates that the board must authorize loans, credit facilities and guarantees extended to Banco Santander's directors and senior managers, and, except the cases listed below, subsequently by the ECB:

- transactions guaranteed in a collective agreement signed by Banco Santander, with similar terms and conditions to transactions with any employee; or
- transactions made under agreements with standard conditions that generally apply to a large number of customers, if the amount granted to the beneficiary or their related parties does not exceed EUR 200,000.

Note [5.f 'Loans'](#) to the consolidated financial statements describes the direct risk Grupo Santander maintained with board members as of 31 December 2022. Those transactions are consistent with market conditions, have the same terms and conditions as transactions with employees, and allocate payments in kind where appropriate.

No Banco Santander shareholder holds 10% or more of voting rights or has a sit on the board.

Intra-group transactions

The law does not consider direct or indirect transactions with a wholly-owned subsidiary or investee to be "related-party" if no party related to Banco Santander holds an interest in it. To this end, Santander monitors subsidiaries or investees' observance of these rules if they can be affected by related-party transactions. Intragroup transactions have the same rules, approval competent bodies and procedures as transactions with customers, with mechanisms to ensure that they are effected under market conditions.

Note [52 'Related parties'](#) to the consolidated financial statements and note [47 'Related parties'](#) to the individual financial statements state the balance of transactions with subsidiaries, affiliates, jointly-owned entities, directors, senior managers and related parties.

Other conflicts of interest

Banco Santander has rules and procedures for preventing and managing conflicts of interest that can arise from operations or with directors and senior managers. We also have an internal policy for Group employees, directors and entities on preventing and managing conflicts of interest.

Directors and senior managers

Our directors must adopt necessary measures to avoid situations in which their direct or indirect interests may enter

into conflict with corporate interests or their duty towards Banco Santander.

Directors must refrain from using Banco Santander's name or their position to exert undue influence on private transactions; using corporate assets for private purposes; using business opportunities for personal gain; obtaining favours or remuneration from others for being directors; and engaging in activities for themselves or others that will put them and Banco Santander in competition or permanent conflict.

Directors must report to the board conflicts of interest that they or their related parties may have with Banco Santander, which are to be disclosed in the financial statements. The nomination committee verifies compliance with the rules set from time to time to avoid conflicts of interest in other roles held by directors.

In 2022, no director reported a conflict of interest with Santander. Nonetheless, there were 28 abstentions in votes on matters deliberated at board and committee meetings, including 10 instances where directors did not vote on resolutions on nominations, re-elections or board committee assignments; five instances concerning remuneration; four instances relating to a transaction between Banco Santander and a director or a company related to a director; and nine instances where directors removed themselves during the review of their status and suitability.

The Code of conduct in security markets (CCSM), which directors and senior managers follow, provides mechanisms to recognize and resolve conflicts of interest. It also dictates that directors and senior managers must provide the Compliance & Conduct area with a statement on their relations, and they must keep it up to date.

They must also disclose any matter that could put them in a conflict of interest because of their ties or otherwise, and the chief officer of their area will resolve it. Conflicts that involve several areas must be resolved by their common senior officer. In other cases, the Compliance & Conduct area should be consulted.

The CCSM also dictates that directors, senior managers and related parties should not trade Grupo Santander's securities within 30 days either from the time they are bought or sold or before the quarterly, half-year or annual results are announced and published.

The CCSM can be found on our corporate website.

Group companies

Banco Santander is the Group's only company listed in Spain, where it's not required to have mechanisms in place to resolve conflicts of interest with a listed subsidiary.

In a conflict of interest with a listed subsidiary, Banco Santander, as the parent company, must consider the interests of all its subsidiaries and how they suit the long-term interests of the Group. Subsidiaries should also consider the interests of Grupo Santander and assess the effect of their actions on the Group.

The Group structures governance on a system of rules that guarantees regulation on governance as well as proper oversight over subsidiaries (see section [7. 'Group structure and internal governance'](#)).

5. Management team

The table below shows the profiles of Banco Santander's Senior Executive Vice President. It does not include executive directors, whose profiles are described in section [4.1 'Our directors'](#)

Alexandra Brandão	GLOBAL HEAD OF HUMAN RESOURCES	Born in 1978, Alexandra Brandão joined Grupo Santander in 2003 as head of Products and Services for Individuals at Santander Totta. She was global head of Knowledge and Development at the Grupo Santander Corporate Centre from 2012 to 2016; head of Human Resources from 2016 to 2018; and head of Commercial Management and Segments at Santander Portugal from 2019 to 2020. In 2021, she was appointed global head of Human Resources.
Juan Manuel Cendoya	GROUP HEAD OF COMMUNICATIONS, CORPORATE MARKETING AND RESEARCH	Born in 1967, Juan Manuel Cendoya joined Grupo Santander in 2001 as Group Senior Executive Vice President and head of the Communications, Corporate Marketing and Research division. In 2016, he was appointed Vice Chair of the board of directors and head of Institutional and Media Relations of Santander España. Previously, he had been head of the Legal and Tax department of Bankinter, S.A. He is also a state attorney.
José Doncel	GROUP CHIEF ACCOUNTING OFFICER	Born in 1961, José Doncel joined Grupo Santander in 1989 as head of Accounting. He had also served as head of Accounting and Financial Management at Banesto (1994-2013). He was appointed Senior Executive Vice President and head of the Internal Audit division in 2013 and Group Chief Accounting Officer in 2014.
Mahesh Aditya (*)	GROUP CHIEF RISK OFFICER	Born in 1962, Mahesh Aditya joined Grupo Santander in 2017 as Chief Operating Officer of Santander Holdings USA. He became Chief Risk Officer in 2018 and Chief Executive Officer of Santander Consumer USA in 2019. Previously, he had been Chief Risk Officer at Visa and Chief Risk Officer of Retail & Mortgage Banking at JP Morgan, Capital One and Citibank.
José Antonio García Cantera	GROUP CHIEF FINANCIAL OFFICER	Born in 1966, José Antonio García joined Grupo Santander in 2003 as Senior Executive Vice President of Global Wholesale Banking of Banesto and in 2006, he was appointed Chief Executive Officer. Previously, he had served on the executive committee of Citigroup EMEA, as well as on the board of directors of Citigroup Capital Markets Int, Ltd. and Citigroup Capital Markets UK. In 2012, he was appointed Senior Executive Vice President of Global Corporate Banking before becoming Group Chief Financial Officer in 2015.
Juan Guitard	GROUP CHIEF AUDIT EXECUTIVE	Born in 1960, Juan Guitard joined Grupo Santander in 1997 as head of Human Resources at Santander Investment, S.A. and he had been general counsel and secretary of the board of Santander Investment, S.A. and Banco Santander de Negocios, S.A. In 2002, he was appointed vice secretary general of Banco Santander. In 2013, he was head of Banco Santander's Risk division. In 2014, he was appointed Group Chief Audit Executive. He is also a state attorney.
José María Linares	GLOBAL HEAD OF CORPORATE & INVESTMENT BANKING	Born in 1971, José María Linares joined Grupo Santander in 2017 as Senior Executive Vice President and global head of Corporate and Investment Banking. Previously, he served as an equity analyst at Morgan Stanley & Co. (1993-1994). He worked as Senior Vice President and senior equity analyst at Oppenheimer & Co. (1994-1997), as well as director and senior equity analyst at Société Générale (1997-1999). He joined J.P. Morgan in 1999 and was subsequently appointed managing director and head of Global Corporate Banking at J.P. Morgan Chase & Co. (2011-2017).

(*) Pending regulatory authorization. Replaces Keiran Foad.



Mónica López-Monís	GROUP HEAD OF SUPERVISORY AND REGULATORY RELATIONS	Born in 1969, Mónica López-Monís joined Grupo Santander in 2009 as general counsel and secretary of the board of Banesto. Previously, she had been general counsel at Aldeasa, S.A. She also was general counsel at Bankinter, S.A., as well as independent director at Abertis Infraestructuras, S.A. In 2015, she was appointed Senior Executive Vice President of Banco Santander and Group Chief Compliance Officer until her appointment in 2019 as group head of Supervisory and Regulatory Relations. She is also a state attorney.
Dirk Marzluf	GROUP HEAD OF TECHNOLOGY AND OPERATIONS	Born in 1970, Dirk Marzluf joined Grupo Santander in 2018 as Senior Executive Vice President and head of IT and Operations. Previously, he had served as CIO at AXA Group since 2013, leading the insurance group's technology and information security transformation and co-sponsoring its digital strategy. He also held global senior management roles at Accenture, Daimler Chrysler and Winterthur Group.
Víctor Matarranz	GLOBAL HEAD OF WEALTH MANAGEMENT & INSURANCE	Born in 1976, Víctor Matarranz joined Grupo Santander in 2012 as head of Strategy and Innovation at Santander UK. In 2014, he was appointed Senior Executive Vice President and head of the Executive Chairman's Office and Strategy until his appointment in 2017 as global head of Wealth Management & Insurance. Previously, he held several management roles at McKinsey & Company, where he had become partner.
José Luis de Mora	GROUP HEAD OF STRATEGY & CORPORATE DEVELOPMENT, FINANCIAL PLANNING AND SANTANDER CONSUMER FINANCE	Born in 1966, José Luis de Mora joined Grupo Santander in 2003 to head the Group's Strategic Plan Development and Acquisitions. In 2015, he was appointed Group Senior Executive Vice President and Group head of Financial Planning and Corporate Development. He has been head of Strategy since 2019 and head and CEO of Santander Consumer Finance since 2020.
Jaime Pérez Renovales	GROUP HEAD OF GENERAL SECRETARIAT	See profile in section 4.1 'Our directors' .
António Simões	REGIONAL HEAD OF EUROPE	Born in 1975, António Simões joined Grupo Santander in 2020 as regional head of Europe and was country head of Santander España from 2021 to 2022. He was previously at HSBC, where he held roles including Chief Executive Officer of Global Private Banking, member of the group management board and group executive committee, and chief executive of HSBC Bank PLC and chief executive of Europe, encompassing all UK and European operations for HSBC Group.
Marjolein van Hellemond-Gerdingh	GROUP CHIEF COMPLIANCE OFFICER	Born in 1964, Marjolein van Hellemond-Gerdingh joined Grupo Santander in 2019 as Senior Executive Vice President and Chief Compliance Officer. Previously, she had been Chief Compliance Officer of several banking and financial entities such as NN Group, Zurich Insurance Company and De Lage Landen International B.V.



6. Remuneration

Sections [6.1](#), [6.2](#), [6.3](#), [6.5](#), [6.6](#), [6.7](#), [9.4](#) and [9.5](#) comprise the annual report on directors' remuneration that must be prepared and submitted to the consultative vote of the general shareholders' meeting.

In addition, sections [6.4](#) and [6.5](#) sets out the directors' remuneration policy for 2023, 2024 and 2025, which is to be put to a vote at the general shareholders' meeting, which is binding.

The annual report on directors' remuneration and the directors' remuneration policy for 2023, 2024 and 2025 were approved by our board of directors on 27 February 2023. All directors were present at the time of vote casting and voted in favour.

The remuneration policy for directors in force as of the date of this report is available on our corporate website.

6.1 Principles of the remuneration policy

Directors' remuneration in their capacity as such

The board of directors sets the individual remuneration of directors (including executive directors) for the performance of supervisory and collective decision-making duties within the amount fixed by shareholders and commensurately with the roles they perform on the collective decision-making body, their committee membership and attendance, and other objective circumstances the board might consider.

Remuneration of directors for executive duties

Banco Santander's remuneration policy for executive duties (which also generally applies to Banco Santander employees) dictates that:

1. Remuneration must be in line with shareholders' interests, conducive to creating long-term value and compatible with our rigorous risk management, long-term strategy and values.
2. Fixed remuneration must make up a significant proportion of total compensation.
3. Variable remuneration must reward individuals for their role in achieving set goals within the framework of prudent risk management.
4. The global remuneration package and its structure must be competitive in order to attract and retain talent.
5. Remuneration decisions must be free of conflicts of interest and discrimination of any kind different from that based on the performance assessment of objectives and corporate behaviours. Remuneration must be free of gender-based bias and help eliminate inequalities that could result from it.

The remuneration elements the policy lays down include necessary mechanisms to ensure remuneration will be conducive to achieving strategic and long-term sustainability objectives of the Bank.

Accordingly, it bases executive directors and senior managers' variable pay on pre-determined, specific and quantifiable financial, sustainability-based and value-creation targets that are consistent with Banco Santander's interests, including in regard to environmental, social and governance matters.

For more details, see section 6.3 about the policy's application in 2022 and section 6.4 about the remuneration policy for 2023 and subsequent years.

Lastly, the remuneration committee and the board enlisted the assistance of Willis Towers Watson to:

- Compare markets and entities similar to the Group in size, characteristics and operations using relevant data for setting remuneration.
- Analyse and confirm compliance with certain quantitative metrics required to evaluate accomplishment of objectives.
- Estimate the fair value of variable remuneration linked to long-term objectives.

6.2 Remuneration of directors for supervisory and collective decision-making duties: policy applied in 2022

A. Composition and limits

According to our Bylaws, the remuneration of directors in their roles consists of a fixed annual amount set at the general shareholders' meeting. This amount remains in effect until shareholders vote to amend it, even though the board may reduce it in the years it deems appropriate. At the annual general shareholders' meeting, remuneration for 2022 was set at EUR 6 million, which included (a) annual allotment and (b) attendance fees.

Santander has taken out a civil liability insurance policy for directors subject to usual terms proportionate to its circumstances.

Directors can receive shares, share options or other forms of share-based compensation, subject to prior approval at the general meeting. Directors can also receive other compensation following a proposal made by the remuneration committee and upon resolution by the board of directors, as may be deemed appropriate, in consideration for the performance of other duties in Banco Santander, whether they are executives duties or not, in addition to their oversight and collective decision-making as board members.



Non-executive directors do not have the right to receive any benefit on the occasion of their removal from office.

B. Annual allotment

Each director received the amounts for serving on the board and its committees and positions held in them included in the chart below for 2021 and 2022.

In accordance with the remuneration policy approved at the general shareholders' meeting on 1 April 2022, the amounts for serving and holding roles on the board and committees was the same amount as initially approved for 2021, with the exception of the yearly amount for serving on the board of directors, which was modified from 90,000 euros to 95,000 euros. Applicable amounts were:

Amount per director in euros	2022	2021
Members of the board of directors	95,000	90,000
Members of the executive committee	170,000	170,000
Members of the audit committee	40,000	40,000
Members of the nomination committee	25,000	25,000
Members of the remuneration committee	25,000	25,000
Members of the risk supervision, regulation and compliance committee	40,000	40,000
Members of the responsible banking, sustainability and culture committee	15,000	15,000
Members of the innovation and technology committee	25,000	25,000
Chair of the audit committee	70,000	70,000
Chair of the nomination committee	50,000	50,000
Chair of the remuneration committee	50,000	50,000
Chair of the risk supervision, regulation and compliance committee	70,000	70,000
Chair of the responsible banking, sustainability and culture committee	50,000	50,000
Chair of the innovation and technology committee	70,000	70,000
Lead independent director ^A	110,000	110,000
Non-executive Vice Chair	30,000	30,000

A. Since 2015, Bruce Carnegie-Brown has been allocated EUR 700,000 in minimum total annual pay (including annual allowances and attendance fees) for his services to the board and its committees, particularly as Chair of the nomination and remuneration committees and as lead independent director; and for the required time and dedication to perform these roles.

C. Attendance fees

Pursuant to resolutions approved by the board on the remuneration committee's recommendations, attendance fees for board and committees meetings (with the exception of the executive committee, for which no fees are set) totalled the amounts included in the chart below for the last two years.

For 2022, the board voted to keep the same amounts set out in the 2021 policy.

Attendance fees per director per meeting in euros	2022	2021
Board of directors	2,600	2,600
Audit committee and risk supervision, regulation and compliance committee	1,700	1,700
Other committees (excluding executive committee)	1,500	1,500



D. Breakdown of Bylaw-stipulated emoluments

Total director Bylaw-stipulated emoluments and attendance fees received in 2022 amounted to EUR 4.7 million (EUR 4.8 million in 2021). This is 22% less than the amount approved at the general meeting. Each director earned the following amounts for these items:

Directors	Execu- tive	Non- execu- tive	Amount in euros										Board and committee attendance fees	Total By-law stipulated emoluments and attendance fees	2021	
			2022													
			Annual allotment													
Board ^F	EC	AC	NC	RC	RSRCC	RBSCC	ITC	Total								
Ana Botín		—	95,000	170,000	—	—	—	—	—	—	—	74,000	339,000	40,900	379,900	330,000
José Antonio Álvarez		—	95,000	170,000	—	—	—	—	—	—	—	25,000	290,000	39,400	329,400	330,000
Bruce Carnegie-Brown		I	279,600	170,000	—	75,000	75,000	—	—	—	—	25,000	624,600	75,400	700,000	700,000
Homaira Akbari		I	95,000	—	40,000	—	—	—	—	—	15,000	25,000	175,000	68,800	243,800	247,800
Javier Botín ^A		N	95,000	—	—	—	—	—	—	—	—	—	95,000	33,800	128,800	129,000
Álvaro Cardoso ^B		I	24,010	—	—	—	—	—	—	—	3,791	—	27,801	10,800	38,601	182,100
R. Martijn Chávez ^C		I	47,500	—	—	12,500	7,569	10,778	—	—	—	28,500	106,847	39,600	146,447	374,400
Sol Daurella		I	95,000	—	—	25,000	25,000	—	—	15,000	—	—	160,000	69,800	229,800	239,000
Henrique de Castro		I	95,000	—	40,000	—	25,000	—	—	—	—	25,000	185,000	76,100	261,100	266,800
Gina Díez Barroso		I	95,000	—	—	25,000	—	—	—	—	—	—	120,000	51,800	171,800	129,685
Luis Isasi		N	95,000	170,000	—	—	25,000	40,000	—	—	—	—	330,000	81,600	411,600	406,000
Ramiro Mato		I	95,000	170,000	40,000	—	—	40,000	65,000	—	—	—	410,000	89,800	499,800	498,900
Sergio Rial		N	95,000	—	—	—	—	—	—	—	—	—	95,000	36,400	131,400	129,000
Belén Romana		I	95,000	170,000	40,000	—	—	110,000	15,000	25,000	—	—	455,000	94,300	549,300	532,400
Pamela Walkden		I	95,000	—	110,000	—	—	40,000	—	—	—	—	245,000	78,000	323,000	303,067
Germán de la Fuente ^D		I	65,972	—	31,111	—	—	—	—	—	—	—	97,083	39,600	136,683	—
Glenn Hutchins ^E		I	3,123	—	—	822	822	—	—	—	—	822	5,589	4,100	9,689	—
			1,560,206	1,020,000	301,111	138,322	158,391	240,778	113,791	228,322	228,322	3,760,921	930,200	4,691,121	4,798,152	

A. All amounts received were reimbursed to Fundación Botín.

B. Stepped down as director on 1 April 2022.

C. Stepped down as director on 1 July 2022.

D. Director since 1 April 2022.

E. Director since 20 December 2022.

F. Also includes emoluments for other roles in the board.

P: Proprietary I: Independent N: Non-external (neither proprietary nor independent).

EC: executive committee AC: audit committee NC: nomination committee RC: remuneration committee

RSRCC: risk supervision, regulation and compliance committee. RBSCC: responsible Banking, sustainability and culture committee. ITC: innovation and technology committee.



6.3 Remuneration of directors for executive duties

The policy on directors' remuneration for executive duties in 2022 was approved by the board of directors and put to a binding vote at the 2022 general shareholders' meeting, with 93.83% votes in favour. The table below summarizes the remuneration policy of Ana Botín and José Antonio Álvarez.

Component	Type	Policy	Effective in 2022
Gross annual salary	Fixed	<ul style="list-style-type: none"> • Paid in cash on a monthly basis. 	<ul style="list-style-type: none"> • Ana Botín: EUR 3,176 thousand. • José Antonio Álvarez: EUR 2,541 thousand.
Variable remuneration	Variable	<ul style="list-style-type: none"> • Individual benchmark reference. • Calculated against annual quantitative metrics and a qualitative assessment on account of individual performance. • 50% of each payment is instruments, consisting of Banco Santander, S.A shares, Banco Santander, S.A. share options and restricted stock units (RSUs) of PagoNxt, S.A., split as: <ul style="list-style-type: none"> ◦ the amount of PagoNxt RSUs set for each year; and ◦ the rest, shares and share options in equal parts, unless the director chooses to receive options only. • The number of instruments is set at the time of the award. • 40% paid in 2023; • 60% deferred in five years. <ul style="list-style-type: none"> ◦ 24% paid in equal parts in 2024 and 2025. ◦ 36% paid in equal parts in 2026, 2027 and 2028, provided certain long-term objectives are met (2022-2024). 	<ul style="list-style-type: none"> • See section 6.3 B ii for details on annual metrics and assessment. • See section 6.3 B iv for details on long-term metrics. • See section 6.3 B iii for details on individual variable pay.
Pension scheme	Fixed	<ul style="list-style-type: none"> • Annual contribution of 22% of base salary. 	<ul style="list-style-type: none"> • No change since 2018
	Variable	<ul style="list-style-type: none"> • Annual contribution of 22% of 30% of the average of variable remuneration in the last three years 	<ul style="list-style-type: none"> • See section 6.3 C for details on annual contributions and pension balance.
Other remuneration	Fixed	<ul style="list-style-type: none"> • Includes life, accident and medical insurance, and other in-kind compensation. • Includes a fixed remuneration supplement in cash (not considered salary or pensionable) since supplementary death and disability benefits were eliminated. 	<ul style="list-style-type: none"> • No change for Ana Botín or José Antonio Álvarez since 2018.
		<ul style="list-style-type: none"> • Payment for non-compete commitment 	<ul style="list-style-type: none"> • No change.
Shareholding policy	N/A	<ul style="list-style-type: none"> • Executive directors also have the obligation to hold them for three years from their award date, unless the director already holds shares for an amount equivalent to 200% of their net annual salary (calculated on the basis of their gross annual salary). In such case, the regulatory obligation to hold shares is for one year from their grant date. And share options shall not be exercisable until one year after their delivery. 	<ul style="list-style-type: none"> • Policy updated during 2020 to assure compliance with recommendation 62 to the Good Governance Code for Listed Companies of the CNMV. Ana Botín and José Antonio Álvarez both maintain an amount in shares higher than 200% of their fixed pay.

A. Gross annual salary

The board resolved to maintain the same gross annual salary for Ana Botín and José Antonio Álvarez for 2022 as in 2021.

It also maintained the fixed pension contribution of 22% of gross annual salary it had agreed in 2021 for 2022.

Executive directors' gross annual salary and fixed annual contribution to pensions for 2022 and 2021 were as follows:

EUR thousand	2022			2021		
	Gross annual salary	Fixed annual pension contribution	Total	Gross annual salary	Fixed annual pension contribution	Total
Ana Botín	3,176	699	3,875	3,176	699	3,875
José Antonio Álvarez	2,541	559	3,100	2,541	559	3,100
Total	5,717	1,258	6,975	5,717	1,258	6,975

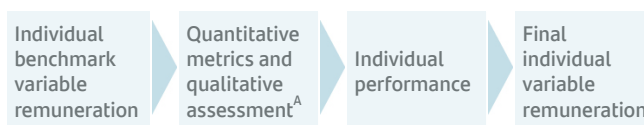


B. Variable remuneration

i) General policy for 2022

The board approved the executive directors' variable remuneration on the remuneration committee's recommendation, according to the policy approved at the general shareholders' meeting:

- Variable components¹ (including the variable part of the contributions to the benefit systems) of executive directors' total remuneration in 2022 should amount to less than 200% of fixed components, as established by resolution of the general shareholders' meeting on 1 April 2022.
- At the beginning of 2023, on the remuneration committee's recommendation, the board approved the final amount of the 2022 incentive, based on the set bonus pool in accordance with the directors' remuneration policy approved at the general shareholders' meeting on 1 April 2022, in consideration of:
 - Short-term quantitative metrics measured against annual objectives.
 - A qualitative assessment that cannot adjust the quantitative result by more than 25 percentage points upwards or downwards.
 - Any exceptional adjustment that must be supported by evidence.
 - The final figure is adjusted to executive directors' individual variable remuneration benchmark according to the current model and (i) their individual objectives (which generally match the Group's and cover financial, risk management and solvency position, as well as fostering the global initiatives PagoNxt and Digital Consumer Bank, and accelerating the transformation of the Bank into One Santander, with a special focus on IT, people and the responsible banking agenda); and (ii) how they achieve them in consideration of how they manage employees and follow the corporate values.



A. Any exceptional adjustment supported by evidence

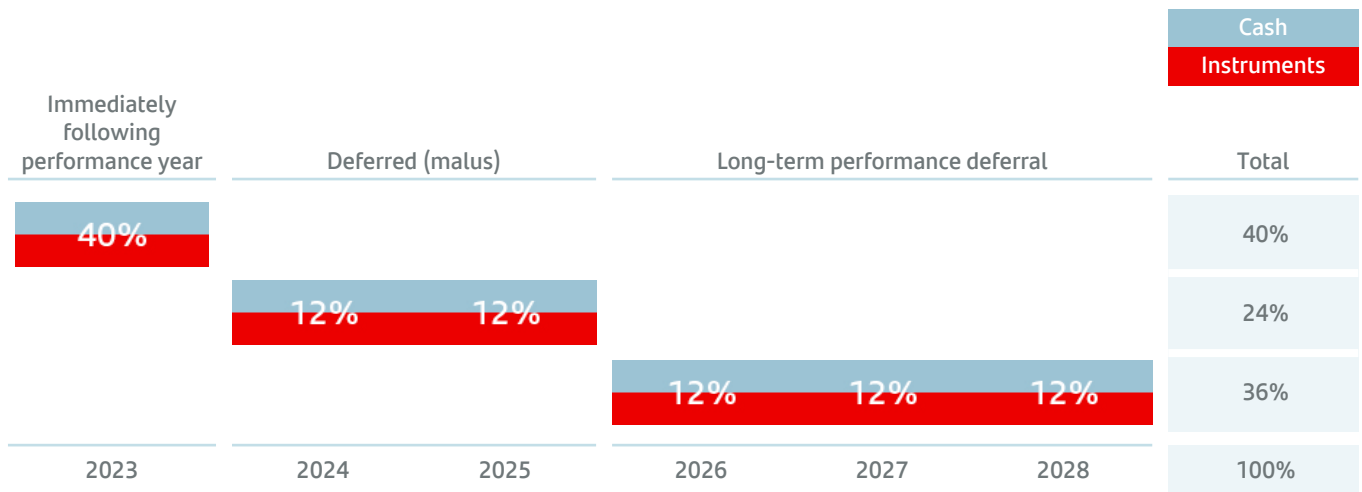
Quantitative metrics and qualitative assessment aspects are described below.

- Payment of the approved incentive is split equally into cash and instruments, the latter as follows:
 - EUR 608,000 and EUR 410,000 in PagoNxt, S.L. RSUs for Ana Botín and José Antonio Álvarez, respectively.
 - The rest in equal parts of Banco Santander, S.A. shares and share options with a 10-year vesting period, unless the executive director chooses to receive options only. In 2022, they both chose to receive half in shares and half in share options.
- 40% is paid in 2023, once the final amount has been set. The remaining 60% will be deferred in equal parts over five years (subject to long-term metrics) as follows:
 - The deferred amount payable in 2024 and 2025, (24% of the total) will be paid if none of the malus clauses described below are triggered.
 - The deferred amount payable in 2026, 2027 and 2028, (36% of the total) will be paid if the malus clauses are not triggered and the multi-year targets described below are reached. These targets can reduce these amounts and the number of deferred instruments, or increase them up to a maximum achievement ratio of 125%, so executives have the incentive to exceed their targets.
- When the deferred amount is paid in cash, the beneficiary may be paid the amount adjusted for inflation up to the date of payment.
- All payments in shares are subject to a three year retention period, unless the director already holds shares for an amount equivalent to twice his/her annual fix remuneration, in which case the shares would be subject only to the regulatory one year retention period obligation.
- The hedging of the instruments received during the retention and deferral periods is expressly prohibited. The sale of shares is also prohibited for one year from time they are received. And the share options may be exercised one year after the time each share option is delivered and until their expiry, which shall take place 10 years after the initial date.

¹ As indicated in the first chart in section 6.3 pension contributions include both fix and variable components, the latter of which also form part of total variable remuneration.



The payment schedule of the incentive is illustrated below.



All deferred payments can be subject to malus, even if they are not subject to long-term objectives. Similarly, Santander can claw back paid incentives in the scenarios and for the period dictated in the Group's malus and clawback policy.

ii) Quantitative metrics and qualitative assessment for 2022

Executive directors' variable remuneration for 2022 has been based on the corporate centre executives' common bonus pool, which calculation comes from the quantitative and qualitative metrics approved by the board at the beginning of 2022 on the remuneration committee's recommendation. This also takes into account the input from the human resources committee, which for this purpose counts on the participation of the senior

management in charge of the group's Risk, Compliance, Audit, Human Resources and Legal and Financial accounting and control functions, who among others provided input on risk, solvency, liquidity, results' quality and recurrence, and compliance and control. The quantitative and qualitative results for the bonus pool (shown in the chart below) resulting from the process above, which are considered by the board, upon recommendation from the remuneration committee are included in 2022 remuneration policy approved in the annual general meeting. In 2022, the board of directors, following a proposal made by the remuneration committee, did not make any exceptional adjustment to the final result obtained by quantitative metrics and the qualitative assessment.



Category and (weight)	Quantitative metrics			Qualitative		Total weighted score ^B
	Metrics	% Achievement over target	Assessment	Weighted assessment ^A	Component	
Customers (30%)	Net Promoter Score ^C (NPS) (10%)	Average of local results ² weighted by # Loyal Customers + SMEs) per country as of December 2021	86.4 %	8.64 %	Measurement of additional and qualitative customer satisfaction metrics	+0% - Increase in score for our Mobile customer service in markets where a new version of our app is available (enhanced functionality, more user-friendly and greater availability), while in other markets improvements are being developed for roll out soon.
	Number of total customer (10%)	Total and loyal customers' scores ² are based on absolute numbers for all the countries except the UK, based on delta variance, as mature country	104.2 %	10.42 %	Conduct risk performance and customer due diligence	+2.22% - Achievement of targets to improve numbers, with a focus on increasing the first line of defence's involvement in conduct risk management. General improvement also in key customer indicators; and positive progress in the implementation of actions in relation to vulnerable customers and the improvement of the design of sales teams' remuneration schemes.
	Number of loyal customers (10%)		105.3 %	10.53 %		
	Total Customers				29.59%	+2.22%
Shareholders (70%)	RoTE ^D (Return on tangible equity): (30%)	Target: 13.3% Achieved: 16%	120.1 %	36.03 %	CET1 - Efficient capital adequacy management	+2.74% - Positive Evolution of CET1 ratio with active management of regulatory and markets (e.g. available for sale portfolios) headwinds throughout the year.
	RoRWA ^D (Return on risk weighted assets) (40%)	Target: 1.79% Achieved: 2.13%	149.2 %	59.68 %	Appropriate management of operational risk, risk appetite and recorded breaches	+1.75% - Significant improvement in risk management and control on the back of a better balance sheet, owing to a reduction in risk exposure in Spain and SCUSA; over 130 regulatory model enhancements submitted to the ECB; more use of machine learning, artificial intelligence and other advanced techniques; and progress with strategic and transformation initiatives.
					Sustainable and sound results and efficient cost management	+2.61% - Santander posted record results in 2022 and fulfilled all its public commitments, despite a challenging economic and geopolitical context. Costs rose below inflation in all regions and efficiency ratio improved.
					Suitability of business growth compared to the previous year in view of market conditions and competition	+1.49% - In a difficult year, Santander outperformed its peers in revenue and provisions, and remains as one of the world's most efficient banks. This enabled us to achieve above-average profit and net margin net of provisions growth (where Santander was the second biggest bank in terms of size, continuing to reduce the gap with the first).
Total Shareholders				95.71%	+11.40%	107.10%
TOTAL						138.91%

A. The weighted assessment is the result of multiplying each objective's assessment by its weighting per category. The five qualitative components under the RoTE and RoRWA category have same weighting.

B. Result of adding or subtracting the qualitative assessment to/from the weighted assessment.

C. The net promoter core (NPS) measures customers' willingness to recommend Santander. The assessment is based on the number of the group's core markets where Santander's NPS scores, as well as on its performance against competitors.

D. For this purpose, these metrics have been adjusted by the board, following a proposal from the remuneration committee, due to inorganic transactions, material changes to the Group's composition or size or other extraordinary circumstances (such as impairments, corporate transactions, share buybacks or restructuring procedures) which have affected the suitability of the metric and achievement scale established, resulting in an impact not related to the performance of the executive directors and executives being evaluated. Furthermore, in RoRWA scale there is an accelerator in the final assessment to foster an efficient use of capital.

1. Argentina: 94.5%; Brazil: 91%; Chile: 115.5%; Uruguay: 115.8%; Spain: 119.5%; Poland: 100%; Portugal: 105.0%; UK: less than 75%; Mexico: 115%; SCF: 100%.

2. Total customers: Argentina: 103%; Brazil: 97%; Chile: does not score (less than 75%); Uruguay: 119%; Spain: 100%; Poland: 102%; Portugal: 100%; UK: 150%; Mexico: 104%; USA: 88%; SCF: 91%; Openbank: 150%. Loyal customers: Argentina: 101%; Brazil: 90%; Chile: 81%; Uruguay: 124%; Spain: 102%; Poland: 102%; Portugal: 107%; UK: 150%; Mexico: 100%; USA: 103%; Openbank: 150%.



The following section details the individual variable remuneration approved by the board.

iii) Determination of the individual variable remuneration for executive directors set in 2022

The board approved executive directors' variable remuneration on the remuneration committee's recommendation based on the policy mentioned in the paragraphs above and the result of the quantitative metrics and qualitative assessment described above.

The board also verified that none of the following circumstances have occurred:

- The Group's ONP² for 2022 was not more than 50% less than for 2021. Otherwise, variable remuneration would not have been greater than 50% of the benchmark incentive.
- The Group's ONP was not negative. Otherwise, the incentive would have been zero.

The board voted to maintain the same benchmark incentive for Ana Botín and José Antonio Álvarez in 2022 as in 2021.

Variable contributions to pensions were not modified in 2022, so the amounts are the 22% of the 30% of the last three assigned bonus' average.

Breakdown of immediately payable and deferred remuneration

In 2022, the very good business performance (which enabled Banco Santander to reach a 13.37% underlying RoTE, 0.64 p.p. above 2021), the excellent execution of our strategy (with the highest attributable profit ever: EUR 9,605 million, 18% above 2021), and efficient capital management, have led to the 138.91% bonus pool detailed above. However, this bonus pool is smaller than 2021's of 151.23%, which was the result of different metrics and weightings (including a very high result in the capital metric). As a result, there has been a reduction in Ana Botín's and Jose Antonio Álvarez's bonus of 8% from 2021 to 2022, as detailed below, despite even better 2022 results.

The immediately payable variable remuneration in deferred amounts not contingent on long-term metrics and variable remuneration deferred and contingent on long-term objectives approved by the board of directors, following a proposal by the remuneration committee resulting from the aforementioned process are:

Immediately payable and deferred (not linked to long-term objectives) variable remuneration

EUR thousand	2022					2021		
	In cash	In shares (A)	In share options (A)	In RSUs (A)	Total	In cash	In shares	Total
Ana Botín	2,702	1,229	1,229	243	5,403	2,941	2,941	5,883
José Antonio Álvarez	1,823	830	830	164	3,647	1,985	1,985	3,970
Total	4,525	2,059	2,059	407	9,050	4,926	4,926	9,853

A. The amounts in the foregoing table correspond to a total of 667 thousand shares in Banco Santander, 1,795 thousand share options and 8 thousand RSUs (1,587 thousand shares in 2021).

The following chart states deferred variable remuneration at fair value, which will only be received in 2026, 2027 and 2028 if the long-term multi-year targets are met (see section 6.3 B iv)) and beneficiaries continue to be employed at Grupo Santander, in accordance with the terms approved in the general shareholders' meeting, and no circumstances triggering malus clauses occur³:

Deferred variable remuneration linked to long-term objectives (fair value)

EUR thousand	2022					2021		
	In cash	In shares (A)	In share options (A)	In RSUs (A)	Total	In cash	In shares	Total
Ana Botín	1,064	404	404	255	2,128	1,158	1,158	2,316
José Antonio Álvarez	718	273	273	172	1,436	782	782	1,563
Total	1,782	677	677	428	3,564	1,940	1,940	3,880

A. The number of shares in the table total 219 thousand shares in Banco Santander, 590 thousand share options and 9 thousand RSUs of PagoNxt S.L. (625 thousand shares in 2021).

Fair value has been determined on the grant date based on the valuation of an independent expert, Willis Towers Watson. Based on the design of the plan for 2022 and success levels of similar plans at peer entities, the fair value was considered to be 70% of total value linked to long-term objectives assigned.

² For this purpose, ONP is attributed ordinary net profit, adjusted upwards or downwards for transactions the board believes have an impact not connected to the performance of evaluated directors, for which extraordinary profit, corporate transactions, impairments, or accounting or legal adjustments that may occur during the year are evaluated. The exclusion in the calculation for these purposes of goodwill impairments is aligned with the supervisors' criteria on their recommendations on dividend distributions.

³ Corresponds to the fair value of the maximum amount to be received over a total of 3 years, subject to continued service -with certain exceptions-, non- applicability of malus clauses and compliance with set goals. Fair value was estimated at the plan award date on account of several scenarios for the variables in the plan during the measurement periods.



The maximum amount of shares and share options to be delivered under the plan (corresponding to EUR 3,268 thousand in shares and EUR 3,268 thousand in share options) is within the maximum amount of the award to be delivered in shares (EUR 5,750 thousand) and in share options (EUR 5,750 thousand) approved by 2022 general shareholders' meeting for executive directors. This number of shares and option shares has been calculated with the weighted average daily volume of weighted average listing prices of Santander shares in the 15 trading sessions prior to the Friday (not inclusive) before 31 January 2023 (the date on which the board approved the 2022 bonus for executive directors), which was EUR 3.088 per share. With this price set, the share options are worth EUR 1.147. According to independent experts, the price per PagoNxt, S.L. RSU equals EUR 48.08.



iv) Multi-year targets linked to the payment of deferred amounts in 2026, 2027 and 2028

The multi-year targets linked to the payment of the deferred amounts payable in 2026, 2027 and 2028 are:

	Metrics	Weight	Target and compliance scales (metrics ratios)
A	Banco Santander's consolidated Return on tangible equity (RoTE) target in 2024	40%	If RoTE in 2024 is $\geq 15\%$, then metric ratio is 1.5 If RoTE in 2024 is $\geq 12\%$ but $< 15\%$, then metric ratio is $0 - 1.5^B$ If RoTE in 2024 is $< 12\%$, then metric is 0
B	Relative Total Shareholder Return (TSR) ^A in 2022-2024 within a peer group	40%	If ranking Santander above or equal percentile 100, then metric ratio is 1.5 If ranking Santander between percentiles 75 and 100 (not inclusive), then metric ratio is $1 - 1.5^C$ If ranking Santander between percentiles 40 and 75 (not inclusive), then metric ratio is $0.5 - 1^C$ If ranking Santander below percentile 40, then metric ratio is 0
			If % women in senior leadership positions in 2024 is $\geq 30.5\%$, then metric ratio is 1.25 If % women in senior leadership positions in 2024 is $\geq 30\%$ but $< 30.5\%$, then metric ratio is $1 - 1.25^D$ If % women in senior leadership positions in 2024 is $\geq 28\%$ but $< 30\%$, then metric ratio is $0 - 1^D$ If % women in senior leadership positions in 2024 is $< 28\%$, then metric ratio is 0
			If number of financially empowered people between 2019 and 2024 (in million) is ≥ 14 , then metric ratio is 1.25 If number of financially empowered people between 2019 and 2024 (in million) is ≥ 13 but < 14 , then metric ratio is $1 - 1.25^D$ If number of financially empowered people between 2019 and 2024 (in million) is ≥ 9 but < 13 , then metric ratio is $0 - 1^D$ If number of financially empowered people between 2019 and 2024 (in million) is < 9 , then metric ratio is 0
C	Five ESG (environmental, social and governance) metrics with same weighting	20%	If green finance raised and facilitated target between 2019 and 2024 (in euro billions) is ≥ 170 , then metric ratio is 1.25 If green finance raised and facilitated target between 2019 and 2024 (in euro billions) is ≥ 160 but < 170 , then metric ratio is $1 - 1.25^D$ If green finance raised and facilitated target between 2019 and 2024 (in euro billions) is ≥ 120 but < 160 , then metric ratio is $0 - 1^D$ If green finance raised and facilitated target between 2019 and 2024 (in euro billions) is < 120 , then metric ratio is 0
			If number of sectors with decarbonisation targets in 2024 is ≥ 11 , then metric ratio is 1.25 If number of sectors with decarbonisation targets in 2024 is $= 10$, then metric ratio is 1^D If number of sectors with decarbonisation targets in 2024 is ≥ 0 but < 10 , then metric ratio is $0 - 1^D$
			If % of emission intensity reduction of our power generation portfolio in 2024 versus 2019 is $\geq 17\%^E$, then metric ratio is 1.25 If % of emission intensity reduction of our power generation portfolio in 2024 versus 2019 is $\geq 13.5\%$ but $< 17\%^E$, then metric ratio is $1 - 1.25^D$ If % of emission intensity reduction of our power generation portfolio in 2024 versus 2019 is $\geq 0\%$ but $< 13.5\%$, then metric ratio is $0 - 1^D$

A. TSR refers to the difference (%) between the final and initial values of capital invested in ordinary shares of Banco Santander. The final value is calculated based on the dividends or other similar concepts (such as the Santander Scrip Dividend programme) shareholders receive for this investment during the corresponding period -as if they had invested in more shares of the same type at the first date on which the dividend or similar concept was payable to shareholders- and the weighted average share price at that date. To calculate TSR, the weighted average daily volumes of the weighted average listing prices for the fifteen trading sessions prior to 1 January 2022 (exclusive) is considered (to calculate the initial value) and the fifteen trading sessions prior to 1 January 2025 (exclusive) (to calculate the final value). The peer group consists of BBVA, BNP Paribas, Citi, Cr dit Agricole, HSBC, ING, Ita , Scotia Bank and Unicredit.

B. Straight-line increase in the RoTE ratio based on the percentage of specific RoTE in 2024 within this bracket of the scale.

C. Proportional increase in the TSR ratio based on the number of positions moved up in the ranking.

D. Increase of the coefficient is proportional to its position on this line of the scale.

E. In the Climate Finance Report published in July 2022, we assessed the 2019 financed emissions of our power generation portfolio, including guarantees and other types of off-balance exposure to our customers that do not entail current funding. According to the PCAF standard, such exposure should not be calculated if its attribution factor is "outstanding", we were over-attributed with our corporate customers' emissions. Therefore, the 2019 baseline emissions intensity has been restated from 0.23 to 0.21. With this change, we have updated the % of reduction from 15% to 13.5%, and from 18.75% to 17%. Although the % of reduction required is lower, the emissions intensity brackets are below previous calculations and thus closer to the net zero decarbonization target for 2030. The 2030 target remains unchanged.

To determine the annual amount of the deferred portion linked to objectives corresponding to each board member in 2026, 2027 and 2028, the following formula shall be applied to each of these payments ('final annuity') without prejudice to any adjustment deriving from the malus clauses:

$$\text{Final annuity} = \text{Amt.} \times (2/5 \times A + 2/5 \times B + 1/5 \times C)$$

where:

- 'Amt.' is one third of the variable remuneration amount deferred conditional on performance (i.e. Amt. will be 12% of the total variable pay set in early 2023).



- 'A' is the RoTE coefficient according to the scale in the table above, based on RoTE at year-end 2024.
- 'B' is the TSR ratio calculated as the scale in the table above, according to the relative performance of Banco Santander's TSR within its peer group in 2022-2024.
- 'C' is the coefficient resulting from the sum of weighted coefficients for each of the five Responsible Banking targets for 2024 described above.
- In any event, if the result of $(2/5 \times A + 2/5 \times B + 1/5 \times C)$ is greater than 1.25, the multiplier will be 1.25.

v) Malus and clawback

Deferred amounts (whether or not contingent on multi-year targets) will be earned if the beneficiary continues to work with the Group⁴, and none of the circumstances triggering the malus clause arise before each payment, according to the section on malus and clawback clauses in the remuneration policy.

Similarly, Banco Santander can clawback any paid variable amounts in the scenarios and for the period dictated by the terms and conditions in the said policy.

Variable remuneration for 2022 can be clawed back until the beginning of 2029.

Malus and clawback clauses are triggered by poor financial performance of Banco Santander, a division or area, or exposures from staff as a result of an executive(s)'s management of, at least, one of these factors:

Category	Factors
Risk	Significant failures in risk management by Banco Santander, or by a business or risk control unit.
Capital	An increase in capital requirements at the Banco Santander or one of its business units not planned at the time that exposure was generated.
Regulation and internal codes	Regulatory penalties or legal convictions for events that might be attributable to the unit or staff responsible for them. In addition, failure to comply with Banco Santander's internal codes of conduct.
Conduct	Improper conduct, whether individual or collective. Negative effects deriving from the marketing of unsuitable products and the liability of persons or bodies making such decisions will be considered especially significant.

And among the specific cases that could lead to the application of these clauses, of note the restatement of the annual financial

statements that does not result from a regulatory change, but from incorrect application of accounting regulations or criteria, as appreciated by supervisors and as long as it results in a lower variable remuneration to be settled than that initially accrued or where no remuneration would have been paid in accordance with the variable remuneration system of the Entity or a specific unit.

The application of malus or clawback clauses for executive directors shall be determined by the board of directors, at the proposal of the remuneration committee, and cannot be proposed once the retention period for the final payment in shares under the plan has elapsed in early 2029. Therefore, the board determines the specific deferred incentive amount to be paid as well as any amount that could be subject to clawback, upon on the remuneration committee's recommendation and depending on the level of compliance with the conditions for applying malus clauses.

C. Main features of the benefit plans

Executive directors participate in the defined contribution pension scheme created in 2012, which covers contingencies due to retirement, disability and death.

According to the 2012 system, contracts for executive directors (and other senior managers) with defined benefit pension obligations were transformed into a defined contribution system. The new system gives executive directors the right to receive benefits upon retirement, even if they are not active at Banco Santander at the time, based on contributions to the system. It also replaces their previous right to receive a pension supplement in the event of retirement.

The initial amount for each executive director in the new defined contribution pension scheme corresponded to the market value of the assets for which the provisions for due obligations were recognized when the previous pension commitments had been transferred to the new pension scheme.

Every year since 2013, Banco Santander has been contributing to the pension scheme for executive directors and senior executives in proportion to their pensionable bases until their departure from the Group, retirement, death or disability (even during pre-retirement). The pensionable base for executive directors is the sum of fixed remuneration plus 30% of the average of their last three variable remuneration amounts. Contributions will be 22% of pensionable bases in all cases.

Pursuant to remuneration regulations, contributions calculated on the basis of variable remuneration are subject to the discretionary pension benefits scheme. Therefore, under the policy, malus and clawback clauses can be enforced on them in place at any given time and during the same period in which

⁴ When the beneficiary's relationship with Banco Santander or another Group entity terminates because of retirement, early retirement or pre-retirement; a dismissal ruled by the courts to be wrongful; unilateral withdrawal for good cause by an employee (which includes the situations set forth in article 10.3 of Royal Decree 1382/1985, of 1 August, governing the special relationship of senior management, for the persons subject to these rules); permanent disability or death; mandatory redundancy; or because an employer other than Banco Santander ceases to belong to Santander Group, the right to receive shares and deferred amounts in cash and any amounts of the deferred amounts in cash adjusted for inflation will remain under the same conditions in force as if none of such circumstances had occurred. In the case of death, the right will pass to the beneficiary's heirs.

In cases of justified temporary leave due to temporary disability, suspension of contract due to maternity or paternity leave, or leave to care for children or a relative, there will be no change in the beneficiary's rights. If the beneficiary goes to another Group company (even through international assignment and/or expatriation), these rights will likewise not change. If the relationship terminates by mutual agreement or because the beneficiary obtains a leave not mentioned above, the terms of the termination or temporary leave agreement will apply.

None of those circumstances attach the right to receive the deferred amount in advance. If beneficiaries or their heirs maintain the right to receive deferred pay in shares and cash and any deferred amounts in cash adjusted for inflation, it will be delivered within the periods and under the terms dictated by the rules for the plans.

None of the above circumstances shall give the right to receive the deferred amount in advance. If the beneficiary or the successors thereof maintain the right to receive the deferred remuneration in shares and cash and, where applicable, the amounts arising from the adjustment for inflation of the deferred amounts in cash, it shall be delivered within the periods and under the terms provided in the rules for the plans.



variable remuneration is deferred. Furthermore, these contributions must be invested in shares in Banco Santander for five years from the date of the executive director's retirement, or from the date on which executive directors leave the group. Once that period has elapsed, the amount invested in shares will be paid to them or their beneficiaries if some contingency covered by the pension scheme was happened or will be added to the remainder of their cumulative balance until their retirement age when the total amount will be paid.

The benefit plan is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A. The economic rights of the directors previously mentioned belong to them even if they are not active at Banco Santander at the time of their retirement, death or disability. Their contracts do not stipulate any severance payment outside the extent of the law for termination of contract or the aforementioned annual allowance for pre-retirement.

The provisions recognised in 2022 for retirement pensions amounted to EUR 1,892 thousand (EUR 1,825 thousand in 2021), as broken down below.

EUR thousand	2022	2021
Ana Botín	1,081	1,041
José Antonio Álvarez	811	783
Total	1,892	1,825

The amounts corresponding to each executive director as of 31 December 2022 and 2021 in the pension scheme are:

EUR thousand	2022	2021
Ana Botín	46,725	48,075
José Antonio Álvarez	18,958	18,821
Total	65,683	66,896

D. Other remuneration

Grupo Santander also takes out insurance policies for life, health and other contingencies for its executive directors. This other remuneration component includes the fixed supplement approved for Ana Botín and José Antonio Álvarez to replace the supplementary benefits from the pension scheme eliminated in 2018, in addition to the cost for insuring death or disability until they retire. Executive directors are also covered under the Group's civil liability insurance policy.

[Note 5](#) to the Group's consolidated financial statements describes other benefits received by executive directors in detail.

E. Shareholdings

In 2016, on the remuneration committee's recommendation, the board of directors approved a shareholding policy to better align executive directors with shareholders' long-term interests.

According to this policy, in addition to the executive directors' commitment to maintaining a significant holding of shares in the Group for as long as they have their role, executive directors active on 1 January 2016 would have five years to demonstrate that their personal assets include shares in Banco Santander that amount (net of taxes) to twice their gross annual salary on that date. Executive directors have complied with this policy. The following table show the ratio, with a share price of EUR 3.088:

	2022		X
	Gross annual salary (thousand)	Number of shares (thousand)	
Ana Botín	3,176	26,857	26.1
José Antonio Álvarez	2,541	2,288	2.8

Likewise, in addition to the regulatory obligation for executive directors not to sell the shares they receive as remuneration for a year from their award, which is included in the shareholding policy, and will apply to all cases, this policy has also been updated in 2020 to include the obligation for executive directors not to sell the shares they receive as remuneration for a period of three years from their award date, unless the executive director already holds Banco Santander shares for an amount equivalent to twice his/her fix annual remuneration.

F. Remuneration of board members as representatives of Banco Santander

The executive committee has resolved that the remuneration received by directors who represent Banco Santander on boards of companies where it owns equity and were appointed after 18 March 2002 will accrue to the Group. No executive director received remuneration for this type of representation in 2022 or 2021.

However, in their personal capacity, in 2022 Álvaro Cardoso was paid BRL 150 thousand (EUR 28 thousand) as member of sustainability committee of Banco Santander Brasil, S.A., Homaira Akbari was paid USD 169 thousand (EUR 161 thousand) as member of the board of Santander Consumer USA Holdings, Inc. and EUR 200 thousand as member of the Board of PagoNxt S.L., and Henrique de Castro and R.Martín Chávez were each paid the same EUR 200 thousand as members of the board of PagoNxt. Likewise, Pamela Walkden was paid GBP 125 thousand (EUR 147 thousand) as member of the Santander UK plc and Santander UK Group Holdings boards. And Sergio Rial, as non executive Chair of Ebury Partners Limited received a total pay of GBP 244 thousand (EUR 286 thousand) and as Chair of the board of directors of Banco Santander Brasil, S.A. was paid BRL 10,981 thousand (EUR 2,000 thousand).

Likewise, Luis Isasi was paid EUR 1,000 thousand for his role as non-Executive Chair of Santander España and for Santander España board and committees meetings (amount included in the chart below as "other remuneration" as it is paid by Banco Santander, S.A.).



Additionally, Héctor Grisi has received at the end of 2022 a payment of EUR 2,500 thousand as relocation expenses for settling in Spain to carry out his CEO role effectively from 1 January 2023. Because the payment is based on his annual allowance capitalized over five years, in accordance with corporate practices and policies, if the CEO terminates his contract before said period, he will reimburse the proportional share of that amount.

Below is a breakdown of each director's short-term salary (payable immediately) and deferred remuneration not based on long-term performance for 2022 and 2021. Statistical information on remuneration required by the CNMV (9.5) and Note 5 to the Group's consolidated financial statements contains disclosures on shares delivered in 2022 under the deferred remuneration schemes of previous years where conditions for their delivery were met in the related years.

G. Individual remuneration of directors for all items in 2022

Directors	EUR thousand									2021	
	2022										
	Bylaw-stipulated emoluments		Salary and bonus of executive directors								Total
	Board and board committees annual allotment	Board and committee attendance fees	Fixed Salary	Immediate payment bonus (50% in instruments)	Deferred payment bonus (50% in instruments)	Total	Pension Contribution	Other remuneration ^F	Total	Total	
Ana Botín	339	41	3,176	3,377	2,026	8,579	1,081	961	11,001	11,435	
José Antonio Álvarez	290	39	2,541	2,279	1,368	6,188	811	1,758	9,086	9,160	
Bruce Carnegie-Brown	625	75	—	—	—	—	—	—	700	700	
Homaira Akbari	175	69	—	—	—	—	—	—	244	248	
Javier Botín ^A	95	34	—	—	—	—	—	—	129	129	
Álvaro Cardoso ^B	28	11	—	—	—	—	—	—	39	183	
R.Martín Chávez ^C	107	40	—	—	—	—	—	—	147	374	
Sol Daurella	160	70	—	—	—	—	—	—	230	239	
Henrique de Castro	185	76	—	—	—	—	—	—	261	267	
Gina Díez Barroso	120	52	—	—	—	—	—	—	172	130	
Luis Isasi	330	82	—	—	—	—	—	1,000	1,412	1,406	
Ramiro Mato	410	90	—	—	—	—	—	—	500	499	
Sergio Rial	95	36	—	—	—	—	—	—	131	879	
Belén Romana	455	94	—	—	—	—	—	—	549	533	
Pamela Walkden	245	78	—	—	—	—	—	—	323	303	
Germán de la Fuente ^D	97	40	—	—	—	—	—	—	137	—	
Glenn Hutchins ^E	6	4	—	—	—	—	—	—	10	—	
Total 2022	3,762	931	5,717	5,656	3,394	14,767	1,892	3,719	25,071	—	
Total 2021	3,764	1,036	6,467	6,158	3,694	16,319	1,824	3,542	—	26,485	

A. All amounts received were reimbursed to Fundación Botín.

B. Stepped down as director on 1 April 2022.

C. Stepped down as director on 1 July 2022.

D. Director since 1 April 2022.

E. Director since 20 December 2022.

F. Other remuneration includes for Luis Isasi EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings.



The following table provides each executive director's salary contingent on multi-year targets. It is only paid if they remain active in the group, malus clauses do not apply and set multi-year targets are achieved (as depending on their achievement, the amounts will be increased (limited to 125%), reduced, or even be zero, if the related minimum thresholds are not achieved):

	EUR thousand	
	2022 ^A	2021 ^A
Ana Botín	2,128	2,316
José Antonio Álvarez	1,436	1,563
Total	3,564	3,880

A. Fair value of the maximum amount receivable over a total of 3 years (2026, 2027 and 2028), which was estimated when the plan was granted, based on several scenarios relating to variables in the plan during the measurement periods.

H. Ratio of variable to fixed pay components in 2022

At the 2022 AGM, shareholders approved a maximum ratio of 200% of variable to fixed components in executive directors' pay.

The table below shows the ratio of variable components to fixed components for each executive director's total pay in 2022. This ratio decreased from 2021 by 13 pp for Ana Botín and by 13 pp for José Antonio Álvarez.

Executive directors	Variable Components / fixed components (%)
Ana Botín	169 %
José Antonio Álvarez	115 %

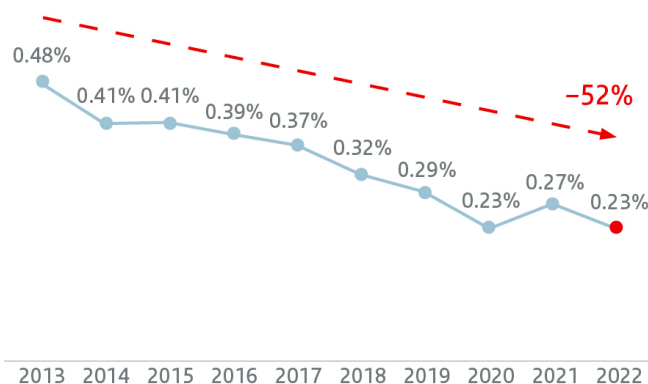
For these purposes:

- Variable components include all items of this nature, such as any contributions to the pension scheme calculated on directors' variable pay.
- Fixed components consist of the other items each director receives for executive duties, including contributions to pension schemes calculated on the basis of fixed remuneration and other benefits, as well as all Bylaw-stipulated emoluments that the director is entitled to receive in his or her capacity as such.

I. Comparative analysis of directors' remuneration, company performance and average remuneration of employees

This chart summarizes directors' compensation (short-term remuneration, deferred variable remuneration and/or deferred variable remuneration linked to multi-year targets included) for executive duties in relation to underlying attributable profit. The weight of executive directors' remuneration relative to underlying attributable profit continues to decline since 2013.

Ratio of executive directors' total remuneration to underlying attributable profit





The following chart shows the comparative analysis between the directors' remuneration, the company performance (underlying profit attributable to the Group, audited profit before taxes and ordinary ROTE) and the average remuneration of Santander employees in the last 5 years:

Directors' remuneration ¹ (EUR thousand)	2022	% var. 22/21	2021	% var. 21/20	2020	% var. 20/19	2019	% var. 19/18	2018
• Executive Directors									
Ana Botín	11,001	(4)%	11,435	68%	6,818	(32)%	9,954	(5)%	10,483
José Antonio Álvarez	9,086	(1)%	9,160	52%	6,018	(27)%	8,270	(4)%	8,645
• Non-Executive Directors²									
Bruce Carnegie-Brown	700	—	700	18%	595	(15)%	700	(4)%	732
Sergio Rial	131	—	879	—	63	—	—	—	—
Javier Botín ^A	129	—	129	6%	122	(11)%	137	13%	121
Sol Daurella	230	(4)%	239	12%	214	(11)%	240	12%	215
Belén Romana	549	3%	533	28%	417	(21)%	525	27%	414
Homaira Akbari	244	(2)%	248	23%	202	(11)%	226	14%	199
Ramiro Mato	500	—	499	16%	430	(14)%	500	11%	450
Álvaro Cardoso ^B	39	(79)%	183	(25)%	243	(12)%	276	86%	148
Henrique de Castro	261	(2)%	267	23%	217	152%	86	—	—
Pamela Walkden	323	7%	303	42%	214	529%	34	—	—
Luis Isasi	1,412 ^F	—	1,406	49%	943	—	—	—	—
R. Martín Chávez ^C	147	(61)%	374	911%	37	—	—	—	—
Gina Díez Barroso	172	32%	130	—	4	—	—	—	—
Germán de la Fuente ^D	137	—	—	—	—	—	—	—	—
Glenn Hutchins ^E	10	—	—	—	—	—	—	—	—
Company's performance									
Underlying profit attributable to the Group (EUR mn)	9,605	11%	8,654	70%	5,081	(38)%	8,252	2%	8,064
Consolidated results of the Group ³ (EUR mn)	15,250	5%	14,547	—	(2,076)	—	12,543	(12)%	14,201
Ordinary RoTE	13.37%	5%	12.73%	71%	7.44%	(37)%	11.79%	(2)%	12.08%
Employees' average remuneration⁴ (EUR)	56,262	1%	55,673	18%	47,130	(12)%	53,832	2%	52,941

1. Deferred variable remuneration linked to long-term objectives not included.

2. Non-executive directors' remuneration fluctuations are caused by joining or leaving the board of directors and the difference in the amount of meetings they assist during the year. Hence there is no correlation between their remuneration and the company performance.

3. Group operating profit/(loss) before tax.

4. Employee average remuneration includes all concepts, including other remuneration. Full-time equivalent data. The percentage of variable remuneration over fixed remuneration in an average employee is lower than that of the executive directors. Variable remuneration data accrued in the current year, both for employees and executive directors. Evolutive data also impacted by exchange rate performance in the group's geographies. Full time equivalent data considered.

A. All amounts received were reimbursed to Fundación Botín.

B. Stepped down as director on 1 April 2022.

C. Stepped down as director on 1 July 2022.

D. Director since 1 April 2022.

E. Director since 20 December 2022.

F. Includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings.



J. Summary of link between risk, performance and remuneration

Banco Santander's remuneration policy and its application in 2022 have promoted sound and effective risk management, at the same time as supported the fulfilment of long-term business objectives.

The key elements of the remuneration policy for executive directors making alignment between risk, performance and reward in 2022 were as follows:

Key words	Aspect aligning risk, performance and remuneration
Metrics balance	The balance of quantitative metrics and qualitative assessments, including customer, risk, capital and profitability in relation to risk, used to determine the executive directors' variable remuneration.
Financial thresholds	The adjustment to variable remuneration if certain financial thresholds are not reached, which may limit the variable remuneration to 50% of the previous year's amount or lead to it not being awarded at all.
Long-term objectives	The long-term objectives linked to the last three portions of the deferred variable remuneration. These objectives are directly associated with return to shareholders relative to a peer group, return on tangible equity (RoTE) and the five public targets linked to our Responsible banking agenda.
Individual performance	The discretion of the board to consider the performance of each executive director in the award of their individual variable remuneration.
Variable remuneration cap	200% of fixed remuneration.
Control functions involvement	The work undertaken by the human resources committee aided by senior managers leading Control functions in relation to the analysis of quantitative metrics information and undertaking qualitative analysis.
Malus and clawback	Malus can be applied to unvested deferred pay and clawback can be applied to vested or paid compensation under the conditions dictated by the Group's remuneration policy.
Payment in shares	At least 50% of variable pay is in instruments and subject to retention or prohibition from exercise of at least one year from their delivery.

6.4 Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote

Remuneration policy principles and remuneration system

A. Directors' remuneration in their capacity as such

Director's remuneration is regulated by article 58 of Banco Santander's Bylaws and article 33 of the Rules and regulations of the board of directors. For 2023, 2024 and 2025, no changes to the principles and composition of directors' remuneration for supervisory and collective decision-making duties are planned with respect of those in 2022. They are described in sections [6.1](#) and [6.2](#).

B. Executive directors' remuneration

Executive directors are entitled to be paid the remuneration (e.g., salaries, incentives, bonuses, severance payments for early termination from such duties, and amounts to be paid by Banco Santander for insurance premiums or contributions to savings schemes) deemed appropriate for performing executive functions following a proposal from the remunerations committee and by resolution of the board of directors, subject to the limits set by law.

While there are no planned changes to the principles on executive directors' remuneration for executive duties in 2023, 2024 and 2025 (sections [6.1](#) and [6.3](#)), changes to the corporate bonus scheme are being proposed as detailed below.

First, to further support the Group's transformation strategy, short-term corporate bonus metrics will include the new strategic priorities released at the 2023 Investor Day, maintaining the focus on clients (with active customers as the main metric), as well as RoTE (which continues to be part of the scheme). The third pillar to be included as a metric is capital, to

outline the importance of capital generation throughout the business.

With the purpose of further promoting value creation for investors, a relative performance multiplier is included, which may reduce or increase the result from the metrics above, based on results versus top peers in each market on metrics considered more relevant for each country/business (and for Group, the weighted average of countries results): NIM, NPS, C/I, CoR, NPLs and Net Margin after provisions. Thus assuring that our teams not only push to exceed budget, but also to outperform peers.

The qualitative assessment for the short-term bonus is simplified by reducing the items included in it from 7 to 4 the possible adjustments made, covering risk, compliance, network collaboration and ESG aspects (Responsible Banking).

Second, variable remuneration in 2023 for executive directors will be paid 50% in cash and 50% in instruments. The part to be received in instruments split as follows:

- EUR 500,000 and EUR 420,000 in PagoNxt, S.L. RSUs for Ana Botín and Héctor Grisi, respectively.
- The rest, all in instruments of Banco Santander, S.A. The executive director must decide between receiving such amount all in shares, or receiving in equal parts shares and share options of Banco Santander, S.A (while for 2024 and 2025, the board agreed, upon proposal from remuneration committee, that executive directors receive half in shares and half in share options).

For the rest of identified staff, variable remuneration will be paid as follows, according to each executive's choice:

- 50% in cash and 50% in Banco Santander, S.A. shares; or,



- 50% in cash, 25% in shares and 25% in Banco Santander, S.A. share options.

This decision would mean the effective introduction of options as part of the yearly bonus for identified staff (excluding executive directors who already received options for 2022), as the board voted in 2022 to postpone introducing share options for this group.

Third, it is proposed to maintain the long-term performance metrics, prioritising in this way shareholder returns and the Group's profitability in the long-term, as well as sustainability of the balance sheet and its activities and how they are carried out. Therefore these metrics will be:

- Relative performance of Banco Santander's total shareholder return (TSR) compared to our peer group; with a threshold at which executives begin to accrue remuneration of 40%. Its weight will be 40% of the total.
- Return on tangible equity (RoTE), as an indication of long-term value creation. Its weight will be 40% of the total.
- Four ESG (environmental, social and governance) metrics linked to the progress we make on our targets to implement the Group's Responsible banking agenda. Their weight will be 20% of the total.

The maximum achievement ratio will remain at 125% so executives have the incentive to exceed their targets; however, the maximum achievement ratio for effectively paid remuneration will not exceed the thresholds approved at the AGM.

Additionally, with the aim of providing a strong alignment with PagoNxt's success, the Executive Chair and the Chief Executive Officer will continue to receive restricted stock units (RSUs) of PagoNxt, S.L.

The RSUs substitute part of their Santander variable pay instruments without increasing their total pay and will not represent more than 10% of their variable pay.

Specifically, as regards 2023, Ana Botín would receive the equivalent of EUR 500 thousand in RSUs, and Héctor Grisi would receive the equivalent of EUR 420 thousand in RSUs, in accordance with PagoNxt, S.L.'s long term incentive plan. Each RSU would grant the right to a share in PagoNxt, S.L. or the holding entity of its group (or its equivalent in cash) at the moment when, according to such plan, a liquidity event, a repurchase or a liquidation of such instruments takes place.

This plan is subject to the same principles of risk alignment, variable remuneration caps, deferrals and malus and clawback as the incentive which applies to executive directors described herein, but with payment being done in PagoNxt instruments.

Finally, every year, Banco Santander conducts a comparative analysis of total compensation for executive directors and other senior executives. For 2023, the analysis will consist of a 'peer group' made up by BBVA, BNP Paribas, Citi, Crédit Agricole, HSBC, ING, Itaú, Scotia Bank and Unicredit.

Principle of equal pay for equal work and equal employment conditions for Santander executives and employees

Santander applies the equal pay principle included in the Corporate remuneration policy of Grupo Santander for executive

directors and employees alike, which forbids any type of differential treatment that is not exclusively based on an assessment of performance results and corporate behaviours, and promotes equal pay for men and women.

Furthermore, our remuneration framework rewards Santander employees for their contribution based on such common principles as:

- Meritocracy: Non-discrimination based on sex, age, culture, religion or ethnicity.
- Consistency: Remuneration consistent with the level of responsibility, leadership and performance within the Group, to promote retention of key professionals and attract the best talent.
- Sustainability: A remuneration framework that is sustainable in terms of associated costs, cost control, and related objectives (as described in the policy) that ensure variable remuneration is commensurate with the Group's performance, disincentivize short termism and promote long-term sustainability. The remuneration scheme for the 1,029 identified staff also includes deferrals of up to 60% of variable remuneration, payment 50% in Santander instruments (subject to one-year retention) and malus and clawback clauses.
- Also, performance objectives for annual variable remuneration have included since 2020 ESG components aligned with our Responsible banking goals. From 2022, with the purpose of increasing focus on the Group's responsible banking agenda and highlight sustainability as a core long-term strategy, ESG metrics are included (described in the next section) for the last deferred variable remuneration payments.
- Social responsibility: Employees' pay cannot be lower than the legal minimum wage or the living wage in the country where they work. Additionally, in order to give our social responsibility prominence in remuneration, the Group's responsible banking objectives for employee remuneration include the people financially empowered metric.
- Performance-based pay: Variable remuneration is subject to the achievement of (i) annual objectives (set out in section 6.4.B.ii.B), which reflect customer and profitability strategy, promote proper risk management and cost-effective capital allocation, and discourage short-term management focus; and (ii) long-term objectives (see section 6.4.B.ii.B), which support a sustainable balance sheet, shareholder return, the Group's profitability and sustainability of the Group's activities and the way they are carried out.

Directors' remuneration for 2023

A. Directors' remuneration in their capacity as such

In 2023, directors, in their capacity as such, will receive remuneration for supervisory and collective decision-making duties for a total of up to EUR 6 million as authorised by the shareholders at the April 2022 AGM (which will again be put to a vote at the 2023 AGM). It consists of:

- annual allocation, and
- attendance fees.



After several years with practically no review of directors' remuneration, the board has proposed, for 2023, an increase of EUR 3,000 in the annual allotment for board and committee membership (except for the executive committee) and without a comprehensive review of the remuneration. All other board related amounts for 2023, including board and board committees fees are the same as for 2022 (see sections 6.2.B and C above).

The specific amounts and the form of payment are determined by the board of directors in the manner described in section 6.2 above, based on the objective circumstances of each director.

Additionally, as indicated in the description of the director remuneration system, Banco Santander will pay its directors' the corresponding civil liability insurance premium in 2023. The related policy is common to all executives and was taken out under usual market condition, proportionate to Banco Santander's situation.

B. Executive directors' remuneration for the performance of executive duties

The board, on the remuneration committee's recommendation and with effect from 1 January 2023, resolved for Héctor Grisi to have the same target pay as José Antonio Álvarez received until he stepped down as CEO, based on the fact that he is a professional with a proven expertise and performed a similar role for Santander México and as head of the Group's North America region, plus the cost savings derived from not hiring an external candidate.

i) Fixed remuneration components

A) Gross annual salary

After five years with no review of gross annual salary, and further to the remuneration committee's recommendation, the board resolved that Ana Botín's gross annual salary would increase a 3% in respect of 2022 (this would mean an effective total rise in her total compensation of around 1% versus 2022, taking into account the sum of fixed salary, pension contribution and target bonus). In connection with this, it is worth noting that an increase of 4.5% in the base salary subject to collective agreement has been applied to the general Santander workforce in Spain.

In turn, the new CEO Héctor Grisi will receive a gross annual salary of EUR 3 million, which is the same fixed compensation as the former CEO. The board agreed on this amount upon proposal of the remuneration committee, based on his proven expertise as a successful CEO with Santander Mexico and Group's North America regional head. Also, as Héctor Grisi's appointment is internal, it does not entail any additional buyout or sign-on bonus expenses, as would normally be the case with an external candidate.

Their gross annual salary amounts may increase owing to adjustments made to the fixed remuneration mix based on the criteria approved by the remuneration committee, provided this does not entail any cost increase for Banco Santander.

B) Other fixed remuneration components

- Benefit systems: defined contribution schemes as set out in section 'Benefit schemes'⁵.

- Supplement to fixed salary: Ana Botín will receive EUR 525,000 as a supplement to her fixed pay in 2023. This had been approved in 2018 when the supplementary death and disability pension schemes were eliminated. Héctor Grisi will not receive a supplement.
- Social welfare benefits: executive directors will also receive social welfare benefits such as life insurance premiums, travel grants, medical insurance and the allocation of remuneration to employee loans, in accordance with Banco Santander's general policy for senior management, and in the same terms as the rest of employees.
- Likewise, the Bank makes available to directors the human and material means required or considered appropriate for carrying out their duties (including any travel required for the exercise of their role). Any eventual private use of these means by the executive directors is duly paid by them under the similar terms and conditions that would be applied to third independent party under the supervision of the audit committee. This information can also be found under the 'Benefit plans' section.

ii) Variable remuneration components

The board approved the policy on executive directors' variable remuneration for 2023 on the remuneration committee's recommendation, based on the remuneration policy principles described under section 6.3.

Executive directors' variable remuneration consists of a single incentive scheme, linked to the achievement of short-and long-term objectives. It is structured as follows:

- The final amount of variable remuneration will be set at the start of the following year (2024) based on the benchmark amount and subject to compliance with the annual objectives described under section B) below.
- 40% of the incentive will be paid immediately once the final amount has been set, and 60% will be deferred in equal parts paid out over five years and subject to long-term metrics:
- The amount deferred over the first two years (24% of the total) will be paid in 2025 and 2026 on the condition that no malus clauses described under section 6.3 B v) are triggered.
- The amount deferred over the next three years (36% of the total) will be paid in 2027, 2028 and 2029, on the condition that no malus clauses are triggered and long-term targets – described in section D) Deferred incentive subject to long-term performance objectives – are met.

The Group can claw back incentives already paid in the cases and during the term set out in its malus and clawback policy, described under section 6.3 B v).

Exceptionally, when a new executive director joins Banco Santander, his/her variable pay may include a sign-on bonus and/or buyouts.

Variable components in executive directors' total remuneration for 2023 cannot exceed the limit of 200% of fixed components submitted for approval to the 2023 AGM. However, under EU regulations on remuneration, certain variable components can be excluded.

⁵ As indicated in the next section, executive directors contribution to the benefit systems includes both fixed and variable components

A. Variable remuneration benchmark

Variable remuneration for executive directors in 2023 will be set based on a standard benchmark contingent upon the full achievement of their set individual targets, which for 2022 among others include, both for the Executive Chair and the CEO, pushing CET1 and sustainability targets.

The board of directors may revise the variable pay benchmark on the remuneration committee's recommendation and following market and internal contribution criteria.

Hector Grisi's variable remuneration target will be EUR 4,200 thousand, which aligns with the former CEO's variable remuneration target until his departure and following the same rationale explained above for gross annual salary.

B. Setting of final variable remuneration based on yearly results

Based on that standard benchmark, 2023 variable remuneration for executive directors will be based on this new corporate bonus scheme proposal:

- Three categories of quantitative metrics (business transformation, sustainable profitability and capital) to increase alignment with increasing shareholder value and capital generation.
- A relative performance multiplier versus market which will multiply by 0.7 to 1.3 the result of the quantitative metrics above, based on performance versus top peers in each market on metrics considered more relevant for each country/business (and for Group, the weighted average of countries results): with net interest margin (NIM), cost to income, CoR, NPLs, net promoter score (NPS) and Net Margin after provisions as references.
- A simpler qualitative assessment with four components (risk, compliance, network collaboration and ESG) instead of seven, to cover regulatory requirements and stakeholders' concerns more efficiently. The assessment cannot raise or lower the above result by more than 25%.
- An exceptional adjustment that must be duly supported and may involve changes owing to control and/or risk deficiencies, negative assessments from supervisors or unexpected material events.

These changes align the new scheme with the strategic priorities we announced at our Investor Day on 28 February 2023. Capital generation will become an important part of key employees' remuneration (including executive directors) in order to ensure an efficient use of capital, alongside RoTE, which we are keeping in the scorecard to incentivize sustainable, long-term growth. Customers continue to be part of the quantitative metrics, with special focus on active customers. Lastly, executives' focus on outperforming the market in aspects directly related with shareholder value is increased.

The proposed quantitative metrics and weightings are:

Category	Quantitative metrics
	Total and active customers (growth) (Weight: 20%)
Transformation: Weight: 45%	Operative cost per active customer (Weight: 15%)
	Revenue per active customer (Weight: 10%)
Capital Weight: 30%	CET1 ratio ^A
Sustainable Profitability Weight: 25%	RoTE ^A (Return on tangible equity)

A. For this purpose, these metrics may be adjusted upwards or downwards by the board, following a proposal from the remuneration committee, when inorganic transactions, material changes to the Group's composition or size or other extraordinary circumstances (such as impairments, share buybacks, legal changes or restructuring procedures) have occurred which affect the suitability of the metric and achievement scale established in each case and resulting in an impact not related to the performance of the executive directors and executives being evaluated.

A relative performance multiplier (from 0.7 to 1.3) based on performance versus best-in-class peers is applied to the total result of these metrics.

And finally, to the result obtained above, we add or subtract the qualitative assessment according to this table:

Qualitative assessment	Weight
Risk	+/-5%
Compliance	+/-5%
Network collaboration	+/-10%
ESG targets	+/-5%

Lastly, as additional conditions for determining the incentive, the following circumstances must be confirmed to set variable pay:

- If the Group's ONP for 2023 were 50% less than in 2022, variable pay would in no case exceed 50% of the benchmark incentive for 2023.
- If the Group's ONP were negative, the incentive would be zero.

When setting individual bonuses, the board will also consider restrictions to the dividend policy imposed by supervisors.

C) Forms of payment of the incentive

Variable remuneration of executive directors will be paid 50% in instruments, split as:

- the amount of PagoNxt RSUs set for each year (which cannot exceed 10% of their variable pay); and
- the rest, all in instruments of Banco Santander, S.A. The executive director must decide between receiving such amount all in shares, or receiving in equal parts shares and share options of Banco Santander, S.A.



One portion will be paid in 2024 and the other will be deferred for five years and contingent on long-term metrics:

- 40% of variable remuneration is paid in 2024 net of tax, with 50% in cash and 50% in instruments.
- 60% paid, if applicable, in five equal parts in 2025, 2026, 2027, 2028 and 2029 (net of tax), with 50% in cash, 50% in instruments, under the conditions stipulated in section E).

The final three payments will also be subject to long-term objectives described in section D) below.

Shares shall be subject to a three-years retention period, unless the executive directors already hold shares for an amount equivalent to 200% of their fix annual remuneration -in which case the regulatory one year retention period will apply. Share options shall not be exercisable or sold until one year after their delivery. The exact exercise period for the options shall be determined by the board, upon the recommendation from remuneration committee, in the terms approved by the general shareholders' meeting.

Additionally, a proposal to increase the number of trading sessions used to determine the share price used for executive directors and identified staff bonus from 15 to 50, to soften the impact on the share price of events (positive or negative) that may occur within a short period will be put to vote at the 2023 AGM. Under the Remuneration policy for 2023 and beyond, the maximum number of shares (and/or share options) will be calculated based on the daily volume-weighted average of the weighted average Santander share price in the 50 trading sessions before the last Friday (not included) before the board meeting at which executive directors' bonus is agreed.

D) Deferred variable pay subject to long-term objectives

As indicated above, the amounts deferred in 2027, 2028 and 2029 will be paid on the condition that the group achieves its long-term targets for 2023-2025, in addition to the terms described in section E).

As advanced in section B) on the principles of the remuneration policy, the long-term targets are:

- Banco Santander's consolidated Return on tangible equity (RoTE) target in 2025. The RoTE ratio for this target is obtained as follows:

RoTE in 2025 (%)	'RoTE Ratio'
≥ 17%	1.5
≥ 14% but <17%	0 – 1.5 ^A
< 14%	0

A. Straight-line increase in the RoTE ratio based on the percentage of specific RoTE in 2025 within this bracket of the scale.

To verify compliance with this objective, the board, following a proposal from the remuneration committee, may adjust it to remove the effects of any regulatory change to its calculation rules or any extraordinary circumstances (such as impairments,

corporate transactions, share buybacks or restructuring procedures) that have occurred which affect the suitability of the metric and achievement scale established in each case and resulting in an impact not related to the performance of the executive directors and executives being evaluated.

- Relative performance of Banco Santander's total shareholder return (TSR) in 2023-2025 in respect of the weighted TSR of a peer group comprising 9 credit institutions, with the appropriate TSR ratio based on the group's TSR among its peers.

Ranking of Santander TSR	'TSR Ratio'
The 100 th percentile	1.5
Between the 75 th and 100 th percentiles (not inclusive)	1 – 1.5 ^A
Between the 40 th and 75 th percentiles (not inclusive)	0.5 – 1 ^A
Less than the 40 th percentile	0

A. Increase in the TSR ratio proportional to the number of positions moved up in the ranking.

TSR⁶ measures the return on shareholders' investment. It is the sum of the change in share price plus dividends and other similar items (including the Santander Scrip Dividend programme) shareholders can receive during the period.

The peer group comprises BBVA, BNP Paribas, Citi, Credit Agricole, HSBC, ING, Itaú, Scotiabank and Unicredit.

- ESG (environmental, social and governance) metrics.

Achievement will depend on the progress made on the Group's Responsible Banking actions lines and associated targets (described below)⁷:

- Women in senior leadership positions by 2025:

Women in senior leadership positions ^B (%)	Coefficient
≥ 36%	1.25
≥ 35% but < 36%	1 – 1.25 ^A
≥ 29.3% but < 35%	0 – 1 ^A
< 29.3%	0

A. Increase of the coefficient is proportional to its position on this line of the scale.

B. Senior leadership positions make up 1% of the total workforce.

- Financial inclusion between 2023 and 2025:

Financial inclusion ^B (millions)	Coefficient
≥ 6	1.25
≥ 5 but < 6	1 – 1.25 ^A
≥ 3 but < 5	0 – 1 ^A
< 3	0

A. Increase of the coefficient is proportional to its position on this line of the scale.

B. Banking proposals for unbanked and underbanked regarding access to basic financial services (i.e.: cash-in/cash-out services in remote locations) or tailored finance (i.e.: for micro-entrepreneurs to set up or grow a business or customers in financial distress).

⁶ TSR refers to the difference (%) between the final and initial values of capital invested in ordinary shares of Banco Santander. The final value is calculated based on the dividends or other similar concepts (such as the Santander Scrip Dividend programme) shareholders receive for this investment during the corresponding period -as if they had invested in more shares of the same type at the first date on which the dividend or similar concept was payable to shareholders- and the weighted average share price at that date. To calculate TSR, the weighted average daily volumes of the weighted average listing prices for the fifteen trading sessions prior to 1 January 2023 (exclusive) is considered (to calculate the initial value) and the fifteen trading sessions prior to 1 January 2026 (exclusive) (to calculate the final value).

⁷ There are thresholds that go beyond current public targets, which should not be considered a revision of them, but a way to further motivate our management team, in order to progress beyond targets on ESG main strategic lines.



3. Green finance and socially responsible investment. This third ESG goal is split into two subcategories: cumulative green finance raised and facilitated between 2019 and 2025 and socially responsible investments AuMs in 2025, with a weight of 70% and 30%, respectively.

Green finance raised and facilitated ^B (EUR Bn)	Coefficient
≥ 240	1.25
≥ 220 but < 240	1 – 1.25 ^A
≥ 160 but < 220	0 – 1 ^A
< 160	0

A. Increase of the coefficient is proportional to its position on this line of the scale.

B. Grupo Santander's contribution to green business: SCIB, Retail & Commercial banking and Digital Consumer Bank. It is measured with cumulative data since 2019.

Socially responsible investments ^B (EUR Bn)	Coefficient
≥ 102	1.25
≥ 100 but < 102	1 – 1.25 ^A
≥ 53 but < 100	0 – 1 ^A
< 53	0

A. Increase of the coefficient is proportional to its position on this line of the scale.

B. Funds registered under article 8 and 9 (SFDR) in the EU, including third-party funds and SAM's Latin American funds that meet equivalent criteria.

4. Reduction of the exposure in thermal coal-related power and mining portfolios:

Thermal coal-related power & mining ^B (EUR bn)	Coefficient
≤ 3.8	1.25
< 5.8 but > 3.8	1 – 1.25 ^A
= 5.8	1
> 5.8	0

A. Increase of the coefficient is proportional to its position on this line of the scale.

B. Credit risk exposure with customers affected by the thermal coal 2030 phase-out target: power generation customers with more than 10% of revenues coming from thermal coal and thermal coal-mining customers.

Each of the four Responsible Banking action lines has the same weighting and this formula to calculate them:

$$C = (1/4 \times \text{Coefficient 1} + 1/4 \times \text{Coefficient 2} + 1/4 \times \text{Coefficient 3} + 1/4 \times \text{Coefficient 4})$$

The following formula will be used to set the annual amount of performance-based deferred variable remuneration in 2027, 2028 and 2029 ('final annuity'), without prejudice to any adjustment deriving from the application of the malus policy (see section 6.3 B v):

$$\text{Final annuity} = \text{Amt.} \times (2/5 \times A + 2/5 \times B + 1/5 \times C)$$

where:

- 'Amt.' is one third of variable remuneration deferred conditional on performance (i.e. Amt. will be 12% of the total incentive set in early 2024).
- 'A' is the RoTE coefficient according to the scale in the table above, based on RoTE at year-end 2025.

- 'B' is the TSR ratio calculated as the scale in the table above, according to the relative performance of Banco Santander's TSR within its peer group in 2023-2025.

- 'C' is the coefficient resulting from the sum of weighted coefficients for each of the four Responsible banking targets for 2025 (see section (c) above).

- In any event, if the result of $(2/5 \times A + 2/5 \times B + 1/5 \times C)$ is greater than 1.25, the multiplier will be 1.25.

The estimated maximum amount to be delivered in instruments to executive directors is EUR 11.5 million.

E) Other terms of the incentive

Payment of the deferred amounts (including those linked to long-term targets) will occur only if they remain in the Group and none of the circumstances triggering malus clauses arise (as per the malus and clawback section in the Group's remuneration policy) under terms similar to those indicated for 2022 (detailed in section 6.3 B v)). Furthermore, the group can claw back paid incentives under the scenarios, period and terms and conditions set out in the remuneration policy.

Hedging the value of Santander shares and share options received during the retention and deferral periods is expressly prohibited.

The effect of inflation on the deferred amounts in cash may be offset.

Selling shares is also prohibited for at least one year since the delivery.

The remuneration committee may propose to the board adjustments in variable remuneration under exceptional circumstances owing to internal or external factors, such as requirements, orders or recommendations issued by regulatory or supervisory bodies. Such adjustments will be described in detail in the report on the remuneration committee and the annual report on directors' remuneration put to a non-binding vote at the annual general meeting.

iii. Shareholdings

As described in section 6.3.E, in addition to the regulatory obligation not to sell shares they receive as remuneration for a year since from their award date, in order to comply with recommendation 62 of the Spanish Corporate Governance Code, the policy on shareholdings includes the obligation for executive directors not to sell the shares they receive as variable remuneration for a period of three years from their award date, unless the executive director already holds Banco Santander shares for an amount equivalent to twice his/her annual salary.

Directors' remuneration for 2024 and 2025

A. Directors' remuneration in their capacity as such

For 2024 and 2025, no changes to directors' remuneration are planned in respect of what is foreseen herein for 2023. However, shareholders at the 2024 or 2025 annual general meeting may approve an amount higher than the six million euros currently in force, or the board may approve an alternative allocation of that amount to directors in accordance with the criteria in article 58.2 of Banco Santander's Bylaws (i.e. duties and responsibilities; positions held on the board;



membership and attendance at committee meetings; and other objective circumstances).

B. Directors' remuneration for the performance of executive duties

Executive directors' remuneration will conform to principles similar to those applied in 2023, with the following changes.

i) Fixed components of remuneration

A) Gross annual salary

Executive directors' annual gross fixed pay may be adjusted each year based on the criteria approved by the remuneration committee at any given time. For 2024 and 2025 and going forward, the proposal of the board, upon recommendation from the remuneration committee, is to increase their annual gross salary by an amount equivalent to 75% of the average salary increase applied to the general workforce in the Group, provided that it may not increase above 5% of their gross annual salary in respect of the previous year.

The 5% increase mentioned above may be higher for one or several directors provided that, when applying the rules or requirements or supervisory recommendations, and if so proposed by the remuneration committee, it is appropriate to adjust their remuneration mix and, in particular, their variable remuneration, in view of the functions they perform.

This should not increase executive directors' total remuneration. Otherwise, it must be disclosed in the report on the remuneration committee and the annual report on director's remuneration put to a non-binding vote at annual general meeting.

B) Other fixed remuneration components

No changes planned in respect of the terms for 2023.

ii) Variable remuneration components

The policy on executive directors' variable remuneration for 2024 and 2025 will be based on the same principles as in 2023, following the same single-incentive scheme described above, and subject to the same rules of operation and limitations.

A) Setting variable remuneration

Executive directors' variable remuneration for 2024 and 2025 will be set based on the corporate bonus pool and a benchmark approved for each year which takes into account:

- a set of short-term quantitative metrics measured against annual objectives and aligned with the Group's strategic plan. These metrics will also cover, at least, shareholder return targets, capital and customers. They can be measured at Group level and, where applicable, at division level, for a specific business division headed by an executive director. The results of each metric can be contrasted with the budget for the financial year, as well as with growth from the previous year.
- a relative performance multiplier in some key metrics (from 0.7 to 1.3) versus our best-in-class peers.
- a qualitative assessment that cannot raise or lower the result of the quantitative metrics and the multiplier above by more than 25%. It will be conducted for the same categories as the quantitative metrics, including risk, compliance, network collaboration and ESG targets.

- an exceptional adjustment that must be duly substantiated and may involve changes owing to control and/or risk shortfalls, negative assessments from supervisors or unexpected material events.

The quantitative metrics, relative performance accelerator, the qualitative assessment and potential extraordinary adjustments will ensure main objectives are considered from the perspective of the various stakeholders and that the importance of risk and capital management is factored in.

Once the corporate bonus pool is fixed according to the criteria above, the board of directors, further to a proposal from the remunerations committee, decides on the individual bonus, taking into consideration the level of achievement of their individual objectives, which in general terms coincide with the bonus pool metrics, their compliance with corporate values and risk culture.

Lastly, the following circumstances must be confirmed to set variable remuneration:

- If ONP does not reach a certain compliance threshold, the incentive cannot exceed 50% of the year's incentive benchmark.
- If the group's ONP were negative, the incentive would be zero.
- When setting individual variable pay, the board will also consider restrictions to the dividend policy imposed by supervisors.

B) Forms of payment of the incentive

The variable remuneration of executive directors for 2024 and 2025, will be paid as follows:

- 50% in cash;
- and 50% in instruments, split as follows:
 - the amount of PagoNxt, S.L. RSUs set for each year (as described below); and
 - the rest, half in shares and half in share options of Banco Santander, S.A.

It is also envisaged that for 2024 and 2025 Ana Botín would receive the equivalent of EUR 500 thousand in RSUs, and Héctor Grisi would receive the equivalent of EUR 420 thousand in RSUs, in accordance with PagoNxt, S.L.'s long term incentive plan. Each RSU would grant the right to a share in PagoNxt, S.L. or the holding entity of its group (or its equivalent in cash) at the moment when, according to such plan, a liquidity event, a repurchase or a liquidation of such instruments takes place.

The RSUs will substitute part of their Santander variable pay instruments without increasing their total pay and will not represent more than 10% of their variable pay in any event.

C) Deferred variable remuneration subject to long-term objectives

The last three annual payments of each deferred variable remuneration amount will be made in accordance with the terms described under section E) above and if the Group fulfils long-term objectives for at least three years. This may confirm,



reduce or increase payment amounts and the number of deferred instruments.

Long-term metrics will, at least, cover value creation and shareholder returns as well as capital and sustainability over a minimum period of three years. They will be aligned with the Group's strategic plan and main priorities towards its stakeholders. They can be measured for the entire Group or by country or business, when appropriate, and subsequently compared to a group of peers.

The portion paid in shares cannot be sold until one year has elapsed since delivery.

D) Other terms of the incentive

No changes to the continuity, malus and clawback clauses of the remuneration policy for 2023 described in section E are expected. Furthermore, no changes are planned in respect of the clauses on hedging instruments or the deferred amounts in cash adjusted for inflation.

iii) Shareholdings

The policy on shareholdings approved in 2016, with the amendment introduced in 2020 relating to not selling the shares they receive as variable remuneration for a period of three years detailed in section 6.3.E above will apply in 2024 and 2025, unless the remuneration committee proposes it be amended to the board in light of exceptional circumstances (regulations, orders or recommendations from regulators or supervisors). Such amendments would be described in detail in the report on the remuneration committee and the annual report on director's remuneration put to a non-binding vote at the annual general meeting.

iv) Principle of equal pay

The same principle of equal pay that applies for executive directors and any other Santander employee described in respect of 2023 apply for 2024 and 2025.

Terms and conditions of executive directors' contracts

Executive directors' terms of service are governed by board-approved contracts they sign with Banco Santander. The basic terms and conditions, besides those relating to the remuneration mentioned above, are the ones described herebelow.

A. Exclusivity and non-competition

Executive directors may not contract with other companies or entities to perform services, unless expressly authorised by the board of directors. In all cases, they are bound by a duty of non-competition in relation to companies and activities similar in nature to Banco Santander and its consolidated group.

In addition, executive director contracts impose prohibitions on competing and attracting customers, employees and suppliers, which can be enforced for two years after their termination in their executive duties for reasons other than a breach by Banco Santander. In regard to Ana Botín and Héctor Grisi, the compensation to be paid by Banco Santander for this duty of non-competition is twice the amount of the fixed remuneration.

B. Code of Conduct

Executive directors are obliged to adhere strictly to the group's General Code and the Code of Conduct in Securities Markets,

especially in terms of confidentiality, professional ethics and conflicts of interest.

C. Termination

The length of executive directors' contract is indefinite. Contracts do not provide for any severance payment upon termination apart from what the law provides.

If Ana Botín's contract is terminated by Banco Santander, she must remain available to the group for four months in order to ensure proper transition. During this period, she would continue to receive her gross annual salary.

D. Benefit plans

Executive directors participate in the defined contribution pension scheme created in 2012. It covers retirement, disability and death. Banco Santander makes annual contributions to executive directors' benefit plans schemes. Annual contributions are calculated in proportion to executive directors' pensionable bases, and the Group will continue to make them until the executive directors' leave the Group or until their early retirement within the Group, their death or disability (including during pre-retirement). The pensionable base of executive directors' annual contributions is their fixed remuneration plus 30% of the average of their last three variable remuneration amounts. For Héctor Grisi, the average for the first three years will be calculated according to these criteria:

- For 2023, his gross variable remuneration agreed in that exercise.
- For 2024, the average of his gross variable remuneration agreed for 2023 and 2024 exercises.
- For 2025, the average of his gross variable remuneration agreed for 2023, 2024 and 2025 exercises.

Contributions will be 22% of pensionable bases.

The pension amount that corresponds to contributions linked to variable remuneration will be invested in Santander shares for five years from the earlier of the date of retirement or cessation. It will be paid in cash after the five years have elapsed or on the retirement date (if later). Moreover, the malus and clawback clauses for variable remuneration contributions will apply for the same period as the related bonus or incentive.

This benefit plan is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A. Executive directors' economic rights under the scheme belong to them even if they are not active in the group at the time of their retirement, death or disability. Their contracts do not provide for any severance pay upon termination apart from what the law provides and in the case of pre-retirement, the aforementioned annual allotment.

E. Insurance and other remuneration and benefits in kind

Ana Botín will receive the supplement to their fixed remuneration approved when the supplementary life and health benefits were eliminated in 2018. It will be paid in 2023, 2024 and 2025 in the same amount and continue to be paid until they reach retirement age (even if they are still active).

The Group has life and health insurance policies taken out for directors. Insurance premiums for 2023 include standard life insurance and the life insurance cover with the supplement to



their fixed remuneration mentioned above. In 2024 and 2025, premiums could vary if directors' fixed pay or actuarial circumstances change.

Furthermore, executive directors are covered by Banco Santander's civil liability insurance policy and may receive other benefits in kind (such as employee loans) pursuant to the group's general policy and subject to the corresponding tax treatment.

Likewise, the Bank makes available to directors the human and material means required or considered appropriate for carrying out their duties (including any travel required for the exercise of their role). Any eventual private use of these means by the executive directors is duly paid by them under the similar terms and conditions that would be applied to third independent party under the supervision of the audit committee

F. Confidentiality and return of documents

Directors are bound to a strict duty of confidentiality during their relationship and subsequent to termination. Executive directors are required to return any documents and items relating to their activities and in their possession to Banco Santander.

Agreements with non-executive members of the board

José Antonio Álvarez signed a contract to become a strategic adviser to Grupo Santander, effective on 1 January 2023. The contract stipulates that Mr Álvarez will aid in the handover to the new CEO and attend executive risk committee meetings and engaging supervisors, international bodies, sector organizations and others in institutional matters as necessary. Mr Álvarez will receive fixed remuneration of EUR 1,750 thousand. For this contract, he will retain some of the benefits he enjoyed under his former contract, including health and life insurance, and the supplement he had been receiving for having waived the death and disability policy in the amount stated under section 6.3 (see "Other remuneration" in table 6.3 G) of this Annual Report. Moreover, the post-contractual non-compete commitment in his previous contract will remain in force until this one expires. He will not be entitled to any other payment in connection with the termination of this contract.

Luis Isasi has a contract since 4 April 2020 to act as non-Executive Chair of the board of Santander España (for which he receives EUR 925 thousand a year) and to serve as a member of the board of Santander España (for which he receives EUR 75 thousand a year). His contract is permanent and does not entitle him to any compensation if terminated.

Appointment of new executive directors

The components of remuneration and basic structure of the agreements described in this remunerations policy will apply to any new director that is given executive functions at Banco Santander, notwithstanding the possibility of amending specific terms of agreements so that, overall, they contain conditions similar to those previously described.

Directors' total remuneration for executive duties cannot exceed the highest remuneration received by the group's current executive directors under the remuneration policy approved by shareholders. The same rules apply if a director assumes new duties or becomes an executive director.

If a director takes up executive functions in a specific division or local unit, the board of directors, on the remuneration committee's recommendation, can adapt the metrics for setting and paying incentives to take that division or local unit into account in addition to the Group.

Remuneration paid to directors in that capacity will be included within the maximum amount set by shareholders to be distributed by the board of directors in the terms described above.

A new director coming from an entity outside Santander Group could be paid a buyout to offset any variable remuneration foregone for having accepted a contract with the group; and/or a sign-on bonus for leaving to join Banco Santander.

This compensation could be paid fully or partly in shares, depending on the delivery limits approved at the annual general shareholders' meeting. Authorization is expected to be sought at the next general shareholders' meeting in order to deliver a maximum number of shares to any new executive directors or employees to whom buyout regulations apply.

Furthermore, sign-on bonuses can only be paid once to new executive directors, in cash or in shares, and in each case they will not exceed the sum of the maximum variable remuneration awarded for all executive directors.

Mr Grisi's appointment as CEO (with effect from 1 January 2023) did not entail a buyout or sign-on bonus since he was already part of Grupo Santander.

Temporary exceptions to the remuneration policy

According to section 6 of Article 529 *novedecies* of the Spanish Companies Act, specific exceptions may apply to components in the remuneration policy, based on particular business needs or macroeconomic context in the Group's geographies, provided that they are required to serve the long-term interests and sustainability of the entity; ensure its viability; and require to be adopted urgently.

Such exceptions include:

- Complex macroeconomic scenarios where the ordinary course of the business is severely impacted.
- The appointment of a new Executive Chair or chief executive officer, or the need to retain an executive director to avoid a vacancy at the head of the Group (*vacatio regis*) during especially complex times for the business.
- The need to adapt to regulatory change.

To apply, exceptions must be supported by:

- a reasoned remuneration committee proposal; and
- board of directors analysis and approval.

Any applied exception will be explained in the *Annual report on directors' remuneration*.



6.5 Preparatory work and decision-making for the remuneration policy; remuneration committee involvement

Section 4.7 'Remuneration committee activities for 2022', (the report on the remuneration committee) states:

- Pursuant to Banco Santander's Bylaws and the Rules and regulations of the board of directors, the duties relating to the remuneration of directors performed by the remuneration committee.
- How the remuneration committee is composed on the date the report is approved.
- The number of meetings it had in 2022, including joint sessions with the risk, compliance and regulation supervision committee.
- The date of the meeting in which the report was approved.

The 2021 annual report on directors' remuneration was approved by the board of directors and put to a binding vote at the 2022 AGM, with 88.01% of the votes in favour. The tally of the votes was:

	Number	% of total ^A
Votes	11,589,809,297	97.18 %
	Number	%
Votes for ^B	10,193,385,775	88.01 %
Votes against ^B	1,389,271,674	11.99 %
Blank ^C	7,151,848	0.06 %
Abstentions ^C	336,389,901	2.82 %

A. Percentage on total valid votes and abstentions.

B. Percentage of votes for and against.

C. Percentage of share capital present and attending by proxy at the ordinary shareholders' meeting.

Decision process for the development, review and application of the policy

Pursuant to Article 529 *novodecies* of the Spanish Companies Act, the remuneration committee issues the report on the proposed remuneration policy for 2023, 2024 and 2025 herein. The board of directors then submits it to the 2023 AGM as a separate item on the agenda and an integral part of this text. See section 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote'.

Banco Santander's Compensation function prepares the remuneration policy with the suggestions, requests and comments received during the year from the human resources committee, remuneration committee and the board of directors. A first draft of the policy is submitted to the remuneration committee for review every January. The review considers the suggestions, requests and comments the Chair and lead independent director receive through shareholder and stakeholder engagement during the year on our corporate governance and our remuneration structures. Regulators' recommendations and legal requirements that may have come to light since the last time the director remuneration policy was

submitted for approval by the annual general meeting are also considered.

The committee also makes sure the policy is consistent with the Group's culture and our Simple, Personal and Fair values. The Compensation function then prepares the final draft for the remuneration committee to submit to the board of directors for approval in February.

Based on the analysis carried out in the context of the 2022 annual remuneration report elaboration and its continued supervision of the remuneration policy, the remuneration committee believes the director remuneration policy for 2023, 2024 and 2025 which is included in section 6.4 above is consistent with the principles of Banco Santander's remuneration policy and its remuneration scheme set out in the Bylaws.

The policy aims, among other aspects, (i) to maintain a simple executive remuneration scheme, with three categories of quantitative metrics (business transformation, sustainable profitability and capital) to further align with value creation and capital generation; (ii) outperform peers in value creation aspects; and, (iii) regarding metrics linked to multiyear objectives, to prioritize long-term profitability for shareholders and Santander and a sustainable balance sheet (total shareholder return, RoTE and ESG-related metrics related to our responsible banking targets) in order to follow best market practice and meet our stakeholders' needs.

In 2022, no deviations from, or temporary exceptions to, the application of the remuneration policy occurred.

6.6 Remuneration of non-director members of senior management

2022 variable remuneration was approved by the board of directors on 31 January 2023 in view of the recommendation from the 30 January 2023 remuneration committee. It was set according to Banco Santander's general remuneration policy as well as specific details pertaining to senior management.

In general, senior management variable remuneration packages were calculated with the quantitative metrics and qualitative assessment used for executive directors (see section 6.3 B ii).

Some contracts of members of senior management were amended in 2018 in the same manner described under 6.3.D in respect of Ana Botín, with a pension scheme of 22% of their pensionable bases, the elimination of supplementary benefits, an increase of the insured sum of life insurance and a supplement to fixed remuneration in cash which is included under "Other remuneration".

The following table shows the amounts of short term remuneration (immediately payable) and deferred remuneration (not linked to multi year targets) for senior management as of 31 December 2022 and 2021, excluding those of executive directors. This amount has been reduced by 35% compared to that reported in 2014 (EUR 80,792 thousand):



EUR thousand

Year	Number of people	Short-term and deferred salary remuneration					Total
		Fixed	Immediately receivable variable remuneration (50% in shares) ^A	Deferred variable remuneration (50% in shares) ^B	Pension contributions	Other remuneration ^C	
2022	14	18,178	15,466	6,797	5,339	6,956	52,736
2021	15	19,183	16,804	7,296	5,542	5,055	53,880

A. The amount immediately payable in shares in 2022 was 2,504 thousand Santander shares (2,707 thousand Santander shares in 2021).

B. The amount of deferred shares in 2022 was 1,101 thousand Santander shares (1,175 thousand Santander shares in 2021).

C. Includes life insurance premiums, health insurance and relocation packages, other remuneration items and RSUs of PagoNxt S.L., as members of board of directors of this entity.

This table breaks down remuneration linked to multi-year targets for senior management (excluding executive directors) at 31 December 2022 and 2021, which they will only receive if they meet the terms of continued service; non-applicability of malus clauses; and long-term goals are met during deferral periods.

Year	Number of people	Thousands of euros	
		Deferred variable remuneration subject to long-term metrics ^A (50% in shares) ^B	
2022	14		7,137
2021	15		7,660

A. In 2022, this corresponds to the fair value of maximum annual payments for 2026, 2027 and 2028 in the seventh cycle of the plan for deferred variable remuneration linked to multi-year targets. In 2021, this corresponds to the estimated fair value of maximum annual payments for 2025, 2026 and 2027 in the sixth cycle of the plan for deferred variable pay linked to multi-year targets. Fair value in the plan was determined on the authorization date based on the valuation report of independent expert Willis Towers Watson. Based on the plan for 2022 and success levels of similar plans at peer entities, the fair value was considered to be 70% of the value linked to long-term metrics.

B. The number of shares in Santander as deferred variable pay subject to long-term metrics shown in the table above was 1,156 thousand in 2022 (1,234 thousand shares in Santander in 2021).

The long-term goals are the same as those for executive directors. They are described in section 6.3 B iv).

Additionally, senior executives who stepped down from their roles in 2022 consolidated salary remuneration and other remuneration for a total amount of EUR 3,691 thousand (EUR 5,294 thousand in 2021). They also have the right to receive, in total, EUR 447 thousand in variable pay subject to long-term objectives (this right has been generated in 2021 for a total amount of EUR 55 thousand).

The board of directors approved the 2022 Digital Transformation Incentive which is a variable remuneration scheme split in two different blocks:

- the first one, with the same design as in previous years, that delivers Santander shares and share options if the Group hits major milestones on its digital roadmap. This is aimed at a group of up to 250 employees whose functions are deemed essential to Santander's growth. No senior executives are included within this plan in 2022.
- And the second one, which delivers PagoNxt, S.L. RSUs and premium priced options (PPOs), and is aimed at up to 50 employees whose roles are considered key to PagoNxt's success, including 1 senior executive who will receive EUR 500 thousand under it.

See [Note 46](#) to the 2022 Group's consolidated financial statements for further information on the Digital Transformation Incentive.

In 2022, the ratio of variable to fixed pay components was 120% of the total for senior managers, well within the maximum limit of 200% set by shareholders.

See [note 5](#) of the Group's 2022 consolidated financial statements for further details.

6.7 Prudentially significant disclosures document

On the remuneration committee's recommendation, the board approves the key remuneration elements of managers or employees who, while not belonging to senior management, take on risks, carry out control functions (i.e. internal audit, risk management and compliance) or who receive global remuneration that places them in the same remuneration bracket as senior management and employees who take on risk. These are typically those whose professional activities may have an important impact on the Group's risk profile (all of these, together with the senior management and Banco Santander's board of directors form the so called 'Identified Staff' or 'Material Risk Takers')

Every year, the remuneration committee reviews and, where applicable, updates identified staff in order to include individuals within the organization who qualify as such. The Remuneration Policies chapter in the 2022 Pillar III disclosures report⁸ of Banco Santander, S.A. explains the criteria and regulations followed to identify such staff.

At the end of 2022, 1,029 Group executives (including executive directors and non-director senior managers) were considered identified staff (1,018 in 2021), which accounts for 0.50% of the total final workforce (0.52% in 2021).

Identified staff have the same remuneration standards as executive directors (see sections 6.1 and 6.3), except for:

- Category-based deferral percentages and terms.
- The possibility in 2022 of certain less senior manager categories of only having deferred variable pay subject to malus and clawback clauses (and not to long-term targets).

⁸ The 2022 Pillar III disclosures report can be found on our corporate website.



- The portion of variable remuneration paid or deferred as shares for Group executives in Brazil, Chile and Poland that can be delivered in shares or similar instruments of their own listed entities (as in previous years).

In 2023, the board will maintain its flexibility to determine full or partial payment in shares or similar instruments of Banco Santander and its subsidiaries in the proportion it deems appropriate (according to the maximum number of Santander shares allocated at the general meeting and to any regulatory restrictions in each jurisdiction).

The aggregate amount of variable remuneration for identified staff in 2022, the amounts deferred in cash and instruments, and the ratio of the variable to fixed remuneration components are explained in the remuneration policies chapter of Banco Santander's Pillar III disclosures report for 2022.



7. Group structure and internal governance

Grupo Santander is structured into legally independent subsidiaries whose parent company is Banco Santander, S.A. Its registered office is in Santander (Cantabria, Spain), while its corporate centre is located in Boadilla del Monte (Madrid, Spain). It has a Group-Subsidiary Governance Model (GSGM) and good governance practices in place for its core subsidiaries. Any references to subsidiaries in this section are to the Group's most prominent entities.

The key features of the GSGM are:

- The subsidiaries' governing bodies must ensure their rigorous and prudent management and economic solvency while pursuing the interests of their shareholders and other stakeholders.
- The subsidiaries are managed locally by teams that possess extensive knowledge on, and experience with, their customers and markets, while benefiting from the synergies and advantages of belonging to the Group.
- The subsidiaries are subject to local authority regulation and supervision, although the ECB supervises the Group overall.
- Customer funds are secured by the deposit guarantee schemes in the subsidiaries' countries and are subject to local laws.

The subsidiaries finance their own capital and liquidity. The Group's capital and liquidity are coordinated by corporate committees. Intra-group risk transactions are limited, transparent and carried out under market conditions. Grupo Santander retains a controlling interest in subsidiaries listed in certain countries.

Each subsidiary runs independently and has its own recovery plan, limiting the contagion of risk between them and reducing systemic risk.

7.1 Corporate Centre

Banco Santander's GSGM is supported by a corporate centre, which brings control and support units together with such functions as strategy, risk, compliance, auditing, finance, accounting, technology and operations, human resources, legal services, internal governance, communications and marketing. It adds value to the Group by:

- enhancing governance under robust corporate frameworks, models, policies and procedures to implement strategies and ensure effective Group oversight;
- making the Group's units more efficient through cost management synergies, economies of scale and a common brand;

- sharing best practices in global connectivity, commercial initiatives and digitalization; and
- ensuring the "know your structure" governance principle is effectively applied with a Procedure for appointing key positions and assessing suitability that applies to the entire Group.

7.2 Internal governance

Grupo Santander's internal governance model outlines a set of principles that regulate three types of relationships with its subsidiaries:

- The subsidiaries' governing bodies are subject to the Group's rules and procedures for structuring, forming and running boards of directors and audit, nomination, remuneration and risk committees, according to international standards and good governance practices. This includes embedding other Group rules and regulations on the suitability, appointment, remuneration and succession plans of governing body members, which fully comply with local regulations and supervisory standards.
- The relationship between regional and country heads and the Group CEO.
- The relationship between local and global heads of key control positions, following a three lines of defence model: chief officers for risk (CRO), compliance (CCO), audit (CAE), finance (CFO) and accounting (CAO), as well as other key support and business functions (Technology and Operations, HR, General Counsel, Legal Services, Marketing, Communications, Strategy, SCIB, Wealth Management & Insurance and Global Cards and Digital Solutions).

The Group has three regional heads who report to the Group CEO and are responsible for consolidating and streamlining the management and coordination of its core subsidiaries in the three geographic areas where it operates: Europe, South America and North America. They must undertake their key responsibilities in compliance with European Union and country-specific laws and regulations, and ensure that the country heads' role and accountability (including regulatory responsibilities) are not undermined.

Since 2020, the Europe region (Spain, Portugal, Poland and the UK) has had the mandate to execute a pan-European operating model to deliver benefits of scale and efficiency that leverage common product and regional management structures in those countries. Specific coordination elements and organizational structures were defined to ensure the effective discharge of the Europe regional head's responsibilities, fully respecting local



governance. Business and functional roles were also created to support and control those responsibilities.

The GSGM dictates rules for appointing those officers, setting their objectives (weighted 50% local and 50% group/regional) and variable pay, assessing their performance and planning their succession. It also explains how Group officers should coordinate and interact with their subsidiary counterparts.

Grupo Santander has corporate frameworks for matters considered to have a material impact on its risk profile. They cover risk, capital, liquidity, compliance, financial crime, technology, auditing, accounting, finance, strategy, human resources, outsourcing, cybersecurity, special situations management communications and brand and Responsible banking. Our frameworks also specify:

- how the Group should supervise and exert control over subsidiaries; and
- the Group's involvement in subsidiaries' decision-making (and vice versa).

The Banco Santander board approves the GSGM and corporate frameworks for the subsidiary governing bodies to formally adhere to them. They consider subsidiaries' local requirements and are revised every year as required by the Group board to adapt to new legislation and international best practices.

The functions draw on corporate frameworks to prepare internal regulatory documents that are given to subsidiaries as a reference for implementing those frameworks effectively, cohesively and in compliance with local laws and supervisory requirements. This approach ensures consistency throughout the Group. Every year, the functions conduct an assessment to ensure that the Group's internal regulations are embedded locally and carry out an annual certification process to ensure the internal regulation under their scope is fit for purpose. The internal governance office presents the findings to the board of directors.

The Group's internal governance office and subsidiary general counsels are responsible for embedding the governance model and corporate frameworks. Every year, the Group assesses their performance in reports sent to governing bodies.

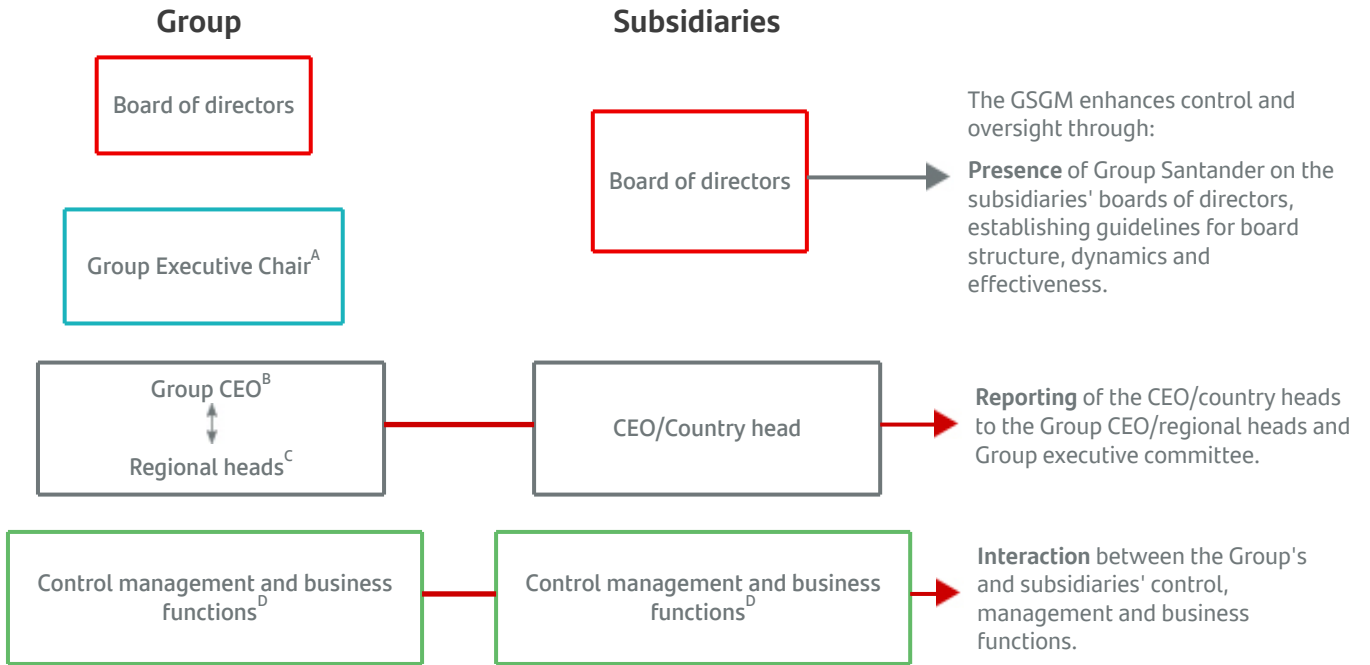
Since 2019, a policy on the governance of non-GSGM subsidiaries has enhanced the governance and control system that has been applied to those companies thus far.

PagoNxt, a wholly-owned subsidiary of Banco Santander structured as a dedicated holding company with a set of key initiatives on digitalizing the Group's financial services and with payments at its core, has had its own governance model since 2020. This model sets out an organizational and governance framework for PagoNxt and its subsidiaries against the backdrop of Group-wide arrangements. It covers the scope, principles, roles and responsibilities, key processes and governance bodies that should be in place to ensure that PagoNxt is managed in alignment with Group, legal and supervisory expectations.

Also since 2020, Santander Corporate and Investment Banking (SCIB) and Wealth Management and Insurance (WM&I) have had specific governance models to ensure robust, Group-wide oversight of those businesses as set out in the GSGM. In 2022, a new global business has been created for Global Cards and digital solutions with a similar governance model and approach to those of SCIB and WM&I.

In 2022, the Group decided to review the Digital Consumer Bank (DCB) governance model to streamline its governance arrangements given the already high degree of board membership overlap of Openbank and Santander Consumer Finance, whilst fully respecting the distinct nature of the legal entities that these banking subsidiaries need to discharge. This facilitates a more efficient operation of the DCB governance and helps ensure ongoing governance effectiveness.

The following charts show the three levels of the GSGM, as well as the main actions to ensure an effective relationship and solid internal governance system for the Group.



A. First executive.
 B. Second executive, who reports to the board of directors.
 C. Europe, North America and South America, reporting to Group CEO.
 D. Audit, Risk, Compliance, Finance, Financial Accounting & Control, IT & Operations, Human Resources, General Secretariat, Marketing, Communications, Strategy, Santander Corporate & Investment Banking and Wealth Management & Insurance.

<p>Best practices and talent sharing across the whole Group and between subsidiaries is key to our success.</p>	<p>Multiple point of entry structure that has proved to be a key resilience instrument and is a result of our diversification strategy.</p>	<p>Continuous collaboration and daily interaction between local and corporate teams.</p>
<p>A common set of corporate frameworks and policies across the Group adapted to local market conditions.</p>	<p>Synergies and economies of scale across the Group.</p>	<p>Planning and implementation of new Group-wide and local initiatives to keep developing our management and control model.</p>



8. Internal control over financial reporting (ICFR)

This section describes the key aspects of Grupo Santander's ICFR in respect of financial reporting. It includes:

- control environment.
- risk assessment in financial reporting.
- control activities.
- reporting and communication.
- system monitoring.
- the external auditor's report.

8.1 Control environment

Governance and control bodies

The board of directors approves the financial reports Banco Santander must publicly disclose as a listed company. It is the body that oversees and guarantees the integrity of the Group's internal information and communication systems. The abovementioned includes the operational and financial control and legal compliance.

The board of directors has an audit committee that assists with supervising the Group's financial reporting and internal control systems. See section [4.5 'Audit committee activities in 2022'](#).

The audit committee works with the external auditor to address every aspect that impacts on the ICFR identified in audits. It also makes sure the external auditor issues a report on the Group's system for ICFR.

Responsibilities, General Code of Conduct, whistleblowing channel and training

Lead functions

Grupo Santander, through its corporate organization function, countries and businesses, draws up, implements and maintains the units' organizational structures, catalogue of roles and size. The corporate Costs & Organization function sets out and documents the corporate model for managing structures and workforces, which is used as a reference across the Group.

The organizational units are in charge of identifying and drawing-up the main functions under the responsibility of each structural unit, ensuring that the organization has a solid ICFRS model.

Grupo Santander has implemented a responsibility scheme to identify potential risks and their mitigating controls under a three-pronged defence model (business, risks and internal

audit) that establishes lines of authority and accountability including:

The head of the financial accounting and control function (Chief Accounting Officer) of the countries and businesses, which has the following functions concerning the generation of financial information, amongst others:

- Integrating the Group's corporate accounting policies into its management and adapting them to local needs.
- Ensuring that appropriate organizational structures are in place to carry out the tasks assigned, as well as a suitable hierarchical-functional structure.
- Running critical procedures (control models) based on corporate technology.
- Implementing the corporate accounting and management information systems and adapting them to the specific needs of each unit.

In order to preserve its independence, the subsidiaries' CAO reports hierarchically to the head of the entity or country in which it exercises its responsibilities (country head) and functionally to the head of the Group's Financial Accounting and Control division.

The corporate Non-Financial Risk Control function is responsible for:

- establishing and circulating the methodology for documenting the Group's Internal Control System (ICS) and its evaluation and certification, which covers the ICFRS and other regulatory and legal requirements. Grupo Santander's ICS makes sure the board of directors, senior managers and other Group staff can provide reasonable assurance they will achieve their objectives.
- encouraging document maintenance to align with organizational and regulatory changes and, alongside the Financial Accounting and Control division and representatives of the divisions and/or companies involved (where applicable), to present the ICS evaluation to the audit committee. Similar functions in each unit report to the corporate Non-Financial Risk control area.

General Code of Conduct (GCC)

The Group's GCC sets out board approved guidelines employees' conduct, accounting standards and financial reporting. The GCC can be viewed on our corporate website.

All the Group's employees, including members of its governance bodies, adhere to the Code of Conduct, even though some are



also subject to the Code of Conduct in Securities Markets and other codes of conduct specific to their area or business.

Santander employees have access to e-learning courses on the GCC. The Compliance and Conduct function answer employees' queries on ethics and rules in the GCC.

The Human Resources function is the one competent to take disciplinary measures due to GCC's breaches and to recommend corrective actions (including labour-related sanctions), irrespective of any related administrative or criminal penalties.

In 2022, the board amended the GCC, with new sections on use of social media and control of individual employee expenses in connection with their professional activity for the Group. See the 'General Code of Conduct' section [3.2 'Conduct and ethical behaviour'](#) in the 'Responsible banking' chapter.

Canal Abierto

Banco Santander's ethical channel is called Canal Abierto. It is a confidential and anonymous means for employees to report unlawful acts, violations of the GCC and other behaviour contrary to corporate values. The channel enable communications by other people related to Banco Santander other than employees, such as shareholders, customers, suppliers and other third parties, ensuring that they are treated confidentially and anonymously. The Canal Abierto can be found on our corporate website.

It can also be used to report accounting or auditing irregularities under Sarbanes-Oxley (SOX) to the Compliance and Conduct function, which will forward them to the audit committee for appropriate measures to be taken. Only certain Compliance and Conduct function officers analyse reports to determine if matters pertain to accounting or auditing in order to submit them to the audit committee.

Canal Abierto is supervised jointly by the audit committee and the risk supervision, regulation and compliance committee, depending on the subject of the complaint. The SOX attributes the authority to supervise the such channel to the audit committee in matters that fall under its remit (specifically financial and accounting, including those audit related), while the risk supervision, regulation and compliance committee oversees reports of breaches of regulatory requirements, corporate behaviours and internal governance.

For more details on the number of complaints filed on the channel and their type, see the 'Ethical Channels' section in [3.2 'Conduct and ethical behaviour'](#) in the 'Responsible banking' chapter.

Training

Group employees who help prepare or analyse financial information take part in training programmes and regular refresher courses specifically designed to teach them the concepts and skills they require to discharge their duties properly.

The participating functions of the SCIIF promotes, designs and oversees these programmes and courses. It has support from the Human Resources function.

Training takes the form of both e-learning and on-site sessions monitored and overseen by the Human Resources function to

guarantee that employees duly complete them and learning properly.

Training programmes and refresher courses in 2022 have focused on matters directly and indirectly relating to financial reporting: (i) risk analysis and management; (ii) accounting and financial statement analysis; (iii) the business, banking and the financial environment; (iv) financial management, costs and budgeting; (v) mathematical skills; and (vi) calculations and statistics.

56,090 employees in the all the Group's markets completed training programmes. Over 395,000 training hours were spent at the corporate centre in Spain and remotely via e-learning. Furthermore, local units develop their own training programmes based on Banco Santander's.

8.2 Risk assessment in financial reporting

The Group has a specific process to identify the companies that must be included in its scope of consolidation, which the Financial Accounting and Control division and the General Secretariat division oversee.

This process enables us to identify the entities that Grupo Santander controls through voting rights that grant direct or indirect ownership of their capital and through mutual funds, securitization funds, structured entities and other means. We analyse whether the Group has control over an entity, whether it has rights to the variable returns of the entity or is exposed to them, and whether it can influence the amount of such variable returns. If the Group is considered to have control, the entity is included in the scope of consolidation under the global integration method.

Otherwise, we analyse whether there is significant influence or joint control. If so, the entity is also included in the scope of consolidation and measured using the equity method.

For entities with the greatest impact on the preparation of the Group's financial information, we implement an ICS using a homogeneous methodology to make sure the relevant controls are included and all significant risks to financial reporting are covered.

The Group's ICS complies with the strictest international standards, particularly the guidelines of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) set out in its last published Internal Control framework in 2013, which covers control targets for effective and efficient operations, reliable financial reporting and regulatory compliance.

The risk identification process considers all the Group's activities, the scope of which is greater than all the risks directly related to the preparation of the Group's financial information.

The identification of potential risks that must be covered by the ICS is based on management's knowledge and understanding of the business and its operations in relation to the importance and qualitative criteria associated with the type, complexity or structure of the business.

Banco Santander ensures there are controls to cover risks of errors and fraud in financial reporting, as well as risks that may concern (i) the existence of assets, liabilities and transactions at



the relevant date; (ii) whether the items are assets or rights or liabilities and obligations of the Group; (iii) the timely and correct recording and proper valuation of assets, liabilities and transactions; and (iv) the correct application of accounting principles and rules, as well as appropriate breakdowns.

The main features of the Group's ICS are:

- It is a corporate model that involves the entire organizational structure through a direct set of individual responsibilities.
- Management of the ICS documents is decentralized to the various units, while coordination and monitoring falls to the non-financial risk control area, which provides general criteria and guidelines to standardize procedure documents, control assessments, criteria for classifying potential deficiencies and regulatory adaptations.
- It is a global model primarily aimed at documenting activities to produce consolidated financial information and other procedures carried out by each entity's support areas that, without having a direct impact on the accounts, could lead to possible losses or contingencies in the event of incidents, errors, breaches of regulations and/or fraud.
- It is dynamic and is under constant evolution in order to reflect the reality of the group's business, risks and controls to mitigate them.
- It produces comprehensive documents on the processes within its scope and includes detailed descriptions of operations, assessment criteria and reviews.

All ICS documents of the Group's companies are compiled on a corporate IT application that is used by employees of different levels of responsibility in the assessment and certification of the Group's internal control system.

8.3 Control activities

Revision and approval of financial information

The audit committee and the board of directors oversee the preparation and submission of the financial information required of Banco Santander and the Group, which includes the non-financial information and its integrity, and the compliance with regulatory requirements, the scope of consolidation and the correct application of accounting standards, ensuring that such information is permanently updated on corporate website.

The production, revision and approval of financial information and the description of ICFR is documented in a corporate tool that integrates the control model into risk management, including a description of activities, risks, tasks and controls associated with all operations that may have a significant effect on the financial statements. This documentation covers recurrent banking operations and one-off transactions and aspects related to judgements and estimates to correctly record, evaluate, present and break down financial information.

The audit committee is responsible for reporting to the board on the financial information that the Group must publish regularly, ensuring that it is prepared in accordance with the same principles and practices as the annual accounts and is as equally reliable as the financial statements for the board to adopt the corresponding resolutions.

The most significant aspects when closing and reviewing relevant judgements, estimates, measurements and projections are:

- Impairment losses on certain assets.
- The assumptions used in the actuarial calculation of post-employment benefit liabilities and other obligations.
- The useful life of tangible and intangible fixed assets.
- The valuation of consolidation goodwill.
- The calculation of provisions and contingent liabilities.
- The fair value of certain unquoted assets and liabilities.
- The recoverability of tax assets.
- The fair value of acquired identifiable assets and the liabilities assumed in business combinations.

Grupo Santander also has a corporate accounting and financial management information committee, which is responsible for governing and supervising accounting, financial management and control, and ensuring that these matters are disclosed in accordance with law and such disclosure is fair, accurate and not misleading.

The Non-financial Risk Control area checks potential changes in the Group's control environment to make sure the ICS operates correctly. Annual pyramid assessment and certification of the ICS help the area review the criticality of risks and the effectiveness of controls. The process begins with an assessment of control activities by those responsible for them. The assessment is then challenged and ratified by senior officers, so that the CEO, CFO and CAO can confirm the ICS's effectiveness.

Grupo Santander also has an internal control forum chaired by the heads of the Risk and Financial Accounting & Control divisions. It continuously monitors the Group's control environment and ICS strategy and performance.

Internal control policies and procedures for IT systems

The Technology and Operations division draws up the Group's corporate policies on IT systems used directly or indirectly in relation to the financial statements. These systems implement special internal controls to prepare and post financial information correctly.

The internal control on these matters are particularly important:

- Updated and divulged internal policies and procedures for system security and access to applications and computer systems according to functions and ratings of each unit/role.
- The Group's methodology, under which new applications are developed and existing applications are maintained or adapted through a circuit that formulates, develops and tests them so as to treat financial information reliably.
- Once applications are developed according to regularly defined requirements (detailed documentation of processes to be implemented), they are run through comprehensive tests by a specialist development laboratory.



- Before they are rolled out, a complete software testing cycle is run in a pre-production computerized environment that simulates real situations. Testing includes technical and functional tests, performance tests, user-acceptance tests and pilot and prototype tests, which are defined by the entities.
- The Group's continuity plans for key functions in disasters or other events that could suspend or disrupt operations, as well as highly automated back-up systems that support critical systems and require little manual intervention owing to redundant systems, high availability systems and redundant communication lines.

Internal control policies and procedures for outsourced activities and valuation services from independent experts

The Group's action framework and specific policies and procedures fittingly cover outsourcing risks. All Group companies must adhere to this framework, which meets the EBA's requirements for outsourcing and risk management with third parties. It consists of:

- Tasks to initiate, record, process, settle, report and account for transactions and asset valuations.
- IT support in terms of software development, infrastructure maintenance, incident management, security and processing.
- The provision of other material support services not directly related to financial reporting, such as supplier management, property management and HR management, amongst others.

Key control procedures include:

- Documenting relations between Group companies with comprehensive service agreements.
- Documentation and validation by the Group's service providers of processes and controls for the services they perform.
- External suppliers undergoing an approval process to ensure that the relevant risks associated with the services they provide remain within acceptable levels, in accordance with the Group's risk appetite.

Grupo Santander reviews estimates internally according to its control model guidelines. It will hire a third party to help with specific matters upon confirming their expertise and independence and approving their methods and rationale of assumptions through relevant procedures.

Furthermore, there are controls that make sure information relating to external suppliers of services that could affect the financial statements is accurately and comprehensively detailed in service level agreements.

Responsible function for accounting policies

The Financial Accounting and Control division has an area called Regulation Accounting, which has the following responsibilities:

- To set out how the transactions that constitute Banco Santander's activity are accounted for in accordance with their economic nature and the regulations governing the financial system.

- To draw up and keep up-to-date the Group's accounting policies and resolve any queries or conflicts arising from their interpretation.
- To enhance and standardize the Group's accounting practices.

The corporate accounting and financial reporting and management framework sets out the principles and guidelines to prepare accounting, financial and management information that must apply to all Grupo Santander entities as a key element of their good governance.

Grupo Santander's structure makes it necessary to establish these principles and standard guidelines for their application, and for each of the Group entities to have effective consolidation methods and employ homogeneous accounting policies. The framework's principles are reflected appropriately in the Group's accounting policies.

Accounting policies should be understood as a complement to local financial and accounting rules. Their overarching aims are (i) for statements and financial information to be available to management bodies, supervisors and other third parties, providing accurate and reliable information for decision-making in relation to the Group, and (ii) timely compliance with legal obligations by all Group entities.

Accounting policies are revised at least once a year and when relevant regulations are amended.

Every month, the Accounting Policies area publishes an internal bulletin on new accounting regulation and their most significant interpretations.

The Group entities, through their operations or accounting heads, maintain open communication with the Regulation Accounting area, as well as with the other areas of the Financial Accounting and Control division.

8.4 Information and communication

The CAO meets with the audit committee at least every quarter to submit the Group's financial statements for validation. He explains the criteria used to make important estimates, assessments and conclusions.

The Non-financial Risk Control area prepares detailed reports on the Group's control environment and mitigation plan developments at least every quarter and makes them available to the internal control forum.

The Non-financial Risk Control area, the Finance & Management Control division and, if necessary, representatives of concerned divisions and companies, present the findings of the ICS assessment to the audit committee at least every half-year after first presenting them to the risk control committee.

The Non-financial Risk Control area also prepares a report on the main conclusions on units' ICS assessment and major shortcomings uncovered during the year. It is additional information for management and the audit committee that details corrected shortcomings and plans in place to correct others. It also includes all information that CEO, CFO and CAO need to confirm the effectiveness of the SCL.



8.5 Monitoring

2022 ICFR monitoring activities and results

The board of directors approved an internal audit framework that details the function and how it should conduct its work.

Internal Audit is a permanent, independent function that guarantees the quality and effectiveness of internal control, risk management (current or emerging) and governance processes and systems, thus contributing to the protection of the organization's value, solvency and reputation as well as the board of directors and senior managers. It reports to the audit committee and periodically, at least twice a year, to the board of directors. As an independent unit, it also has direct access to the board when required.

Internal Audit assesses:

- The efficiency and effectiveness of the processes and systems referred to above.
- Compliance with applicable regulations and supervisory requirements.
- The reliability and integrity of financial and operational information.
- Asset integrity.

Internal Audit is the third line of defence, independent of the other two. Its scope of action includes:

- All entities over which the Group exercises effective control.
- Separated assets (for example, mutual funds) managed by the entities mentioned in the previous section.
- Any entity (or separated assets) not included in the above points, with which the Group has entered into an agreement to provide internal audit functions.

This subjective scope includes, in any case, their activities, businesses and processes carried out (either directly or through outsourcing), their organization and, where applicable, commercial networks. Internal Audit may also conduct audits for other investees that are not included in the preceding points when the Group has reserved such right as a shareholder, as well as on outsourced activities in accordance with the established agreements.

The audit committee supervises the Group's Internal Audit function. See section [4.5 'Audit committee activities in 2022'](#).

As at 2022 year-end, Internal Audit had 1,233 exclusively dedicated employees, of which 273 were based at the Corporate Centre and 960 in the local units in the main geographies where the group is present.

Every year, it prepares an audit plan based on a risk self-assessment and is solely responsible for executing the plan. Reviews may lead to recommendations, which are prioritized in accordance with their relative importance and monitored continuously until full implementation.

At its meeting on 21 February 2022, the audit committee reviewed the 2022 audit plan, which was reported to, and approved by, the board at its meeting on 24 February 2022.

As regards the review of the ICFR, Internal Audit reports mainly aim to:

- Verify compliance with the provisions contained in sections 302, 404, 406, 407 and 806 of the SOX Act.
- Check governance with regard to information on the internal control system for financial reporting, including the risk culture.
- Review the duties performed by the internal control departments and by other departments, areas and divisions that work to ensure compliance with the SOX Act.
- Make sure the supporting documents relating to the SOX Act are up to date.
- Confirm the effectiveness of a sample of controls based on an internal audit risk assessment methodology.
- Assess the accuracy of the unit's certifications, especially their consistency of the certifications with respect to the observations and recommendations made by Internal Audit, the external auditors of the annual accounts or supervisors.
- Ratify the implementation of audit plan recommendations.

In 2022, the audit committee and the board of directors were informed of the Internal Audit function's work (according to its annual plan) and of other matters related to it. See section [4.5 'Audit committee activities in 2022'](#).

Detection and management of deficiencies

The audit committee oversees to supervise the financial reporting process and the internal control systems. It is responsible for discussing with the external auditor any significant weaknesses detected in the audit.

The audit committee also assesses the results of the Internal Audit function's work and may take the necessary measures to correct any deficiencies identified in the financial information, that could affect the reliability and accuracy of the annual accounts. It may refer to other areas of the Group involved in the process to obtain necessary information and seek clarification. It also assesses the potential impact of any errors detected in the financial information.

In 2022, the audit committee was informed of the ICS evaluation and certification for the 2021 financial year. See section [4.5 'Audit committee activities in 2022'](#).

8.6 External auditor report

The external auditor issued an independent reasonable assurance report on the design and effectiveness of the ICFR and on the ICFR description that is provided in this section 8.

The report is included in the following pages.



This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Independent reasonable assurance report on the design and effectiveness of Internal Control over Financial Reporting (ICFR)

To the Board of Directors of Banco Santander, S.A.:

We have carried out a reasonable assurance engagement of the design and effectiveness of the Internal Control over Financial Reporting (hereinafter, ICFR) and the description that is included in the attached Report that forms part of the corresponding section of the Annual Corporate Governance Report of the Directors' Report accompanying the consolidated financial statements of Banco Santander, S.A., (hereinafter, the Parent Company) and its subsidiaries (hereinafter, the Group or Grupo Santander) as at December 31, 2022. This system is based on the criteria and policies defined by the Group in accordance with the guidelines established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its "Internal Control-Integrated Framework" report, in its most recent framework published in 2013.

An Internal Control over Financial Reporting is a process designed to provide reasonable assurance over the reliability of financial information in accordance with the applicable financial reporting framework and includes those policies and procedures that: (i) enable the records reflecting the transactions performed to be kept accurately and with a reasonable level of detail; (ii) provide reasonable assurance as to the proper recognition of transactions to make it possible to prepare the financial information in accordance with the accounting principles and standards applicable to it and (iii) provide reasonable assurance in relation to the prevention or timely detection of unauthorised acquisitions, use or sales of the Group assets that could have material effect on the financial information.

Inherent limitations

In this regard, it should be borne in mind that, given the inherent limitations of any system of Internal Control over Financial Reporting, regardless of the quality of the design and operation of the system, it can only allow reasonable, but not absolute security, in relation to the objectives it pursues, which may lead to errors, irregularities or fraud that may not be detected. On the other hand, the projection to future periods of the evaluation of internal control is subject to risks such as such internal control being inadequate as a result of future changes in the applicable conditions, or that in the future the level of compliance of the established policies or procedures may be reduced.

Director's responsibility

The Parent Company's Directors are responsible for taking the necessary measures to reasonably guarantee the implementation, maintenance and supervision of an adequate Internal Control over Financial Reporting, as well as the evaluation of its effectiveness, the development of improvements of ICFR and the preparation and establishment of the content of the attached information relating to the ICFR.

Our Responsibility

Our responsibility is to issue a reasonable assurance report on the design and effectiveness of the Internal Control over Financial Reporting of the Group, based on the work we have performed and on the evidence we have obtained. We have performed our reasonable assurance engagement in accordance with "International Standard on Assurance Engagements 3000 (ISAE 3000)" (Revised), "Assurance Engagements other than Auditing or Reviews of Historical Financial Reporting", issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC).

PricewaterhouseCoopers Auditores, S.L., Torre PwC, Pº de la Castellana 259 B, 28046 Madrid, España
Tel.: +34 915 684 400 / +34 902 021 111, Fax: +34 915 685 400, www.pwc.es

1



A reasonable assurance report includes the understanding of the Internal Control over Financial Reporting, assessing the risk of material weaknesses in the internal control, that the controls are not properly designed or they do not operate effectively, the execution of tests and evaluations on the design and effective implementation of this ICFR, based on our professional judgment, and the performance of such other procedures as may be deemed necessary.

We believe that the evidence we have obtained provides a sufficient and adequate basis for our opinion.

Our Independence and quality management

We have complied with the independence requirements and other ethical requirements of the Accounting Professionals Code of Ethics (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA), which is based on the fundamental principles of integrity, objectivity, professional competence and diligence, confidentiality and professional behavior.

Our firm applies the International Standard on Quality Management (ISQM) 1, which requires the firm to design, implement and operate a quality management system that includes policies or procedures related to compliance with ethical requirements, professional standards and requirements, applicable laws and regulations.

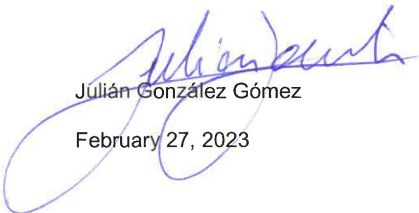
Opinion

In our opinion, Grupo Santander, maintained as at December 31, 2022, in all material respects, a system of Internal Control relating to Financial Reporting included in the consolidated financial statements of the Group as at December 31, 2022 effective, which is based on the criteria and the policies defined by the Group's management in accordance with the guidelines established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its "Internal Control - Integrated Framework" report, in its most recent framework published in 2013.

In addition, the attached description of the ICFR Report as at December 31, 2022, has been prepared, in all material respects, in accordance with the requirements established by article 540 of the Consolidated Text of the Capital Companies Act and with the Circular 5/2013 of June 12 of the CNMV, and subsequent amendments, the most recent being Circular 3/2021, of September 28, of the CNMV for the purposes of describing the ICFR in the Annual Reports of Corporate Governance.

This work does not constitute an audit of accounts nor is it subject to the regulations governing the activity of the audit in force in Spain, so we do not express any audit opinion in the terms provided in the aforementioned regulations. However, we have audited under separate engagement, in accordance with the regulations governing the audit activity in force in Spain, the consolidated financial statements of Grupo Santander prepared by the Parent Company's Directors in accordance with the International Financial Reporting Standards adopted by the European Union and other provisions of the financial reporting standards applicable to the Group, and our report dated February 27, 2023 expresses a favorable opinion on those consolidated annual accounts.

PricewaterhouseCoopers Auditores, S.L.



Julián González Gómez

February 27, 2023

9. Other corporate governance information

Since 12 June 2018 CNMV allows the annual corporate governance and directors' remuneration reports Spanish listed companies must submit to be drafted in a free format, which is what we selected for our corporate governance and directors' remuneration reports since 2018.

The CNMV requires any issuer opting for a free format to provide certain information in a format it dictates so that it can be aggregated for statistical purposes. This information is included (i) for corporate governance matters, under section [9.2 'Statistical information on corporate governance required by the CNMV'](#), which also covers the section 'Degree of compliance with corporate governance recommendations', and (ii) for remuneration matters, under section [9.5 'Statistical information on remuneration required by the CNMV'](#).

Some shareholders or other stakeholders may be used to the formats of the corporate governance and directors'

remuneration reports set the by the CNMV. Therefore, each section under this format in sections [9.1 'Reconciliation with the CNMV's corporate governance report model'](#) and [9.4 'Reconciliation to the CNMV's remuneration report model'](#) include a cross reference indicating where this information may be found in the 2022 annual corporate governance report (drafted in a free format) and elsewhere in this annual report.

We have normally completed the 'comply or explain' section for all recommendations in the Spanish Corporate Governance Code to clearly show the ones we complied with, and explain the ones we partially complied or failed to comply with. In section [9.3 'Table on compliance with or explanations of recommendations in corporate governance'](#), we have included a chart with cross-references showing where information supporting each response can be found in this corporate governance chapter and elsewhere in this annual report.

9.1 Reconciliation with the CNMV's corporate governance report model

Section in the CNMV model	Included in statistical report	Comments
A. OWNERSHIP STRUCTURE		
A.1	Yes	See sections 2.1 'Share capital' , 3.2 'Shareholder rights' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.2	Yes	See section 2.3 'Significant shareholders' .
A.3	Yes	See 'Tenure and equity ownership' in section 4.2 and sections 6.3 'Remuneration of directors for executive duties' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.4	No	See section 2.3 'Significant shareholders' .
A.5	No	See section 2.3 'Significant shareholders' where we explain there are no significant shareholders on their own account so this section does not apply.
A.6	No	See section 2.3 'Significant shareholders' where we explain there are no significant shareholders on their own account so this section does not apply.
A.7	Yes	See sections 2.4 'Shareholders' agreements' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.8	Yes	Not applicable. See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.9	Yes	See section 2.5 'Treasury shares' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.10	No	See section 2.5 'Treasury shares' .
A.11	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
A.12	No	See section 3.2 'Shareholder rights' .
A.13	No	See section 3.2 'Shareholder rights' .
A.14	Yes	See section 2.6 'Stock market information' .



Section in the CNMV model	Included in statistical report	Comments
B. GENERAL SHAREHOLDERS' MEETING		
B.1	No	See 'Quorum and majorities for passing resolutions at general meeting' in section 3.2.
B.2	No	See 'Quorum and majorities for passing resolutions at general meeting' in section 3.2.
B.3	No	See 'Rules for amending our Bylaws' in section 3.2.
B.4	Yes	See 'Quorum and attendance' in section 3.4, in relation to financial year 2022, and section 9.2 'Statistical information on corporate governance as required by the CNMV' , in relation to the financial 2020, 2021 and 2022 year.
B.5	Yes	See 'Voting results and resolutions' in section 3.4.
B.6	Yes	See 'Shareholder participation at general meetings' in section 3.2 and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
B.7	No	See 'Quorum and majorities for passing resolutions at general meeting' in section 3.2.
B.8	No	See 'Corporate website' in section 3.1.
C. MANAGEMENT STRUCTURE		
C.1 Board of directors		
C.1.1	Yes	See 'Size' in section 4.2.
C.1.2	Yes	See section 1.1 'Board skills and diversity' , 4.1 'Our directors, 'Tenure and equity ownership' in section 4.2, and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.3	Yes	See sections 2.4 'Shareholders' agreements' , 4.1 'Our directors, 'Composition by director type' in section 4.2, 'Duties and activities in 2022' in section 4.6 and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.4	Yes	See 'Diversity' and 'Board skills and diversity matrix' in section 4.2, in relation to financial year 2022, and section 9.2 'Statistical information on corporate governance as required by the CNMV' , in relation to the remaining financial years.
C.1.5	No	See 'Diversity' in section 4.2 and 'Duties and activities in 2022' in section 4.6.
C.1.6	No	See 'Diversity' in section 4.2 and 'Duties and activities in 2022' in section 4.6 and, regarding top executive positions, see 1.1 'Highlights 2022' and 3.3 'A talented and motivated team' in 'Responsible banking' chapter.
C.1.7	No	See 'Diversity' in section 4.2 and 'Duties and activities in 2022' in section 4.6.
C.1.8	No	Not applicable, since there are no proprietary directors. See 'Composition by director type' in section 4.2.
C.1.9	No	See 'Group Executive Chair and Chief Executive Officer' in section 4.3 and 'Functions' in section 4.4 .
C.1.10	No	See section 4.1 'Our directors' .
C.1.11	Yes	See sections 4.1 'Our directors' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.12	Yes	See 'Board and committees attendance' in section 4.3.
C.1.13	Yes	See sections 6. 'Remuneration' and 9.2 'Statistical information on corporate governance as required by the CNMV' . Additionally, see Note 5 to the consolidated financial statements.
C.1.14	Yes	See sections 5. 'Management team' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.15	Yes	See 'Board's regulation' in section 4.3.
C.1.16	No	See 'Election, renewal and succession of directors' in section 4.2.
C.1.17	No	See 'Board effectiveness review and actions to continuously improve its operation' in section 1.2, 'Board effectiveness review in 2022' in section 4.3 and 'Annual assessment of the committee' in section 4.6.
C.1.18	No	Not applicable as it was not carried out with the help of an independent external advisor. See 'Board effectiveness review in 2022' in section 4.3.
C.1.19	No	See 'Election, renewal and succession of directors' in section 4.2.
C.1.20	No	See 'Board operation' in section 4.3.
C.1.21	Yes	Not applicable since there are no specific requirements, other than those applying to directors generally, to be appointed chair.
C.1.22	No	See 'Diversity' in section 4.2.
C.1.23	Yes	See 'Election, renewal and succession of directors' in section 4.2 and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.24	No	See 'Board operation' in section 4.3.
C.1.25	Yes	See 'Lead Independent Director' and 'Board and committee preparation and attendance' in section 4.3, 'Duties and activities in 2022' in sections 4.4, 4.5, 4.6, 4.7, 4.8, 4.9 and 4.10 and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.26	Yes	See 'Board and committee preparation and attendance' in section 4.3, section 4.6 'Nomination committee activities in 2022' and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.27	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.28	No	See 'Duties and activities in 2022' in section 4.5.
C.1.29	Yes	See section 4.1 'Our directors' and section 'Secretary of the board' in section 4.3.



Section in the CNMV model	Included in statistical report	Comments
C.1.30	No	See section 3.1 'Shareholder communication and engagement' , 'Report on the independence of the external auditor' and 'Duties and activities in 2022' in section 4.5.
C.1.31	Yes	See 'External auditor' in section 4.5 and section 9.2 'Statistical information on corporate governance required by CNMV' .
C.1.32	Yes	In accordance with the CNMV's instructions, see 'External auditor's independence. Possible threats and protective measures' in section 4.5 and sub-section C.1.32 of section 9.2 'Statistical information on corporate governance required by the CNMV' . Per the CNMV's instructions on preparing annual reports on corporate governance, sub-section C.1.32 provides the fee ratios of non-audit services to total audit services, with these differences in the ratio set out in Regulation (EU) No 537/2014 that is included in section 4.5 'Audit committee activities in 2022' : (a) the ratios in sub-section C.1.32 have two perimeters to the one established by Regulation (EU) No 537/2014: fees for the approved services to be performed by PricewaterhouseCoopers Auditores, S.L. (PwC) for Banco Santander and fees for the approved services to be performed by PwC and other firms in its network for all other Grupo Santander entities, in and outside Spain; and (b) the ratios' denominator is the fees amount for audit services in 2022 and not the average fee value from the past three consecutive years that Regulation (EU) No 537/2014 dictates.
C.1.33	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.34	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.1.35	Yes	See 'Board operation' and 'Committee operation' in section 4.3.
C.1.36	No	See 'Election, renewal and succession of directors' in section 4.2.
C.1.37	No	Not applicable. See 'Duties and activities in 2022' in section 4.6.
C.1.38	No	Not applicable.
C.1.39	Yes	See sections 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' , 6.7 'Prudentially significant disclosure document' and 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.2 Board committees		
C.2.1	Yes	See 'Structure of board's committees' and 'Committee operation' in section 4.3, 'Duties and activities in 2022' in sections 4.4 , 4.5 , 4.6 , 4.7 , 4.8 , 4.9 and 4.10 and section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.2.2	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
C.2.3	No	See 'Board's regulation' and 'Structure of board's committees' , 'Committee operation' in section 4.3 and 'Duties and activities in 2022' in sections 4.4 , 4.5 , 4.6 , 4.7 , 4.8 , 4.9 and 4.10 .
D. RELATED PARTY AND INTRAGROUP TRANSACTIONS		
D.1	No	See 'Related-party transactions' in section 4.12.
D.2	Yes	Not applicable. See 'Related-party transactions' in section 4.12.
D.3	Yes	Not applicable. See 'Related-party transactions' in section 4.12.
D.4	Yes	See section 9.2 'Statistical information on corporate governance as required by the CNMV' .
D.5	Yes	Not applicable. See 'Related-party transactions' in section 4.12.
D.6	No	See 'Other conflicts of interest' in section 4.12.
D.7	Yes	Not applicable. See section 2.3 'Significant shareholders' and 'Other conflicts of interest' in section 4.12.
E. CONTROL AND RISK MANAGEMENT SYSTEMS		
E.1	No	See chapter 'Risk management and compliance' , in particular section 2. 'Risk management and control model' and sections 3.1 'A strong and inclusive culture: The Santander Way' and 3.2.4 'Principles of action in tax matters' in the 'Responsible banking' chapter.
E.2	No	See Note 53 to the consolidated financial statements, section 2.3 'Risk and compliance governance' in the 'Risk management and compliance' chapter, and sections 3.1 'A strong and inclusive culture: The Santander Way' and 3.2.4 'Principles of action in tax matters' in the 'Responsible banking' chapter.
E.3	No	See sections 2.2 'Key risk types' , 3. 'Credit risk' , 4. 'Market, structural and liquidity risk' , 5. 'Capital risk' , 6. 'Operational risk' , 7. 'Compliance and conduct risk' , 8. 'Model risk' and 9. 'Strategic risk' in the 'Risk management and compliance' chapter. See also the 'Responsible banking' chapter and, for our capital needs, see section 3.5 'Capital management and adequacy. Solvency ratios' of the 'Economic and financial review' chapter.
E.4	No	See section 2.4. 'Management processes and tools' in the Risk management and compliance chapter and sections 3.1 'A strong and inclusive culture: The Santander Way' and 3.2.4 'Principles of action in tax matters' in the 'Responsible banking' chapter.
E.5	No	See 3. 'Credit risk' , 4. 'Market, structural and liquidity risk' , 5. 'Capital risk' , 6. 'Operational risk' , 7. 'Compliance and conduct risk' , 8. 'Model risk' , 9. 'Strategic risk' and in 10. 'Climate and environmental risk' the 'Risk management and compliance' chapter. Additionally, see Note 25e to the consolidated financial statements.
E.6	No	See sections 2. 'Risk management and control model' , 3. 'Credit risk' , 4. 'Market, structural and liquidity risk' , 5. 'Capital risk' , 6. 'Operational risk' , 7. 'Compliance and conduct risk' , 8. 'Model risk' , 9. 'Strategic risk' and 10. 'Climate and environmental risk' in the 'Risk management and compliance' chapter.



Section in the CNMV model	Included in statistical report	Comments
F. ICFRS		
F.1	No	See section 8.1 'Control environment' .
F.2	No	See section 8.2 'Risk assessment in financial reporting' .
F.3	No	See section 8.3 'Control activities' .
F.4	No	See section 8.4 'Information and communication' .
F.5	No	See section 8.5 'Monitoring' .
F.6	No	Not applicable.
F7	No	See section 8.6 'External auditor report' .
G. DEGREE OF COMPLIANCE WITH CORPORATE GOVERNANCE RECOMMENDATIONS		
G	Yes	See 'Degree of compliance with the corporate governance recommendations' in section 9.2 and section 9.3 'Table on compliance with or explanations of recommendations on corporate governance' .
H. OTHER INFORMATION OF INTEREST		
H	No	See 'Board's regulation' in section 4.3. Banco Santander also complies with the Polish Code of Best Practices, except in areas where regulation is different in Spain and Poland. In addition, see sections 3.2 'Conduct and ethical behaviour' and 2.4 'Policies' , in particular, 5.1 'Stakeholder engagement' , in the Responsible banking chapter.

9.2 Statistical information on corporate governance required by the CNMV

Unless otherwise indicated all data as of 31 December 2022.

A. OWNERSHIP STRUCTURE

A.1 Complete the following table on share capital and the attributed voting rights, including those corresponding to shares with a loyalty vote as of the closing date of the year, where appropriate:

Indicate whether company Bylaws contain the provision of double loyalty voting:

Yes No

Date of last modification	Share capital (euros)	Number of shares	Number of voting rights
30/06/2022	8,397,200,792	16,794,401,584	16,794,401,584

Indicate whether different types of shares exist with different associated rights:

Yes No

A.2 List the direct and indirect holders of significant ownership interests at year-end, including directors with a significant shareholding:

Name or corporate name of shareholder	% of voting rights attributed to shares		% of voting rights through financial instruments		Total % of voting rights
	Direct	Indirect	Direct	Indirect	
BlackRock Inc.	0	5.08	0	0.346	5.43
Dodge & Cox	0	3.04	0	0	3.04
Norges Bank	3.01	0	0	0	3.01

Details of the indirect shares:

Name or corporate name of the indirect shareholder	Name or corporate name of the direct shareholder	% of voting rights attributed to shares	% of voting rights through financial instruments	Total % of voting rights
BlackRock Inc.	Subsidiaries of BlackRock Inc.	5.08	0.346	5.43
Dodge & Cox	Funds and portfolios managed by Dodge & Cox	3.04	0	3.04

A.3 Give details of the participation at the close of the fiscal year of the members of the board of directors who are holders of voting rights attributed to shares of the company or through financial instruments, whatever the percentage, excluding the directors who have been identified in Section A2 above:

Name or corporate name of director	% of voting rights attributed to shares (including loyalty votes)		% of voting rights through financial instruments		Total % of voting rights	From the total % of voting rights attributed to the shares, indicate, where appropriate, the % of the additional votes attributed corresponding to the shares with a loyalty vote		
	Direct	Indirect	Direct	Indirect		Direct	Indirect	
Ana Botín-Sanz de Sautuola y O'Shea	0.01	0.18	0.00	0.00	0.19	0.00	0.00	
José Antonio Álvarez Álvarez	0.01	0.00	0.00	0.00	0.01	0.00	0.00	
Bruce Carnegie-Brown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Homaira Akbari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Javier Botín-Sanz de Sautuola y O'Shea	0.03	0.12	0.00	0.00	0.15	0.00	0.00	
Sol Daurella Comadrán	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Germán de la Fuente	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Henrique de Castro	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Gina Díez Barroso	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Luis Isasi Fernández de Bobadilla	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ramiro Mato García Ansorena	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sergio Rial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Belén Romana García	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pamela Walkden	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
% total voting rights held by the board of directors						0.35		
% total voting rights represented on the board of directors						0.74		

Details of the indirect holding:

Name or corporate name of director	Name or corporate name of direct owner	% of voting rights attributed to shares	% of voting rights through financial instruments	Total % of voting rights	From the total % of voting rights attributed to the shares, indicate, where appropriate, the % of the additional votes attributed corresponding to the shares with a loyalty vote
-	-	-	-	-	-

A.7 Indicate whether the company has been notified of any shareholders' agreements that may affect it, in accordance with the provisions of Articles 530 and 531 of the Spanish Companies Act (LSC). If so, provide a brief description and list the shareholders bound by the agreement, as applicable:

Yes No

Parties to the shareholders' agreement	% of share capital affected	Brief description of agreement	Expiry date, if applicable
Javier Botín-Sanz de Sautuola y O'Shea (directly and indirectly through Agropecuaria El Castaño, S.L.U.) Emilio Botín-Sanz de Sautuola y O'Shea, Puente San Miguel, S.L.U. Ana Botín-Sanz de Sautuola y O'Shea, CRONJE, S.L.U. Nueva Azil, S.L. Carmen Botín-Sanz de Sautuola y O'Shea Paloma Botín-Sanz de Sautuola y O'Shea Bright Sky 2012, S.L.	0.61	Transfer restrictions and syndication of voting rights as described under section 2.4 'Shareholders' agreements' of the 'Corporate governance' chapter in the annual report. The communications to CNMV relating to this shareholders' agreement can be found in material facts with entry numbers 64179, 171949, 177432, 194069, 211556, 218392, 223703, 226968 and 285567 filed in CNMV on 17 February 2006, 3 August 2012, 19 November 2012, 17 October, 2013, 3 October 2014, 6 February 2015, 29 May 2015, 29 July 2015 and 31 December 2019, respectively.	01/01/2056



Indicate whether the company is aware of the existence of any concerted actions among its shareholders. If so, give a brief description as applicable:

Yes No

Participants in the concerted action	% of share capital affected	Brief description of concerted action	Expiry date, if applicable
Javier Botín-Sanz de Sautuola y O'Shea (directly and indirectly through Agropecuaria El Castaño, S.L.U.) Emilio Botín-Sanz de Sautuola y O'Shea, Puente San Miguel, S.L.U. Ana Botín-Sanz de Sautuola y O'Shea, CRONJE, S.L.U. Nueva Azil, S.L. Carmen Botín-Sanz de Sautuola y O'Shea Paloma Botín-Sanz de Sautuola y O'Shea Bright Sky 2012, S.L.	0.61	Transfer restrictions and syndication of voting rights as described under section 2.4 'Shareholders' agreements' of the 'Corporate governance' chapter in the annual report. The communications to CNMV relating to this shareholders' agreement can be found in material facts with entry numbers 64179, 171949, 177432, 194069, 211556, 218392, 223703, 226968 and 285567 filed in CNMV on 17 February 2006, 3 August 2012, 19 November 2012, 17 October, 2013, 3 October 2014, 6 February 2015, 29 May 2015, 29 July 2015 and 31 December 2019, respectively.	01/01/2056

A.8 Indicate whether any individual or entity currently exercises control or could exercise control over the company in accordance with article 5 of the Spanish Securities Market Act. If so, identify them:

Yes No

A.9 Complete the following tables on the company's treasury shares:

At year end:

Number of shares held directly	Number of shares held indirectly (*)	% of total share capital
220,942,806	22,746,219	1.451

(*) Through:

Name or corporate name of the direct shareholder	Number of shares held directly
Pereda Gestión, S.A.	13,680,000
Banco Santander Río, S.A.	975,238
Banco Santander México, S.A.	3,006,429
Total:	17,661,667

A.11 Estimated free float:

	%
Estimated free float	85.98

A.14 Indicate whether the company has issued securities not traded in a regulated market of the European Union.

Yes No



B. GENERAL SHAREHOLDERS' MEETING

B.4 Indicate the attendance figures for the general shareholders' meetings held during the financial year to which this report relates and in the two preceding financial years:

Date of General Meeting	Attendance data				
	% attending in person	% by proxy	% remote voting		Total
			Electronic means	Other	
03/04/2020	0.09	62.60	1.71	0.60	65.00
Of which free float:	0.01	61.59	1.71	0.60	63.91

Date of General Meeting	Attendance data				
	% attending in person	% by proxy	% remote voting		Total
			Electronic means	Other	
27/10/2020	0.17	43.29	16.30	0.59	60.35
Of which free float:	0.11	42.27	16.30	0.59	59.27

Date of General Meeting	Attendance data				
	% attending in person	% by proxy	% remote voting		Total
			Electronic means	Other	
26/03/2021	0.06	65.02	2.04	0.55	67.67
Of which free float:	0.01	64.03	2.04	0.55	66.63

Date of General Meeting	Attendance data				
	% attending in person	% by proxy	% remote voting		Total
			Electronic means	Other	
01/04/2022	0.71	65.41	2.08	0.57	68.77
Of which free float:	0.09	64.98	2.08	0.57	67.72

B.5 Indicate whether in the general shareholders' meetings held during the financial year to which this report relates there has been any matter submitted to them which has not been approved by the shareholders:

Yes No

B.6 Indicate whether the Bylaws require a minimum holding of shares to attend to or to vote remotely in the general shareholders' meeting:

Yes No

C. MANAGEMENT STRUCTURE

C.1 Board of directors

C.1.1 Maximum and minimum number of directors provided for in the Bylaws:

Maximum number of directors	17
Minimum number of directors	12
Number of directors set by the General Meeting	15

C.1.2 Complete the following table with the directors' details:

Name or corporate name of director	Representative	Category of director	Position in the board	Date of first appointment	Date of last appointment	Election procedure
Ana Botín-Sanz de Sautuola y O'Shea	N/A	Executive	Chair	04/02/1989	03/04/2020	Vote in general shareholders' meeting
José Antonio Álvarez Álvarez	N/A	Executive	Chief executive officer	25/11/2014	12/04/2019	Vote in general shareholders' meeting
Bruce Carnegie-Brown	N/A	Independent	Lead independent director	25/11/2014	26/03/2021	Vote in general shareholders' meeting
Homaira Akbari	N/A	Independent	Director	27/09/2016	26/03/2021	Vote in general shareholders' meeting
Javier Botín-Sanz de Sautuola y O'Shea	N/A	Other external	Director	25/07/2004	26/03/2021	Vote in general shareholders' meeting
Sol Daurella Comadrán	N/A	Independent	Director	25/11/2014	03/04/2020	Vote in general shareholders' meeting
Henrique de Castro	N/A	Independent	Director	12/04/2019	12/04/2019	Vote in general shareholders' meeting
Germán de la Fuente	N/A	Independent	Director	01/04/2022	01/04/2022	Vote in general shareholders' meeting
Gina Díez Barroso	N/A	Independent	Director	22/12/2020	22/12/2020	Vote in general shareholders' meeting
Glenn Hutchins	N/A	Independent	Director	20/12/2022	20/12/2022	Cooption
Luis Isasi Fernández de Bobadilla	N/A	Other external	Director	03/04/2020	03/04/2020	Vote in general shareholders' meeting
Ramiro Mato García-Ansorena	N/A	Independent	Director	28/11/2017	26/03/2021	Vote in general shareholders' meeting
Sergio Rial	N/A	Other external	Director	03/04/2020	03/04/2020	Vote in general shareholders' meeting
Belén Romana García	N/A	Independent	Director	22/12/2015	12/04/2019	Vote in general shareholders' meeting
Pamela Walkden	N/A	Independent	Director	29/10/2019	03/04/2020	Vote in general shareholders' meeting
Total number of directors				15		

Indicate any directors who have left during the financial year to which this report relates, regardless of the reason (whether for resignation or by agreement of the general meeting or any other):

Name or corporate name of director	Category of director at the time he/her left	Date of last appointment	Date of leave	Board committees he or she was a member of	Indicate whether he or she has left before the expiry of his or her term
Álvaro Cardoso de Souza	Independent	26/03/2021	01/04/2022	Responsible banking, sustainability and culture committee	YES
R. Martín Chávez Márquez	Independent	27/10/2020	01/07/2022	Nomination committee	YES

C.1.3 Complete the following tables for the directors in each relevant category:

Executive directors

Name or corporate name of director	Position held in the company	Profile
Ana Botín-Sanz de Sautuola y O'Shea	Executive chair	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.
José Antonio Álvarez Álvarez	CEO	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.
Total number of executive directors		2
% of the Board		13.33

Proprietary non-executive directors

Name or corporate name of director	Name or corporate name of significant shareholder represented or having proposed his or her appointment	Profile
N/A	N/A	N/A
Total number of proprietary non-executive directors		0
% of the Board		0%

Independent directors

Name or corporate name of director	Profile	
Bruce Carnegie-Brown	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Homaira Akbari	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Álvaro Cardoso de Souza	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
R. Martín Chávez Márquez	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Sol Daurella Comadrán	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Henrique de Castro	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Gina Díez Barroso	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Ramiro Mato García-Ansorena	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Belén Romana García	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Pamela Walkden	See section 4.1 'Our directors' in the 'Corporate governance' chapter in the annual report.	
Total number of independent directors		10
% of the Board		66.67



Identify any independent director who receives from the company or its group any amount or perk other than his or her director remuneration, as a director, or who maintain or have maintained during the financial year covered in this report a business relationship with the company or any group company, whether in his or her own name or as a principal shareholder, director or senior manager of an entity which maintains or has maintained such a relationship.

In such a case, a reasoned statement from the Board on why the relevant director(s) is able to carry on their duties as independent director(s) will be included.

Name or corporate name of director	Description of the relationship	Reasoned statement
Homaira Akbari	Business	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the business relationships maintained between Grupo Santander and the company in which Homaira Akbari was a director in 2022 were not significant because, among other reasons they did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE and Nasdaq.</p>
Sol Daurella	Business/Financing	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the business relationships maintained and the funding Grupo Santander granted to companies in which Sol Daurella was a principal shareholder or director in 2022 were not significant because, among other reasons: (i) did not generate economic dependence on the companies involved in view of the substitutability of this funding by other sources, whether banks or others, (ii) were aligned with Grupo Santander's share in the corresponding market, and (iii) did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE, Nasdaq and the Canadian Bank Act.</p>
Henrique de Castro	Business	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the business relationships maintained between Grupo Santander and the company in which Henrique de Castro was a director in 2022 were not significant because, among other reasons they did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE and Nasdaq.</p>
Gina Díez Barroso	Business/Financing	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the business relationships maintained and the funding granted by Grupo Santander to the companies in which Gina Díez Barroso was a principal shareholder and director in 2022 were not significant because, among other reasons: (i) did not generate a situation of economic dependence on the company involved in view of the substitutability of this funding by other sources, whether banks or others, (ii) were aligned with Grupo Santander's share in the corresponding market, and (iii) did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE, Nasdaq and the Canadian Bank Act.</p>
Glenn Hutchins	Financing	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the funding Grupo Santander granted to the company in which Glenn Hutchins was a director in 2022 was not significant because, among other reasons: (i) did not generate economic dependence on the companies involved in view of the substitutability of this funding by other sources, whether banks or others, (ii) was aligned with Grupo Santander's share in the corresponding market, and (iii) did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE, Nasdaq and the Canadian Bank Act.</p>
Belén Romana	Business/Financing	<p>When conducting the annual verification of the independence of directors classified as independent, the nomination committee analysed the business relationships between Grupo Santander and the companies in which they are or have previously been principal shareholders, directors or senior managers.</p> <p>The committee concluded that the business relationships maintained and the funding Grupo Santander granted to the companies in which Belén Romana was a director in 2022 were not significant because, among other reasons: (i) did not generate economic dependence on the companies involved in view of the substitutability of this funding by other sources, whether banks or others, (ii) were aligned with Grupo Santander's share in the corresponding market, and (iii) did not reach certain comparable materiality thresholds used in other jurisdictions, e.g. NYSE, Nasdaq and the Canadian Bank Act.</p>



Other external directors

Identify all other external directors and explain why these cannot be considered proprietary or independent directors and detail their relationships with the company, its executives or shareholders:

Name or corporate name of director	Reasons	Company, manager or shareholder to which or to whom the director is related	Profile
Javier Botín-Sanz de Sautuola y O'Shea	Given that Mr Botín has been director for over 12 years, pursuant to sub-section 4. i) of article 529 <i>duodecies</i> of the Spanish Companies Act.	Banco Santander, S.A.	See section 4.1 'Our directors' in the Corporate governance chapter in the annual report.
Luis Isasi Fernández de Bobadilla	Under prudent criteria given his remuneration as non-executive Chair of Santander España's body as supervisor, unit without its own corporate identity separate to Banco Santander, pursuant to sub-sections 2 to 4 of article 529 <i>duodecies</i> of the Spanish Companies Act.	Banco Santander, S.A.	See section 4.1 'Our directors' in the Corporate governance chapter in the annual report.
Sergio Rial	Given that Mr Rial, as a former executive director of Banco Santander as CEO of Banco Santander (Brasil) S.A. and Regional head of South America until 31 December 2021, pursuant to sub-section 4 a) of article 529 <i>duodecies</i> of the Spanish Companies Act.	Banco Santander, S.A.	See section 4.1 'Our directors' in the Corporate governance chapter in the 2021 annual report.
Total number of other external directors			3
% of the Board			20.00

List any changes in the category of a director which have occurred during the period covered in this report.

Name or corporate name of director	Date of change	Previous category	Current category
N/A	N/A	N/A	N/A

C.1.4 Complete the following table on the number of female directors at the end of each the past four years and their category:

Number of female directors	% of total directors of each category							
	FY 2022	FY 2021	FY 2020	FY 2019	FY 2022	FY 2021	FY 2020	FY 2019
Executive	1	1	1	1	50.00	50.00	33.33	50.00
Proprietary	—	—	—	—	0.00	0.00	0.00	0.00
Independent	5	5	5	5	50.00	50.00	50.00	55.55
Other external	—	—	—	—	0.00	0.00	0.00	0.00
Total:	6	6	6	6	40.00	40.00	40.00	40.00



C.1.11 List the positions of director, administrator or representative thereof, held by directors or representatives of directors who are members of the company's board of directors in other entities, whether or not they are listed companies:

Identity of the director or representative	Company name of the listed or non-listed entity	Position	Remunerated YES/NO
Ana Botín-Sanz de Sautuola y O'Shea	The Coca-Cola Company	Director	YES
Bruce Carnegie-Brown	Lloyd's of London	Chair	YES
	Cuvva Limited	Chair	YES
Javier Botín-Sanz de Sautuola y O'Shea	JB Capital Markets, Sociedad de Valores, S.A.U.	Chair	YES
	Inversiones Zulú, S.L.	Chair-chief executive officer	NO
	Agropecuaria El Castaño, S.L.E	Joint and several administrator	NO
	Inversiones Peña Cabarga, S.L.	Sole administrator	NO
Homaira Akbari	Landstar System, Inc.	Director	YES
	AKnowledge Partners, LLC	Chief executive officer	YES
	Temenos AG	Director	YES
Sol Daurella Comadrán	Coca-Cola Europacific Partners PLC	Chair	YES
	Cobega, S.A.	Representative of director	NO
	Equatorial Coca Cola Bottling Company, S.L.	Director	YES
	Cobega Invest S.L.	Joint and several administrator	NO
	Olive Partners, S.A.	Representative of director	NO
	Indau, S.A.R.L.	Sole administrator	YES
	Henrique de Castro	Fiserv Inc.	Director
Stakecorp Capital, s.a.r.l.		Director	NO
Gina Díez Barroso Azcárraga	Grupo Diarq, S.A. de C.V.	Chair	NO
	Dalia Women, S.A.P.I. de C.V.	Director	NO
	Centro de Diseño y Comunicación, S.C.	Chair	NO
	Bolsa Mexicana de Valores, S.A.B. de C.V.	Director	YES
Glenn Hogan Hutchins	AT&T Inc.	Director	YES
	North Island, LL	Chair	NO
	North Island Ventures, LLC	Chair	NO
Luis Isasi Fernández de Bobadilla	Compañía de Distribución Integral Logista Holdings, S.A.	Director	YES
	Balcón del Parque, S.L.	Sole administrator	NO
	Santa Clara de C. Activos, S.L.	Director	NO
Ramiro Mato García-Ansorena	Ansorena, S.A.	Chair	NO
Sergio Rial	Delta Airlines Inc	Director	YES
	Vibra Energia S.A.	Chair	YES
	BRF S.A.	Vice Chair	YES
Belén Romana García	Werfen, S.A.	Director	YES
	Six Group AG	Director	YES
	Bolsas y Mercados Españoles, Sociedad Holding de Mercados y Sistemas Financieros, S.A.	Director	YES

Indicate, where appropriate, the other remunerated activities of the directors or directors' representatives, whatever their nature, other than those indicated in the previous table.

Identity of the director or representative	Other paid activities
Bruce Carnegie-Brown	Member of investment committee of Gresham House PLC
Glenn Hogan Hutchins	Member of the international advisory board Government of Singapore Investment Corporation
	Member of the executive committee of Boston Celtics
Luis Isasi Fernández de Bobadilla	Senior Advisor of Morgan Stanley
Ramiro Mato García-Ansorena	External advisor of ACON Southern Europe Advisory, S.L.
Belén Romana García	Senior advisor of Artá Capital, S.G.E.I.C., S.A
Pamela Walkden	Member of the advisory board of JD Haspel Limited



C.1.12 Indicate and, if applicable explain, if the company has established rules on the maximum number of directorships its directors may hold and, if so, where they are regulated:

Yes No

The maximum number of directorships is established, as provided for in article 30 of the Rules and regulations of the board, in article 26 of Spanish Law 10/2014 on the ordering, supervision and solvency of credit institutions. This rule is further developed by articles 29 and subsequent of Royal Decree 84/2015 and by Rules 30 and subsequent of Bank of Spain Circular 2/2016.

C.1.13 Identify the following items of the total remuneration of the board of directors:

Board remuneration accrued in the fiscal year (EUR thousand)	25,071
Funds accumulated by current directors for long-term savings systems with consolidated economic rights (EUR thousand)	65,683
Funds accumulated by current directors for long-term savings systems with unconsolidated economic rights (EUR thousand)	0
Pension rights accumulated by former directors (EUR thousand)	47,950

C.1.14 Identify the members of the company's senior management who are non executive directors and indicate total remuneration they have accrued during the financial year:

Name or corporate name	Position (s)
Alexandra Brandão	Global head of Human Resources
Juan Manuel Cendoya Méndez de Vigo	Group head of Communications, Corporate Marketing and Research
José Francisco Doncel Razola	Group head of Accounting and Financial Control - Group Chief Accounting Officer
Keiran Paul Foad	Group Chief Risk Officer
José Antonio García Cantera	Group Chief Financial Officer
Juan Guitard Marín	Group Chief Audit Executive
José María Linares Perou	Global head of Corporate & Investment Banking
Mónica Lopez-Monís Gallego	Group head of Supervisory and Regulatory Relations
Dirk Marzluf	Group head of Technology and Operations
Víctor Matarranz Sanz de Madrid	Global head of Wealth Management & Insurance
José Luis de Mora Gil-Gallardo	Group head of Strategy & Corporate Development, Financial Planning and Santander Consumer Finance
Jaime Pérez Renovales	Group head of General Secretariat
Antonio Simões	Regional head of Europe
Marjolein van Hellemond-Gerdinck	Group Chief Compliance Officer
Number of women in senior management	3
Percentage of total senior management	21.43
Total remuneration accrued by the senior management (EUR thousand)	53,236

C.1.15 Indicate whether any changes have been made to the board's regulations during the financial year:

Yes No

C.1.21 Indicate whether there are any specific requirements, other than those applying to directors generally, to be appointed Chair:

Yes No

C.1.23 Indicate whether the Bylaws or the board's regulations set a limited term of office (or other requirements which are stricter than those provided for in the law) for independent directors different than the one provided for in the law.

Yes No

C.1.25 Indicate the number of board meetings held during the financial year and how many times the board has met without the Chair's attendance. Attendance also includes proxies appointed with specific instructions:

Number of board meetings	14
Number of board meetings held without the Chair's attendance	0

Indicate the number of meetings held by the Lead Independent Director with the rest of directors without the attendance or representation of any executive director.

Number of meetings	5
--------------------	---



Indicate the number of meetings of the various board committees held during the financial year.

Number of meetings of the audit committee	12
Number of meetings of the responsible banking, sustainability and culture committee	5
Number of meetings of the innovation and technology committee	3
Number of meetings of the nomination committee	12
Number of meetings of the remuneration committee	13
Number of meetings of the risk supervision, regulation and compliance committee	17
Number of meetings of the executive committee	32

C.1.26 Indicate the number of board meetings held during the financial year and data about the attendance of the directors:

Number of meetings with at least 80% of directors being present	14
% of votes cast by members present over total votes in the financial year	98.04
Number of board meetings with all directors being present (or represented having given specific instructions)	12
% of votes cast by members present at the meeting or represented with specific instructions over total votes in the financial year	98.53

C.1.27 Indicate whether the company's consolidated and individual financial statements are certified before they are submitted to the board for their formulation.

Yes No

Identify, where applicable, the person(s) who certified the company's individual and consolidated financial statements prior to their formulation by the board:

Name	Position
José Francisco Doncel Razola	Group head of Accounting and Financial Control

C.1.29 Is the secretary of the board also a director?

Yes No

If the secretary of the board is not a director fill in the following table:

Name or corporate name of the secretary	Representative
Jaime Pérez Renovales	N/A

C.1.31 Indicate whether the company has changed its external audit firm during the financial year. If so, identify the incoming audit firm and the outgoing audit firm:

Yes No

C.1.32 Indicate whether the audit firm performs non-audit work for the company and/or its group. If so, state the amount of fees paid for such work and express this amount as a percentage they represent of all fees invoiced to the company and/or its group.

Yes No

	Company	Group companies	Total
Amount of non-audit work (EUR thousand)	10,712	7,682	18,394
Amount of non-audit work as a % of amount of audit work	41.50	10.30	18.30

C.1.33 Indicate whether the audit report on the previous year's financial statements contains a qualified opinion or reservations. Indicate the reasons given by the Chair of the audit committee to the shareholders in the general shareholders meeting to explain the content and scope of those qualified opinion or reservations.

Yes No



C.1.34 Indicate the number of consecutive years during which the current audit firm has been auditing the financial statements of the company and/or its group. Likewise, indicate for how many years the current firm has been auditing the financial statements as a percentage of the total number of years over which the financial statements have been audited:

	Individual financial statements	Consolidated financial statements
Number of consecutive years	7	7
	Company	Group
Number of years audited by current audit firm/Number of years the company's or its Group financial statements have been audited (%)	17.07	17.50

C.1.35 Indicate and if applicable explain whether there are procedures for directors to receive the information they need in sufficient time to prepare for meetings of the governing bodies:

Yes No

Procedures

Our Rules and regulations of the board foresees that members of the board and committees are provided with the relevant documentation for each meeting sufficiently in advance of the meeting date.

C.1.39 Identify, individually in the case of directors, and in the aggregate in all other cases, and provide detailed information on, agreements between the company and its directors, executives and employees that provide indemnification, guarantee or golden parachute clause in the event of resignation, unfair dismissal or termination as a result of a takeover bid or other type of transaction.

Number of beneficiaries	21
Type of beneficiary	Description of the agreement:
Employees	The Bank has no commitments to provide severance pay to directors. A number of employees have a right to compensation equivalent to one to two years of their basic salary in the event of their contracts being terminated by the Bank in the first two years of their contract in the event of dismissal on grounds other than their own will, retirement, disability or serious dereliction of duties. In addition, for the purposes of legal compensation, in the event of redundancy a number of employees are entitled to recognition of length of service including services provided prior to being contracted by the Bank; this would entitle them to higher compensation than they would be due based on their actual length of service with the Bank itself.

Indicate whether these agreements must be reported to and/or authorised by the governing bodies of the company or its group beyond the procedures provided for in applicable law. If applicable, specify the process applied, the situations in which they apply, and the bodies responsible for approving or communicating those agreements:

	Board of directors	General Shareholders' Meeting
Body authorising clauses	√	
	YES	NO
Is the general shareholders' meeting informed of such clauses?	√	

C.2 Board committees

C.2.1 Give details of all the board committees, their members and the proportion of executive, independent and other external directors.

Executive committee

Name	Position	Type	
Ana Botín-Sanz de Sautuola y O'Shea	Chair	Executive director	
José Antonio Álvarez Álvarez	Member	Executive director	
Bruce Carnegie-Brown	Member	Independent director	
Luis Isasi Fernández de Bobadilla	Member	Other external director	
Ramiro Mato García-Ansorena	Member	Independent director	
Belén Romana García	Member	Independent director	
% of executive directors			33.33
% of proprietary directors			0.00
% of independent directors			50.00
% of other external directors			16.67

Audit committee

Name	Position	Type	
Pamela Walkden	Chair	Independent director	
Homaira Akbari	Member	Independent director	
Henrique de Castro	Member	Independent director	
Germán de la Fuente	Member	Independent director	
Ramiro Mato García-Ansorena	Member	Independent director	
Belén Romana García	Member	Independent director	
% of executive directors			0
% of proprietary directors			0
% of independent directors			100
% of other external directors			0

Identify those directors in the audit committee who have been appointed on the basis of their knowledge and experience in accounting, audit or both and indicate the date of appointment of the committee chair.

Name of directors with accounting or audit experience	Pamela Walkden Belén Romana García Homaira Akbari Germán de la Fuente Henrique de Castro Ramiro Mato García-Ansorena
Date of appointment of the committee chair for that position	26 April 2020

Nomination committee

Name	Position	Type	
Bruce Carnegie-Brown	Chair	Independent director	
Sol Daurella Comadrán	Member	Independent director	
Gina Díez Barroso	Member	Independent director	
Glenn Hutchins	Member	Independent director	
% of executive directors			0
% of proprietary directors			0
% of independent directors			100
% of other external directors			0

**Remuneration committee**

Name	Position	Type	
Bruce Carnegie-Brown	Chair	Independent director	
Sol Daurella Comadrán	Member	Independent director	
Henrique de Castro	Member	Independent director	
Glenn Hutchins	Member	Independent director	
Luis Isasi Fernández de Bobadilla	Member	Other external director	
% of executive directors			0
% of proprietary directors			0
% of independent directors			80.00
% of other external directors			20.00

Risk supervision, regulation and compliance committee

Name	Position	Type	
Belén Romana García	Chair	Independent director	
Luis Isasi Fernández de Bobadilla	Member	Other external director	
Ramiro Mato García-Ansorena	Member	Independent director	
Pamela Walkden	Member	Independent director	
% of executive directors			0
% of proprietary directors			0
% of independent directors			75.00
% of other external directors			15.00

Responsible banking, sustainability and culture committee

Name	Position	Type	
Ramiro Mato García-Ansorena	Chair	Independent director	
Homaira Akbari	Member	Independent director	
Sol Daurella Comadrán	Member	Independent director	
Belén Romana García	Member	Independent director	
% of executive directors			0
% of proprietary directors			0
% of independent directors			100
% of other external directors			0

Innovation and technology committee

Name	Position	Type	
Ana Botín-Sanz de Sautuola y O'Shea	Chair	Executive director	
José Antonio Álvarez Álvarez	Member	Executive director	
Bruce Carnegie-Brown	Member	Independent director	
Homaira Akbari	Member	Independent director	
Henrique de Castro	Member	Independent director	
Glenn Hutchins	Member	Independent director	
Belén Romana García	Member	Independent director	
% of executive directors			28.57
% of proprietary directors			0.00
% of independent directors			71.43
% of other external directors			0.00



C.2.2 Complete the following table on the number of female directors on the various board committees over the past four years.

	Number of female directors							
	FY 2022		FY 2021		FY 2020		FY 2019	
	Number	%	Number	%	Number	%	Number	%
Audit committee	3	50.00	3	60.00	3	60.00	3	60.00
Responsible banking, sustainability and culture committee	3	75.00	3	60.00	3	60.00	5	62.50
Innovation and technology committee	3	42.86	3	—	3	42.85	3	37.50
Nomination committee	2	50.00	2	50.00	1	33.33	2	40.00
Remuneration committee	1	20.00	1	20.00	1	20.00	1	20.00
Risk supervision, regulation and compliance committee	2	50.00	2	40.00	1	20.00	2	40.00
Executive committee	2	33.33	2	33.33	2	33.33	2	28.50

D. RELATED-PARTY AND INTRAGROUP TRANSACTIONS

D.2 Give individual details of operations that are significant due to their amount or of importance due to their subject matter carried out between the company or its subsidiaries and shareholders holding 10% or more of the voting rights or who are represented on the board of directors of the company, indicating which has been the competent body for its approval and if any affected shareholder or director has abstained. In the event that the board of directors has responsibility, indicate if the proposed resolution has been approved by the board without a vote against the majority of the independents:

Not applicable.

D.3 Give individual details of the operations that are significant due to their amount or relevant due to their subject matter carried out by the company or its subsidiaries with the administrators or managers of the company, including those operations carried out with entities that the administrator or manager controls or controls jointly, indicating the competent body for its approval and if any affected shareholder or director has abstained. In the event that the board of directors has responsibility, indicate if the proposed resolution has been approved by the board without a vote against the majority of the independents:

Not applicable.



D.4 Report individually on intra-group transactions that are significant due to their amount or relevant due to their subject matter that have been undertaken by the company with its parent company or with other entities belonging to the parent's group, including subsidiaries of the listed company, except where no other related party of the listed company has interests in these subsidiaries or that they are fully owned, directly or indirectly, by the listed company.

In any case, report any intragroup transactions carried out with entities in countries or territories considered to be tax havens.

Corporate name of the group company	Brief description of the transaction and any other information necessary for its evaluation	Amount (EUR thousand)
Banco Santander (Brasil) S.A. (Cayman Islands Branch)	This chart shows the transactions and the results obtained by the Bank at 31 December 2022 with Group entities resident in countries or territories that were considered non-cooperative jurisdictions pursuant to Spanish legislation, at such date (Law 11/2021 on measures to prevent and fight against tax fraud). These results, and the balances indicated below, were eliminated in the consolidation process. See note 3 to the 2022 Consolidated financial statements for more information on offshore entities. The amount shown on the right corresponds to negative results relating to contracting of derivatives (includes branches in New York and London of Banco Santander, S.A.). The referred derivatives had a net negative market value of EUR 328 million in the Bank and covered the following transactions: - 104 Non Delivery Forwards. - 341 Swaps. - 50 Cross Currency Swaps. - 9 Options. - 58 Forex	526,245
	The amount shown on the right corresponds to negative results relating to term deposits with the New York branch of Banco Santander, S.A. (liability). These deposits had a nominal value of EUR 1,227 million at 31 December 2022.	8,669
	The amount shown on the right corresponds to positive results relating to deposits with the Hong Kong branch of Banco Santander, S.A. (asset), all of them expired before 31 December 2022.	5
	The amount shown on the right corresponds to positive results relating to fixed income securities-subordinated instruments (asset). This relates to the investment in November 2018 in two subordinated instruments (Tier I Subordinated Perpetual Notes and Tier II Subordinated Notes due 2028) with an amortised cost of EUR 2,363 million as at 31 December 2022.	158,620
	The amount shown on the right corresponds to negative results relating to interests and commissions concerning correspondent accounts (includes Hong Kong branch of Banco Santander, S.A.) (liability). This relates to correspondent accounts with a credit balance of EUR 36 million at 31 December 2022.	217
	The amount shown on the right corresponds to positive results relating to commissions received mainly for operations with the London and Hong Kong branches of Banco Santander, S.A.	411

D.5 Give individual details of the operations that are significant due to their amount or relevant due to their subject matter carried out by the company or its subsidiaries with other related parties pursuant to the international accounting standards adopted by the EU, which have not been reported in previous sections.

Not applicable.

G. DEGREE OF COMPLIANCE WITH THE CORPORATE GOVERNANCE RECOMMENDATIONS

Indicate the degree of the company's compliance with the recommendations of the good governance code for listed companies.

Should the company not comply with any of the recommendations or comply only in part, include a detailed explanation of the reasons so that shareholders, investors and the market in general have enough information to assess the company's behaviour. General explanations are not acceptable.

1. The bylaws of listed companies should not place an upper limit on the votes that can be cast by a single shareholder, or impose other obstacles to the takeover of the company by means of share purchases on the market.

Complies Explain

2. When the listed company is controlled, pursuant to the meaning established in Article 42 of the Commercial Code, by another listed or non-listed entity, and has, directly or through its subsidiaries, business relationships with that entity or any of its subsidiaries (other than those of the listed company) or carries out activities related to the activities of any of them, this is reported publicly, with specific information about:

a) The respective areas of activity and possible business relationships between, on the one hand, the listed company or its subsidiaries and, on the other, the parent company or its subsidiaries.

b) The mechanisms established to resolve any conflicts of interest that may arise.

Complies Partially complies Explain Not applicable

3. During the AGM the chair of the board should verbally inform shareholders in sufficient detail of the most relevant aspects of the company's corporate governance, supplementing the written information circulated in the annual corporate governance report. In particular:

a) Changes taking place since the previous annual general meeting.

b) The specific reasons for the company not following a given Good Governance Code recommendation, and any alternative procedures followed in its stead.

Complies Partially complies Explain

4. The company should define and promote a policy for communication and contact with shareholders and institutional investors within the framework of their involvement in the



company, as well as with proxy advisors, that complies in full with the rules on market abuse and gives equal treatment to shareholders who are in the same position. The company should make said policy public through its website, including information regarding the way in which it has been implemented and the parties involved or those responsible its implementation.

Further, without prejudice to the legal obligations of disclosure of inside information and other regulated information, the company should also have a general policy for the communication of economic-financial, non-financial and corporate information through the channels it considers appropriate (media, social media or other channels) that helps maximise the dissemination and quality of the information available to the market, investors and other stakeholders.

Complies Partially complies Explain

5. The board of directors should not make a proposal to the general meeting for the delegation of powers to issue shares or convertible securities without pre-emptive subscription rights for an amount exceeding 20% of capital at the time of such delegation.

And that whenever the board of directors approves an issuance of shares or convertible securities without pre-emptive rights the company immediately publishes reports on its web page regarding said exclusions as referenced in applicable mercantile law.

Complies Partially complies Explain

6. Listed companies drawing up the following reports on a voluntary or compulsory basis should publish them on their website well in advance of the AGM, even if their distribution is not obligatory:

- a) Report on auditor independence.
- b) Reviews of the operation of the audit committee and the nomination and remuneration committees.
- c) Audit committee report on third-party transactions.

Complies Partially complies Explain

7. The company should broadcast its general meetings live on the corporate website.

The company should have mechanisms that allow the delegation and exercise of votes by electronic means and even, in the case of large-cap companies and, to the extent that it is proportionate, attendance and active participation in the general shareholders' meeting.

Complies Explain

8. The audit committee should strive to ensure that the financial statements that the board of directors presents to the general shareholders' meeting are drawn up in accordance to accounting legislation. And in those cases where the auditors includes any qualification in its report, the chair of the audit committee should give a clear explanation at the general meeting of their opinion regarding the scope and content, making a summary of that opinion available to the shareholders at the time of the publication of the notice of the meeting, along with the rest of proposals and reports of the board.

Complies Partially complies Explain

9. The company should disclose its conditions and procedures for admitting share ownership, the right to attend general meetings and the exercise or delegation of voting rights, and display them permanently on its website.

Such conditions and procedures should encourage shareholders to attend and exercise their rights and be applied in a non-discriminatory manner.

Complies Partially complies Explain

10. When a shareholder so entitled exercises the right to supplement the agenda or submit new proposals prior to the general meeting, the company should:

- a) Immediately circulate the supplementary items and new proposals.
- b) Disclose the standard attendance card or proxy appointment or remote voting form, duly modified so that new agenda items and alternative proposals can be voted on in the same terms as those submitted by the board of directors.
- c) Put all these items or alternative proposals to the vote applying the same voting rules as for those submitted by the board of directors, with particular regard to presumptions or deductions about the direction of votes.
- d) After the general meeting, disclose the breakdown of votes on such supplementary items or alternative proposals.

Complies Partially complies Explain Not applicable

11. In the event that a company plans to pay for attendance at the general meeting, it should first establish a general, long-term policy in this respect.

Complies Partially complies Explain Not applicable

12. The board of directors should perform its duties with unity of purpose and independent judgement, according the same treatment to all shareholders in the same position. It should be guided at all times by the company's best interest, understood as the creation of a profitable business that promotes its sustainable success over time, while maximising its economic value.

In pursuing the corporate interest, it should not only abide by laws and regulations and conduct itself according to principles of good faith, ethics and respect for commonly accepted customs and good practices, but also strive to reconcile its own interests with the legitimate interests of its employees, suppliers, clients and other stakeholders, as well as with the impact of its activities on the broader community and the natural environment.

Complies Partially complies Explain

13. The board of directors should have an optimal size to promote its efficient functioning and maximise participation. The recommended range is accordingly between five and fifteen members.

Complies Explain

14. The board of directors should approve a policy aimed at promoting an appropriate composition of the board that:

- a) is concrete and verifiable;
- b) ensures that appointment or re-election proposals are based on a prior analysis of the competences required by the board; and
- c) favours diversity of knowledge, experience, age and gender. Therefore, measures that encourage the company to have a significant number of female senior managers are considered to favour gender diversity.



The results of the prior analysis of competences required by the board should be written up in the nomination committee's explanatory report, to be published when the general shareholders' meeting is convened that will ratify the appointment and re-election of each director.

The nomination committee should run an annual check on compliance with this policy and set out its findings in the annual corporate governance report.

Complies Partially complies Explain

15. Proprietary and independent directors should constitute an ample majority on the board of directors, while the number of executive directors should be the minimum practical bearing in mind the complexity of the corporate group and the ownership interests they control.

Further, the number of female directors should account for at least 40% of the members of the board of directors before the end of 2022 and thereafter, and not less than 30% previous to that.

Complies Partially complies Explain

16. The percentage of proprietary directors out of all non-executive directors should be no greater than the proportion between the ownership stake of the shareholders they represent and the remainder of the company's capital.

This criterion can be relaxed:

- a) In large cap companies where few or no equity stakes attain the legal threshold for significant shareholdings.
- b) In companies with a plurality of shareholders represented on the board but not otherwise related.

Complies Explain

17. Independent directors should be at least half of all board members.

However, when the company does not have a large market capitalisation, or when a large cap company has shareholders individually or concertedly controlling over 30 percent of capital, independent directors should occupy, at least, a third of board places.

Complies Explain

18. Companies should disclose the following director particulars on their websites and keep them regularly updated:

- a) Background and professional experience.
- b) Directorships held in other companies, listed or otherwise, and other paid activities they engage in, of whatever nature.
- c) Statement of the director class to which they belong, in the case of proprietary directors indicating the shareholder they represent or have links with.
- d) Dates of their first appointment as a board member and subsequent re-elections.
- e) Shares held in the company, and any options on the same.

Complies Partially complies Explain

19. Following verification by the nomination committee, the annual corporate governance report should disclose the reasons for the appointment of proprietary directors at the urging of shareholders controlling less than 3 percent of capital; and explain any rejection of a formal request for a board place from shareholders whose equity stake is equal to or greater than that of others applying successfully for a proprietary directorship.

Complies Partially complies Explain Not applicable

20. Proprietary directors should resign when the shareholders they represent dispose of their ownership interest in its entirety. If such shareholders reduce their stakes, thereby losing some of their entitlement to proprietary directors, the number of the latter should be reduced accordingly.

Complies Partially complies Explain Not applicable

21. The board of directors should not propose the removal of independent directors before the expiry of their tenure as mandated by the bylaws, except where they find just cause, based on a proposal from the nomination committee. In particular, just cause will be presumed when directors take up new posts or responsibilities that prevent them allocating sufficient time to the work of a board member, or are in breach of their fiduciary duties or come under one of the disqualifying grounds for classification as independent enumerated in the applicable legislation.

The removal of independent directors may also be proposed when a takeover bid, merger or similar corporate transaction alters the company's capital structure, provided the changes in board membership ensue from the proportionality criterion set out in recommendation 16.

Complies Explain

22. Companies should establish rules obliging directors to disclose any circumstance that might harm the organisation's name or reputation, related or not to their actions within the company, and tendering their resignation as the case may be, and, in particular, to inform the board of any criminal charges brought against them and the progress of any subsequent trial.

When the board is informed or becomes aware of any of the situations mentioned in the previous paragraph, the board of directors should examine the case as soon as possible and, attending to the particular circumstances, decide, based on a report from the nomination and remuneration committee, whether or not to adopt any measures such as opening of an internal investigation, calling on the director to resign or proposing his or her dismissal. The board should give a reasoned account of all such determinations in the annual corporate governance report, unless there are special circumstances that justify otherwise, which must be recorded in the minutes. This is without prejudice to the information that the company must disclose, if appropriate, at the time it adopts the corresponding measures.

Complies Partially complies Explain

23. Directors should express their clear opposition when they feel a proposal submitted for the board's approval might damage the corporate interest. In particular, independents and other directors not subject to potential conflicts of interest should strenuously challenge any decision that could harm the interests of shareholders lacking board representation.

When the board makes material or reiterated decisions about which a director has expressed serious reservations, then he or she must draw the pertinent conclusions. Directors resigning for such causes should set out their reasons in the letter referred to in the next recommendation.

The terms of this recommendation also apply to the secretary of the board, even if he or she is not a director.

Complies Partially complies Explain Not applicable

24. Directors who give up their position before their tenure expires, through resignation or resolution of the general meeting, should state the reasons for this decision, or in the case of non-executive directors, their opinion of the reasons for the general meeting resolution, in a letter to be sent to all members of the board.



This should all be reported in the annual corporate governance report, and if it is relevant for investors, the company should publish an announcement of the departure as rapidly as possible, with sufficient reference to the reasons or circumstances provided by the director.

Complies Partially complies Explain Not applicable

25. The nomination committee should ensure that non-executive directors have sufficient time available to discharge their responsibilities effectively.

The board rules and regulations should lay down the maximum number of company boards on which directors can serve.

Complies Partially complies Explain

26. The board should meet with the necessary frequency to properly perform its functions, eight times a year at least, in accordance with a calendar and agendas set at the start of the year, to which each director may propose the addition of initially unscheduled items.

Complies Partially complies Explain

27. Director absences should be kept to a strict minimum and quantified in the annual corporate governance report. In the event of absence, directors should delegate their powers of representation with the appropriate instructions.

Complies Partially complies Explain

28. When directors or the secretary express concerns about some proposal or, in the case of directors, about the company's performance, and such concerns are not resolved at the meeting, they should be recorded in the minutes book if the person expressing them so requests.

Complies Partially complies Explain Not applicable

29. The company should provide suitable channels for directors to obtain the advice they need to carry out their duties, extending if necessary to external assistance at the company's expense.

Complies Partially complies Explain

30. Regardless of the knowledge directors must possess to carry out their duties, they should also be offered refresher programmes when circumstances so advise.

Complies Explain Not applicable

31. The agendas of board meetings should clearly indicate on which points directors must arrive at a decision, so they can study the matter beforehand or obtain the information they consider appropriate.

For reasons of urgency, the chair may wish to present decisions or resolutions for board approval that were not on the meeting agenda. In such exceptional circumstances, their inclusion will require the express prior consent, duly minuted, of the majority of directors present.

Complies Partially complies Explain

32. Directors should be regularly informed of movements in share ownership and of the views of major shareholders, investors and rating agencies on the company and its group.

Complies Partially complies Explain

33. The chair, as the person responsible for the efficient functioning of the board of directors, in addition to the functions assigned by law and the company's bylaws, should prepare and submit to the board a schedule of meeting dates and agendas; organise and coordinate regular evaluations of the board and, where appropriate, of the company's chief executive officer;

exercise leadership of the board and be accountable for its proper functioning; ensure that sufficient time is given to the discussion of strategic issues, and approve and review refresher courses for each director, when circumstances so advise.

Complies Partially complies Explain

34. When a lead independent director has been appointed, the bylaws or the Rules and regulations of the board of directors should grant him or her the following powers over and above those conferred by law: to chair the board of directors in the absence of the chair or vice chair; to give voice to the concerns of non-executive directors; to maintain contact with investors and shareholders to hear their views and develop a balanced understanding of their concerns, especially those to do with the company's corporate governance; and to coordinate the chair's succession plan.

Complies Partially complies Explain Not applicable

35. The board secretary should strive to ensure that the board's actions and decisions are informed by the governance recommendations of the Good Governance Code of relevance to the company.

Complies Explain

36. The board in full should conduct an annual evaluation, adopting, where necessary, an action plan to correct weakness detected in:

- a) The quality and efficiency of the board's operation.
- b) The performance and membership of its committees.
- c) The diversity of board membership and competencies.
- d) The performance of the chair of the board of directors and the company's chief executive.
- e) The performance and contribution of individual directors, with particular attention to the chair of board committees.

The evaluation of board committees should start from the reports they send to the board of directors, while that of the board itself should start from the report of the nomination committee.

Every three years, the board of directors should engage an external facilitator to aid in the evaluation process. This facilitator's independence should be verified by the nomination committee.

Any business dealings that the facilitator or members of its corporate group maintain with the company or members of its corporate group should be detailed in the annual corporate governance report.

The process followed and areas evaluated should be detailed in the annual corporate governance report.

Complies Partially complies Explain

37. When there is an executive committee, there should be at least two non-executive members, at least one of whom should be independent; and its secretary should be the secretary of the board of directors.

Complies Partially complies Explain Not applicable

38. The board should be kept fully informed of the matters discussed and decisions made by the executive committee. To this end, all board members should receive a copy of the committee's minutes.

Complies Partially complies Explain Not applicable



39. All members of the audit committee, particularly its chair, should be appointed with regard to their knowledge and experience in accounting, auditing and risk management matters, both financial and non-financial.

Complies Partially complies Explain

40. Listed companies should have a unit in charge of the internal audit function, under the supervision of the audit committee, to monitor the effectiveness of reporting and control systems. This unit should report functionally to the board's non-executive chair or the chair of the audit committee.

Complies Partially complies Explain

41. The head of the unit handling the internal audit function should present an annual work programme to the audit committee, for approval by this committee or the board, inform it directly of any incidents or scope limitations arising during its implementation, the results and monitoring of its recommendations, and submit an activities report at the end of each year.

Complies Partially complies Explain Not applicable

42. The audit committee should have the following functions over and above those legally assigned:

1. With respect to internal control and reporting systems:

a) Monitor and evaluate the preparation process and the integrity of the financial and non-financial information, as well as the control and management systems for financial and non-financial risks related to the company and, where appropriate, to the group – including operating, technological, legal, social, environmental, political and reputational risks or those related to corruption – reviewing compliance with regulatory requirements, the accurate demarcation of the consolidation perimeter, and the correct application of accounting principles.

b) Monitor the independence of the unit handling the internal audit function; propose the selection, appointment and removal of the head of the internal audit service; propose the service's budget; approve or make a proposal for approval to the board of the priorities and annual work programme of the internal audit unit, ensuring that it focuses primarily on the main risks the company is exposed to (including reputational risk); receive regular report-backs on its activities; and verify that senior management are acting on the findings and recommendations of its reports.

c) Establish and supervise a mechanism that allows employees and other persons related to the company, such as directors, shareholders, suppliers, contractors or subcontractors, to report irregularities of potential significance, including financial and accounting irregularities, or those of any other nature, related to the company, that they notice within the company or its group. This mechanism must guarantee confidentiality and enable communications to be made anonymously, respecting the rights of both the complainant and the accused party.

d) In general, ensure that the internal control policies and systems established are applied effectively in practice.

2. With regard to the external auditor:

a) Investigate the issues giving rise to the resignation of the external auditor, should this come about.

b) Ensure that the remuneration of the external auditor, does not compromise its quality or independence.

c) Ensure that the company notifies any change of external auditor through the CNMV, accompanied by a statement of any disagreements arising with the outgoing auditor and the reasons for the same.

d) Ensure that the external auditor has a yearly meeting with the board in full to inform it of the work undertaken and developments in the company's risk and accounting positions.

e) Ensure that the company and the external auditor adhere to current regulations on the provisions of non-audit services, limits on the concentration of the auditor's business and other requirements concerning auditor independence.

Complies Partially complies Explain

43. The audit committee should be empowered to meet with any company employee or manager, even ordering their appearance without the presence of another manager.

Complies Partially complies Explain

44. The audit committee should be informed of any structural changes or corporate transactions the company is planning, so the committee can analyse the operation and report to the board beforehand on its economic conditions and accounting impact and, when applicable, the exchange ratio proposed.

Complies Partially complies Explain Not applicable

45. Risk control and management policy should identify or establish at least:

a) The different types of financial and non-financial risk the company is exposed to (including operational, technological, financial, legal, social, environmental, political and reputational risks, and risks relating to corruption), with the inclusion under financial or economic risks of contingent liabilities and other off-balance-sheet risks.

b) A risk control and management model based on different levels, of which a specialised risk committee will form part when sector regulations provide or the company deems it appropriate.

c) The level of risk that the company considers acceptable.

d) The measures in place to mitigate the impact of identified risk events should they occur.

e) The internal control and reporting systems to be used to control and manage the above risks, including contingent liabilities and off-balance-sheet risks.

Complies Partially complies Explain

46. Companies should establish a risk control and management function in the charge of one of the company's internal department or units and under the direct supervision of the audit committee or some other specialised board committee. This internal department or unit should be expressly charged with the following responsibilities:

a) Ensure that risk control and management systems are functioning correctly and, specifically, that major risks the company is exposed to are correctly identified, managed and quantified.

b) Participate actively in the preparation of risk strategies and in key decisions about their management.

c) Ensure that risk control and management systems are mitigating risks effectively in the frame of the policy drawn up by the board of directors.

Complies Partially complies Explain



47. Members of the nomination and remuneration committee—or of the nomination committee and remuneration committee, if separately constituted – should be chosen procuring they have the right balance of knowledge, skills and experience for the functions they are called on to discharge. The majority of their members should be independent directors.

Complies Partially complies Explain

48. Large cap companies should have formed separate nomination and remuneration committees.

Complies Explain Not applicable

49. The nomination committee should consult with the company's chair and chief executive, especially on matters relating to executive directors.

When there are vacancies on the board, any director may approach the nomination committee to propose candidates that it might consider suitable.

Complies Partially complies Explain

50. The remuneration committee should operate independently and have the following functions in addition to those assigned by law:

- a) Propose to the board the standard conditions for senior officer contracts.
- b) Monitor compliance with the remuneration policy set by the company.
- c) Periodically review the remuneration policy for directors and senior officers, including share-based remuneration systems and their application, and ensure that their individual compensation is proportionate to the amounts paid to other directors and senior officers in the company.
- d) Ensure that conflicts of interest do not undermine the independence of any external advice the committee engages.
- e) Verify the information on director and senior officers' pay contained in corporate documents, including the annual directors' remuneration statement.

Complies Partially complies Explain

51. The remuneration committee should consult with the company's chair and chief executive, especially on matters relating to executive directors and senior officers.

Complies Partially complies Explain

52. The rules regarding composition and functioning of supervision and control committees should be set out in the regulations of the board of directors and aligned with those governing legally mandatory board committees as specified in the preceding sets of recommendations. They should include at least the following terms:

- a) Committees should be formed exclusively by non-executive directors, with a majority of independents.
- b) They should be chaired by independent directors.
- c) The board should appoint the members of such committees with regard to the knowledge, skills and experience of its directors and each committee's terms of reference; discuss their proposals and reports; and provide report-backs on their activities and work at the first board plenary following each committee meeting.
- d) They may engage external advice, when they feel it necessary for the discharge of their functions.

e) Meeting proceedings should be minuted and a copy made available to all board members.

Complies Partially complies Explain Not applicable

53. The task of supervising compliance with the policies and rules of the company in the environmental, social and corporate governance areas, and internal rules of conduct, should be assigned to one board committee or split between several, which could be the audit committee, the nomination committee, a committee specialised in sustainability or corporate social responsibility, or a dedicated committee established by the board under its powers of self-organisation. Such a committee should be made up solely of non-executive directors, the majority being independent and specifically assigned the following minimum functions.

Complies Partially complies Explain

54. The minimum functions referred to in the previous recommendation are as follows:

- a) Monitor compliance with the company's internal codes of conduct and corporate governance rules, and ensure that the corporate culture is aligned with its purpose and values.
- b) Monitor the implementation of the general policy regarding the disclosure of economic-financial, non-financial and corporate information, as well as communication with shareholders and investors, proxy advisors and other stakeholders. Similarly, the way in which the entity communicates and relates with small and medium-sized shareholders should be monitored.
- c) Periodically evaluate the effectiveness of the company's corporate governance system and environmental and social policy, to confirm that it is fulfilling its mission to promote the corporate interest and catering, as appropriate, to the legitimate interests of remaining stakeholders.
- d) Ensure the company's environmental and social practices are in accordance with the established strategy and policy.
- e) Monitor and evaluate the company's interaction with its stakeholder groups.

Complies Partially complies Explain

55. Environmental and social sustainability policies should identify and include at least:

- a) The principles, commitments, objectives and strategy regarding shareholders, employees, clients, suppliers, social welfare issues, the environment, diversity, fiscal responsibility, respect for human rights and the prevention of corruption and other illegal conducts.
- b) The methods or systems for monitoring compliance with policies, associated risks and their management.
- c) The mechanisms for supervising non-financial risk, including that related to ethical aspects and business conduct.
- d) Channels for stakeholder communication, participation and dialogue.
- e) Responsible communication practices that prevent the manipulation of information and protect the company's honour and integrity.

Complies Partially complies Explain



56. Director remuneration should be sufficient to attract and retain directors with the desired profile and compensate the commitment, abilities and responsibility that the post demands, but not so high as to compromise the independent judgement of non-executive directors.

Complies Explain

57. Variable remuneration linked to the company and the director's performance, the award of shares, options or any other right to acquire shares or to be remunerated on the basis of share price movements, and membership of long-term savings schemes such as pension plans, retirement accounts or any other retirement plan should be confined to executive directors.

The company may consider the share-based remuneration of non-executive directors provided they retain such shares until the end of their mandate. The above condition will not apply to any shares that the director must dispose of to defray costs related to their acquisition.

Complies Partially complies Explain

58. In the case of variable awards, remuneration policies should include limits and technical safeguards to ensure they reflect the professional performance of the beneficiaries and not simply the general progress of the markets or the company's sector, or circumstances of that kind.

In particular, variable remuneration items should meet the following conditions:

- a) Be subject to predetermined and measurable performance criteria that factor the risk assumed to obtain a given outcome.
- b) Promote the long-term sustainability of the company and include non-financial criteria that are relevant for the company's long-term value, such as compliance with its internal rules and procedures and its risk control and management policies.
- c) Be focused on achieving a balance between the achievement of short, medium and long-term targets, such that performance-related pay rewards ongoing achievement, maintained over sufficient time to appreciate its contribution to long-term value creation. This will ensure that performance measurement is not based solely on one off, occasional or extraordinary events.

Complies Partially complies Explain Not applicable

59. The payment of the variable components of remuneration is subject to sufficient verification that previously established performance, or other, conditions have been effectively met. Entities should include in their annual directors' remuneration report the criteria relating to the time required and methods for such verification, depending on the nature and characteristics of each variable component.

Additionally, entities should consider establishing a reduction clause ('malus') based on deferral for a sufficient period of the payment of part of the variable components that implies total or partial loss of this remuneration in the event that prior to the time of payment an event occurs that makes this advisable.

Complies Partially complies Explain Not applicable

60. Remuneration linked to company earnings should bear in mind any qualifications stated in the external auditor's report that reduce their amount.

Complies Partially complies Explain Not applicable

61. A major part of executive directors' variable remuneration should be linked to the award of shares or financial instruments whose value is linked to the share price.

Complies Partially complies Explain Not applicable

62. Following the award of shares, options or financial instruments corresponding to the remuneration schemes, executive directors should not be able to transfer their ownership or exercise them until a period of at least three years has elapsed.

Except for the case in which the director maintains, at the time of the transfer or exercise, a net economic exposure to the variation in the price of the shares for a market value equivalent to an amount of at least twice his or her fixed annual remuneration through the ownership of shares, options or other financial instruments.

The foregoing shall not apply to the shares that the director needs to dispose of to meet the costs related to their acquisition or, upon favourable assessment of the nomination and remuneration committee to address an extraordinary situation.

Complies Partially complies Explain Not applicable

63. Contractual arrangements should include provisions that permit the company to reclaim variable components of remuneration when payment was out of step with the director's actual performance or based on data subsequently found to be misstated.

Complies Partially complies Explain Not applicable

64. Termination payments should not exceed a fixed amount equivalent to two years of the director's total annual remuneration and should not be paid until the company confirms that he or she has met the predetermined performance criteria.

For the purposes of this recommendation, payments for contractual termination include any payments whose accrual or payment obligation arises as a consequence of or on the occasion of the termination of the contractual relationship that linked the director with the company, including previously unconsolidated amounts for long-term savings schemes and the amounts paid under post-contractual non-compete agreements.

Complies Partially complies Explain Not applicable

List whether any directors voted against or abstained from voting on the approval of this Report.

Yes No

I declare that the information included in this statistical annex are the same and are consistent with the descriptions and information included in the annual corporate governance report published by the company.



9.3 Table on compliance with or explanations of recommendations on corporate governance

Recommendation	Comply / Explain	Information
1	Comply	See section 3.2 'Shareholder rights' .
2	Not applicable	See 'Other conflicts of interest' in section 4.12 and section 2.3 'Significant shareholders' .
3	Comply	See section 3.1 'Shareholder communication and engagement' .
4	Comply	See section 3.1 'Shareholder communication and engagement' .
5	Comply	See section 2.2 'Authority to increase capital' .
6	Comply	See sections 4.5 'Audit committee activities in 2022' , 4.6 'Nomination committee activities in 2022' , 4.7 'Remuneration committee activities in 2022' , 4.8 'Risk supervision, regulation and compliance committee activities in 2022' , 4.9 'Responsible banking, sustainability and culture committee activities in 2022' , 4.10 'Innovation and technology committee activities in 2022' and 4.12 'Related-party transactions and conflicts of interest' .
7	Comply	See 'Engagement with shareholders in 2022' in section 3.1, 'Shareholder participation at general meetings' in section 3.2 and section 3.5 'Our next AGM in 2023' .
8	Comply	See 'Board's regulation' in section 4.3 and section 4.5 'Audit committee activities in 2022' .
9	Comply	See 'Shareholder participation at general meetings' in section 3.2.
10	Comply	See 'Supplement to the annual general meeting notice' in section 3.2.
11	Not applicable	See section 3.5 'Our next AGM in 2023' .
12	Comply	See section 4.3 'Board functioning and effectiveness' .
13	Comply	See 'Size' in section 4.2.
14	Comply	See 'Diversity' and 'Election, renewal and succession of directors' in section 4.2, 'Board's regulation' in section 4.3, 'Duties and activities in 2022' in section 4.6, section 5 'Management team' and 'Responsible banking' chapter.
15	Comply	See section 4.2 'Board composition' .
16	Comply	See 'Composition by director type' in section 4.2.
17	Comply	See 'Composition by director type' and 'Election, renewal and succession of directors' in section 4.2.
18	Comply	See 'Corporate website' in section 3.1, section 4.1 'Our directors' and 'Tenure and equity ownership' in section 4.2.
19	Not applicable	See 'Composition by director type' in section 4.2.
20	Comply	See 'Election, renewal and succession of directors' in section 4.2.
21	Comply	See 'Election, renewal and succession of directors' in section 4.2.
22	Comply	See 'Election, renewal and succession of directors' in section 4.2, 'Board's regulation' in section 4.3 and 'Duties and activities in 2022' in section 4.6.
23	Comply	See 'Election, renewal and succession of directors' in section 4.2.
24	Comply	See 'Election, renewal and succession of directors' in section 4.2, 'Board's regulation' in section 4.3 and 'Duties and activities in 2022' in section 4.6.
25	Comply	See 'Board and committee preparation and attendance' in section 4.3 and 'Duties and activities in 2022' in section 4.6.
26	Comply	See 'Board operation' and 'Board and committee preparation and attendance' in section 4.3.
27	Comply	See 'Board operation' and 'Board and committee preparation and attendance' in section 4.3.
28	Comply	See 'Board operation' in section 4.3.
29	Comply	See 'Board operation' and 'Committee operation' in section 4.3.
30	Comply	See 'Director training and induction programmes' in section 4.3.
31	Comply	See 'Board operation' in section 4.3.
32	Comply	See section 3.1 'Shareholder communication and engagement' and 'Duties and activities in 2022' in section 4.6.
33	Comply	See section 4.3 'Board functioning and effectiveness' .
34	Comply	See 'Lead independent director' in section 4.3.
35	Comply	See 'Secretary of the board' in section 4.3.
36	Comply	See 'Board effectiveness review in 2022' in section 4.3.
37	Comply	See 'Board's regulation' in section 4.3 and 'Composition' in section 4.4.
38	Comply	See 'Committee operation' in section 4.3 and section 4.4 'Executive committee activities in 2022' .
39	Comply	See 'Board's regulation' in section 4.3 and 'Composition' in section 4.5.
40	Comply	See 'Duties and activities in 2022' in section 4.5 and section 8.5 'Monitoring' .
41	Comply	See 'Board's regulation' in section 4.3 and 'Duties and activities in 2022' in section 4.5.
42	Comply	See 'Board's regulation' in section 4.3 and 'Duties and activities in 2022' in section 4.5.
43	Comply	See 'Committee operation' in section 4.3.
44	Comply	See 'Duties and activities in 2022' in section 4.5.



Recommendation	Comply / Explain	Information
45	Comply	See 'Board's regulation' in section 4.3, 'Duties and activities in 2022' in section 4.5, 'Duties and activities in 2022' in section 4.8 and the 'Risk management and compliance' chapter.
46	Comply	See 'Duties and activities in 2022' in section 4.5, 'Duties and activities in 2022' in section 4.8 and the 'Risk management and compliance' chapter.
47	Comply	See 'Composition' in section 4.6 and 'Composition' in section 4.7.
48	Comply	See 'Structure of board's committees' in section 4.3.
49	Comply	See 'Duties and activities in 2022' in section 4.6.
50	Comply	See 'Duties and activities in 2022' in section 4.7.
51	Comply	See 'Duties and activities in 2022' in section 4.7.
52	Comply	See 'Board's regulation' and 'Committee operation' in section 4.3 and sections 4.8 'Risk supervision, regulation and compliance committee activities in 2022' and 4.9 'Responsible banking, sustainability and culture committee activities in 2022' .
53	Comply	See 'Board's regulation' in section 4.3, 'Duties and activities in 2022' in section 4.6, 'Duties and activities in 2022' in section 4.8 and 'Duties and activities in 2022' in section 4.9.
54	Comply	See 'Board's regulation' in section 4.3, 'Duties and activities in 2022' in section 4.6, 'Duties and activities in 2022' in section 4.8 and 'Duties and activities in 2022' in section 4.9.
55	Comply	See 'Duties and activities in 2022' in section 4.9 and 'Responsible banking' chapter.
56	Comply	See sections 6.2 'Remuneration of directors for supervisory and collective decision-making duties: policy applied in 2022' , 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
57	Comply	See sections 6.2 'Remuneration of directors for supervisory and collective decision-making duties: policy applied in 2022' , 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
58	Comply	See section 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
59	Comply	See section 6.3 'Remuneration of directors for executive duties' .
60	Comply	See section 6.3 'Remuneration of directors for executive duties' .
61	Comply	See section 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
62	Comply	See 'Duties and activities in 2022' in section 4.7, section 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
63	Comply	See section 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .
64	Comply	See sections 6.1 'Principles of the remuneration policy' and 6.3 'Remuneration of directors for executive duties' and 6.4 'Directors' remuneration policy for 2023, 2024 and 2025 submitted to a binding shareholder vote' .



9.4 Reconciliation to the CNMV's remuneration report model

Section in the CNMV model	Included in statistical report	Further information elsewhere and comments
A. Remuneration policy for the present fiscal year		
A.1	No	<ul style="list-style-type: none"> • See section 6.4: A.1.1, A.1.2, A.1.3, A.1.4, A.1.5, A.1.6, A.1.7, A.1.8, A.1.9, A.1.10, A.1.11 (note 5), A.1.12. • See also sections 4.7 and 6.5 for A.1.1 y A.1.6. • See 'Summary of link between risk, performance and reward' in section 6.3.
A.2	No	See section 6.4 .
A.3	No	See section 6.4 . See Introduction.
A.4	No	See section 6.5 .
B. Overall summary of application of the remuneration policy over the last fiscal year		
B.1	No	For B.1.1, see sections 6.1 , 6.2 and 6.3 . For B.1.2 y B.1.3 (not applicable) see section 6.5
B.2	No	See 'Summary of link between risk, performance and reward' in section 6.3 .
B.3	No	See sections 6.1 , 6.2 and 6.3 .
B.4	No	See section 6.5 .
B.5	No	See section 6.2 and 6.3
B.6	No	See 'Gross annual salary' in section 6.3 .
B.7	No	See 'Variable remuneration' in section 6.1 , 6.2 and 6.3 .
B.8	No	Not applicable.
B.9	No	See 'Main features of the benefit plans' in section 6.3 .
B.10	No	See 'Other remuneration' in section 6.3 .
B.11	No	See 'Terms and conditions of executive directors' contracts' in section 6.4 .
B.12	No	See section 6.3 : "Remuneration of board members as representatives of Banco Santander"
B.13	No	See note 5 to the consolidated financial statements.
B.14	No	See 'Insurance and other remuneration and benefits in kind' in section 6.4 .
B.15	No	See 'Remuneration of board members as representatives of the Bank' in section 6.3 .
B.16	No	No remuneration for this component.
C. Breakdown of the individual remuneration of directors		
C	Yes	See section 9.5 .
C.1 a) i)	Yes	See section 9.5 .
C.1 a) ii)	Yes	See section 9.5 .
C.1 a) iii)	Yes	See section 9.5 .
C.1 a) iii)	Yes	See section 9.5 .
C.1 b) i)	Yes	See section 9.5 .
C.1 b) ii)	No	No remuneration for this component.
C.1 b) iii)	Yes	See section 9.5 .
C.1 b) iv)	No	No remuneration for this component.
C.1 c)	Yes	See section 9.5 .
C.2	Yes	See section 9.5 .
D. Other information of interest		
D	No	See section 4.7



9.5 Statistical information on remuneration required by the CNMV

B. OVERALL SUMMARY OF HOW REMUNERATION POLICY WAS APPLIED DURING THE YEAR ENDED

B.4 Report on the result of the consultative vote at the general shareholders' meeting on remuneration in the previous year, indicating the number of votes in favour, votes against, abstentions and blank ballots:

	Number	% of total
Votes cast	11,926,199,198	100.00 %

	Number	% of votes cast
Votes in favour	10,193,385,775	85.47 %
Votes against	1,389,271,674	11.65 %
Blank	7,151,848	0.06 %
Abstentions	336,389,901	2.82 %

C. ITEMISED INDIVIDUAL REMUNERATION ACCRUED BY EACH DIRECTOR

Directors	Type	Period of accrual in year 2022
Ana Botín-Sanz de Sautuola y O'Shea	Executive Chair	From 01/01/2022 to 31/12/2022
José Antonio Álvarez Álvarez	CEO	From 01/01/2022 to 31/12/2022
Bruce Carnegie-Brown	Lead independent director	From 01/01/2022 to 31/12/2022
Homaira Akbari	Independent	From 01/01/2022 to 31/12/2022
Javier Botín-Sanz de Sautuola y O'Shea	Other external	From 01/01/2022 to 31/12/2022
Álvaro Cardoso de Souza	Independent	From 01/01/2022 to 01/04/2022
R. Martín Chávez Márquez	Independent	From 01/01/2022 to 01/07/2022
Sol Daurella Comadrán	Independent	From 01/01/2022 to 31/12/2022
Henrique de Castro	Independent	From 01/01/2022 to 31/12/2022
Gina Díez Barroso	Independent	From 01/01/2022 to 31/12/2022
Luis Isasi Fernández de Bobadilla	Other External	From 01/01/2022 to 31/12/2022
Ramiro Mato García-Ansorena	Independent	From 01/01/2022 to 31/12/2022
Sergio Rial	Other External	From 01/01/2022 to 31/12/2022
Belén Romana García	Independent	From 01/01/2022 to 31/12/2022
Pamela Walkden	Independent	From 01/01/2022 to 31/12/2022
Germán de la Fuente	Independent	From 01/04/2022 to 31/12/2022
Glenn Hutchins	Independent	From 20/12/2022 to 31/12/2022

C.1 Complete the following tables on individual remuneration of each director (including the remuneration for exercising executive functions) accrued during the year.

a) Remuneration from the reporting company:

i) Remuneration in cash (thousand euros)

Name	Fixed remuneration	Per diem allowances	Remuneration for membership of Board's committees	Salary	Short-term variable remuneration	Long-term variable remuneration ¹	Severance pay	Other grounds	Total year 2022	Total year 2021
Ana Botín-Sanz de Sautuola y O'Shea	95	41	244	3,176	2,702	444	—	525	7,227	7,533
José Antonio Álvarez Álvarez	95	39	195	2,541	1,823	297	—	710	5,700	5,941
Bruce Carnegie-Brown	280	75	345	—	—	—	—	—	700	700
Homaira Akbari	95	69	80	—	—	—	—	—	244	248
Francisco Javier Botín-Sanz de Sautuola y O'Shea	95	34	—	—	—	—	—	—	129	129
Álvaro Cardoso de Souza	24	11	4	—	—	—	—	—	39	183
R. Martín Chávez Márquez	48	40	59	—	—	—	—	—	147	374
Sol Daurella Comadrán	95	70	65	—	—	—	—	—	230	239
Henrique de Castro	95	76	90	—	—	—	—	—	261	267
Gina Díez Barroso	95	52	25	—	—	—	—	—	172	130
Luis Isasi Fernández de Bobadilla	95	82	235	—	—	—	—	1,000	1,412	1,406
Ramiro Mato García-Ansorena	95	90	315	—	—	—	—	—	500	499
Sergio Rial	95	36	—	—	—	—	—	—	131	879
Belén Romana García	95	94	360	—	—	—	—	—	549	533
Pamela Walkden	95	78	150	—	—	—	—	—	323	303
Rodrigo Echenique Gordillo	—	—	—	—	—	236	—	—	236	292
Germán de la Fuente	66	40	31	—	—	—	—	—	137	—
Glenn Hutchins	3	4	3	—	—	—	—	—	10	—

Comments (Not included in the electronic submission to the CNMV)

1. Includes deferred amounts from the 2018 deferred and conditional variable remuneration plan subject to long term metrics for Ana Botín, José Antonio Álvarez and Rodrigo Echenique.
2. The remuneration of Luis Isasi includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings.

ii) Table of changes in share-based remuneration schemes and gross profit from consolidated shares or financial instruments

Name	Name of Plan	Financial instruments at start of year 2022		Financial instruments granted during 2022 year		Financial instruments consolidated during 2022				Instruments matured but not exercised ⁴	Financial instruments at end of year 2022	
		No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares / handed over	Price of the consolidated shares	Net profit from shares handed over or consolidated financial instruments (EUR thousand)	No. of instruments	No. of instruments	No. of equivalent shares
Ana Botín Sanz de Sautuola y O'Shea	3rd cycle of deferred variable remuneration plan linked to multi-year targets (2018)	309,911	309,911	—	—	103,303	103,303	2.80 ³	289	206,608	—	—
	4th cycle of deferred variable remuneration plan linked to multi-year targets (2019)	319,390	319,390	—	—	—	—	—	—	—	319,390	319,390
	5th cycle of deferred variable remuneration plan linked to multi-year targets (2020)	111,823	111,823	—	—	—	—	—	—	—	111,823	111,823
	6th cycle of deferred variable remuneration plan linked to multi-year targets (2021)	533,024	533,024	—	—	—	—	—	—	—	533,024	533,024
	7th cycle of deferred variable remuneration plan linked to multi-year targets (2022) in shares	—	—	585,079	585,079	398,078	398,078	3.088	1,229	—	187,002	187,002
	7th cycle (bis) of deferred variable remuneration plan linked to multi-year targets (2022) in option shares ²	—	—	1,575,335	585,079	1,071,830	398,078	3.088	1,229	—	503,505	187,002
	7th cycle (bis) of deferred variable remuneration plan linked to multi-year targets (2022) in RSU ² of PagoNxt S.L.	—	—	12,646	196,891	5,058	78,756	3.088	243	—	7,587	118,135

Name	Name of Plan	Financial instruments at start of year 2022		Financial instruments granted during 2022 year		Financial instruments consolidated during 2022				Instruments matured but not exercised ⁴	Financial instruments at end of year 2022	
		No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares / handed over	Price of the consolidated shares	Net profit from shares handed over or consolidated financial instruments (EUR thousand)	No. of instruments	No. of instruments	No. of equivalent shares
José Antonio Álvarez Álvarez	3rd cycle of deferred variable remuneration plan linked to multi-year targets (2018)	207,097	207,097	—	—	69,032	69,032	2.80 ³	193	138,065	—	—
	4th cycle of deferred variable remuneration plan linked to multi-year targets (2019)	213,449	213,449	—	—	—	—	—	—	—	213,449	213,449
	5th cycle of deferred variable remuneration plan linked to multi-year targets (2020)	60,739	60,739	—	—	—	—	—	—	—	60,739	60,739
	6th cycle of deferred variable remuneration plan linked to multi-year targets (2021)	359,733	359,733	—	—	—	—	—	—	—	359,733	359,733
	7th cycle of deferred variable remuneration plan linked to multi-year targets (2022) in shares	—	—	394,916	394,916	268,679	268,679	3.088	830	—	126,237	126,237
	7th cycle (bis) of deferred variable remuneration plan linked to multi-year targets (2022) in option shares ⁵	—	—	1,063,316	394,916	723,421	268,679	3.088	830	—	339,895	126,237
	7th cycle (bis) of deferred variable remuneration plan linked to multi-year targets (2022) in RSU ² of PagoNxt S.L.	—	—	8,527	132,772	3,411	53,109	3.088	164	—	5,116	79,663

Name	Name of Plan	Financial instruments at start of year 2022		Financial instruments granted during 2022 year		Financial instruments consolidated during 2022				Instruments matured but not exercised ⁴	Financial instruments at end of year 2022	
		No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares	No. of instruments	No. of equivalent shares / handed over	Price of the consolidated shares	Net profit from shares handed over or consolidated financial instruments (EUR thousand)	No. of instruments	No. of instruments	No. of equivalent shares
Rodrigo Echenique Gordillo	3rd cycle of deferred variable remuneration plan linked to multi-year targets (2018)	164,462	164,462	—	—	54,820	54,820	'2.80 ³	153	109,642	—	—
	4th cycle of deferred variable remuneration plan linked to multi-year targets (2019)	98,092	98,092	—	—	—	—	—	—	—	98,092	98,092

Comments (Not included in the electronic submission to the CNMV)

1. After reviewing the results of the 3rd cycle of the deferred variable remuneration plan linked to multi-year targets (2018), the board of directors confirmed in 2022, upon recommendation from the remuneration committee, a 33.3% achievement of the long-term metrics of the plan (as the following level of achievement was met during 2018-2020 period: CET1 at 100% at 2020 year-end (the target was 11.30%); underlying EPS growth at 0% (the target was a 25% growth); and TSR metric at 0% (33% minimum target not reach), with a 33% weight each one) and the amounts of the pending deliveries for each executive director, payable in February 2022, 2023 and 2024 in connection with this plan. This applies to all persons under this plan.

2. Santander share price: EUR 3.088; Santander share option price: EUR 1.147 (Santander share option price is 37.14% of Santander share price); and restricted stock unit (RSU) of PagoNxt S.L. price: EUR 48.08 (equivalent just for this table calculation purposes, the conversion rate of Santander share/PagoNxt RSU is 0.064 times).

3. The share price as of 31 December 2022 closing (EUR 2.80) has been taken into account as a value for the calculation process of this plan. This value may be different to the share price in the moment or date of the respective deliveries and the cost for the Bank, which will depend on the purchase price of the shares or the share hedging that may be exist.

4. These instruments were initially assigned and due to the level of achievement of the metrics of this plan will not be delivered and the beneficiaries will not receive them.

iii) Long-term saving systems (thousand EUR)

Name	Remuneration from consolidation of rights to savings system
Ana Botín-Sanz de Sautuola y O'Shea	1,081
José Antonio Álvarez Álvarez	811

Name	Contribution over the year from the company (EUR thousand)				Amount of accumulated funds (EUR thousand)			
	Savings systems with consolidated economic rights		Savings systems with unconsolidated economic rights		2022		2021	
	2022	2021	2022	2021	Systems with consolidated economic rights	Systems with unconsolidated economic rights	Systems with consolidated economic rights	Systems with unconsolidated economic rights
	Ana Botín-Sanz de Sautuola y O'Shea	1,081	1,041	—	—	46,725	—	48,075
José Antonio Álvarez Álvarez	811	783	—	—	18,958	—	18,821	—

iv) Details of other items (thousands of EUR)

Name	Item	Amount remunerated
Ana Botín-Sanz de Sautuola y O'Shea	Life and accident insurance and fixed remuneration supplement	412
	Other remuneration	25

Name	Item	Amount remunerated
José Antonio Álvarez Álvarez	Life and accident insurance and fixed remuneration supplement	1,040
	Other remuneration	7

b) Remuneration of the company directors for seats on the boards of other group companies:

i) Remuneration in cash (thousands of EUR)

Name	Fixed remuneration	Per diem allowances	Remuneration for membership of Board's committees	Salary	Short-term variable remuneration	Long-term variable remuneration	Severance pay	Other grounds	Total year 2022	Total year 2021
Homaira Akbari	361	—	—	—	—	—	—	—	361	213
Álvaro Cardoso de Souza	28	—	—	—	—	—	—	—	28	334
R. Martín Chávez Márquez	200	—	—	—	—	—	—	—	200	52
Henrique de Castro	200	—	—	—	—	—	—	—	200	52
Pamela Walkden	147	—	—	—	—	—	—	—	147	36
Sergio Rial ¹	117	—	—	2,000	167	—	—	1	2,286	4,001

Comments (Not included in the electronic submission to the CNMV)

1. Long-term variable remuneration only includes amounts since the appointment as director.

ii) Table of changes in share/based remunerations schemes and gross profit from consolidated shares of financial instruments

Not applicable



iii) Long term saving systems (thousand EUR)

Name	Remuneration from consolidation of rights to savings system
Sergio Rial	162

Name	Contribution over the year from the company (EUR thousand)				Amount of accumulated funds (EUR thousand)			
	Savings systems with consolidated economic rights		Savings systems with unconsolidated economic rights		2022		2021	
	2022	2021	2022	2021	Systems with consolidated economic rights	Systems with unconsolidated economic rights	Systems with consolidated economic rights	Systems with unconsolidated economic rights
	Sergio Rial	162	1,153	—	—	6,276	—	5,202

Comments (Not included in the electronic submission to the CNMV)

Saving system from Banco Santander Brasil S.A.

iv) Detail of other items (thousands of EUR)

Not applicable



c) Summary of remuneration (thousands of EUR)

The summary should include the amounts corresponding to all the items of remuneration included in this report that have been accrued by the director, in thousand euros.

Name	Remuneration accrued in the company					Remuneration accrued in group companies						
	Total cash remuneration	Gross profit on consolidated shares or financial instruments	Contributions to the long-term savings plan	Remuneration for other items	Total 2022	Total 2021	Total cash remuneration	Gross profit on consolidated shares or financial instruments	Contributions to the long-term savings plan	Remuneration for other items	Total 2022	Total 2021
Ana Botín-Sanz de Sautuola y O'Shea	7,227	2,990	1,081	437	11,735	12,288	—	—	—	—	—	—
José Antonio Álvarez Álvarez	5,700	2,017	811	1,047	9,575	9,728	—	—	—	—	—	—
Bruce Carnegie-Brown	700	—	—	—	700	700	—	—	—	—	—	—
Homaira Akbari	244	—	—	—	244	248	361	—	—	—	361	213
Javier Botín-Sanz de Sautuola y O'Shea	129	—	—	—	129	129	—	—	—	—	—	—
Álvaro Cardoso de Souza	39	—	—	—	39	183	28	—	—	—	28	334
R. Martín Chávez Márquez	147	—	—	—	147	374	200	—	—	—	200	52
Sol Daurella Comadrán	230	—	—	—	230	239	—	—	—	—	—	—
Henrique de Castro	261	—	—	—	261	267	200	—	—	—	200	52
Gina Díez Barroso	172	—	—	—	172	130	—	—	—	—	—	—
Luis Isasi Fernández de Bobadilla ¹	1,412	—	—	—	1,412	1,406	—	—	—	—	—	—
Ramiro Mato García-Ansorena	500	—	—	—	500	499	—	—	—	—	—	—
Sergio Rial	131	—	—	—	131	879	2,286	—	162	—	2,448	7,170
Belén Romana García	549	—	—	—	549	533	—	—	—	—	—	—
Pamela Walkden	323	—	—	—	323	303	147	—	—	—	147	36
Rodrigo Echenique Gordillo	236	153	—	—	389	444	—	—	—	—	—	—
Germán de la Fuente	137	—	—	—	137	—	—	—	—	—	—	—
Glenn Hutchins	10	—	—	—	10	—	—	—	—	—	—	—
Total	18,147	5,160	1,892	1,484	26,683	28,350	3,222	—	162	—	3,384	7,857

Comments (Not included in the electronic submission to the CNMV)

1. Includes deferred amounts from the 2018 deferred and conditional variable remuneration plan subject to long term metrics for Ana Botín, José Antonio Álvarez and Rodrigo Echenique.
2. The remuneration of Luis Isasi includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings.



C.2 Indicate the evolution in the last five years of the amount and percentage variation of the remuneration accrued by each of the directors of the listed company who have held this position during the year, the consolidated results the company and the average remuneration on an equivalent basis with regard to full-time employees of the company and its subsidiaries that are not directors of the listed company.

Directors' remuneration (EUR thousand)	2022	% var. 22/21	2021	% var. 21/20	2020	% var. 20/19	2019	% var. 19/18	2018
• Executive Directors									
Ana Botín-Sanz de Sautuola y O'Shea	11,735	(5)%	12,288	52%	8,090	(19)%	9,954	(10)%	11,011
José Antonio Álvarez Álvarez	9,575	(2)%	9,728	41%	6,877	(17)%	8,270	(8)%	9,001
• External Directors¹									
Bruce Carnegie-Brown	700	—	700	18%	595	(15)%	700	(4)%	732
Javier Botín-Sanz de Sautuola y O'Shea	129	—	129	6%	122	(11)%	137	13%	121
Sergio Rial	2,579	(68)%	8,049	22%	6,621	—	—	—	—
Sol Daurella Comadrán	230	(4)%	239	12%	214	(11)%	240	12%	215
Belén Romana García	549	3%	533	28%	417	(21)%	525	27%	414
Homaira Akbari	605	31%	461	19%	386	71%	226	14%	199
Ramiro Mato García Ansorena	500	—	499	16%	430	(14)%	500	11%	450
Álvaro Cardoso de Souza	67	(87)%	517	(11)%	578	(14)%	673	355%	148
Henrique de Castro	461	45%	319	36%	234	172%	86	—	—
Pamela Walkden	470	38%	339	59%	214	529%	34	—	—
Luis Isasi Fernández de Bobadilla ²	1,412	—	1,406	49%	943	—	—	—	—
R.Martín Chávez Márquez	347	(19)%	426	689%	54	—	—	—	—
Gina Díez Barroso	172	32%	130	622%	18	—	—	—	—
Germán de la Fuente	137	—	—	—	—	—	—	—	—
Glenn Hutchins	10	—	—	—	—	—	—	—	—
Company's performance									
Underlying profit attributable to the Group (EUR mn)	9,605	11%	8,654	70%	5,081	(38)%	8,252	2%	8,064
Consolidated results of the Group ³ (EUR mn)	15,250	5%	14,547	—	(2,076)	—%	12,543	(12)%	14,201
Ordinary RoTE	13.37%	5%	12.73%	71%	7.44%	(37)%	11.79%	(2)%	12.08%
Employees' average remuneration⁴ (EUR)	56,262	1%	55,673	18%	47,130	(12)%	53,832	2%	52,941

1. Non-executive directors' remuneration fluctuations are caused by joining or leaving the Board of Directors and the difference in the amount of meetings they assist during the year. Hence there is no correlation between their remuneration and the company performance.

2. The remuneration of Luis Isasi includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings.

3. Group operating profit/(loss) before tax.

4. Employee average remuneration includes all concepts. Full-time equivalent data. The percentage of variable remuneration over fixed remuneration in an average employee is lower than that of the executive directors. Variable remuneration data accrued in the current year. Evolutive data impacted by exchange rate performance in the group's geographies.

(Notes not included in the electronic submission to the CNMV)

This annual report on remuneration has been approved by the board of directors of the company, at its meeting on 27 February 2023.

State if any directors have voted against or abstained from approving this report.

Yes No

Economic and financial review





1. Economy, regulation and competition	306
2. Group selected data	310
3. Group financial performance	312
3.1 Situation of Santander	312
3.2 Results	316
3.3 Balance sheet	329
3.4 Liquidity and funding management	333
3.5 Capital management and adequacy. Solvency ratios	341
3.6 Special situations and resolution	353
4. Financial information by segment	357
4.1 Description of segments	357
4.2 Summary of the Group's main business areas' income statements	359
4.3 Primary segments	361
4.4 Corporate Centre	379
4.5 Secondary segments	381
4.6 Appendix	391
5. Research, development and innovation (R&D&I)	400
6. Significant events since year end	402
7. Trend information 2023	403
8. Alternative performance measures (APMs)	411



1. Economy, regulation and competition

Economy

In 2022, Santander operated in an environment marked by global inflation picking up to levels not seen in decades. The war in Ukraine fanned geopolitical tensions and global supply chain bottlenecks and disruptions stemming from the covid-19 pandemic and geopolitical situation waned but, nonetheless, persisted.

In response, the major central banks raised interest rates to try to contain inflationary pressures; some countries are expected to consolidate monetary policy in 2023, which may lead to a gradual slowdown in global economic activity.

Our core regions' economies performed as follows:

- **Eurozone** (GDP: +3.5% in 2022). The end of pandemic restrictions in Q2'22 boosted services sector activity, but the war in Ukraine, which caused energy and basic food prices to rise, hampered post-pandemic recovery and created a recession risk. The labour market was resilient, as the unemployment rate continued to fall to historical lows (6.6%). Inflation rose steadily to above 10% after the summer, although ended the year at 9.2%. The European Central Bank (ECB) responded by beginning to raise interest rates in July, increasing the official interest rate from -0.50% to 2% at year end.
- **Spain** (GDP: +5.5% in 2022). Normalization of the service sector and tourism activity following the pandemic boosted growth in 2022. Despite economic deceleration, the labour market remained robust and the number of part-time contracts fell. Inflation peaked above 10% but declined to 5.8% in December, due to falls in energy prices. However, core inflation continued to rise (7.5% in December).
- **United Kingdom** (GDP: +4.1% in 2022). Accelerated inflation caused real income and domestic demand to fall as the year went on, ending with a significant slowdown. The labour market, with little idle capacity, was another factor pressuring inflation. As a result, the Bank of England raised interest rates to 3.5%.
- **Portugal** (GDP: +6.7% in 2022). Synchronized external and internal demand due to rapid and intense post-pandemic recovery helped keep Portugal at almost full employment (average unemployment rate at 6%). Stronger demand when supply was unable to respond and the effects of the war in Ukraine accelerated inflation to double digits.
- **Poland** (GDP: +4.9% in 2022). The economy was resilient despite headwinds: the war in Ukraine, the spike in energy costs and tighter financial conditions. A strong increase in wages put further pressure on already high inflation. In response, the central bank raised the official interest rate to 6.75%.
- **United States** (GDP: +2.1% in 2022). Economic growth slowed following the high growth rates in 2021. The labour market remained solid, as the unemployment rate was close to historical lows. Inflation shows signs of falling back from mid-year highs but remains elevated (6.5% in December). The Federal Reserve raised interest rates by 425 bps in 2022 up to a range of 4.25%-4.5%.
- **Mexico** (GDP: preliminary +2.8% in 2022). Economic growth was surprisingly robust, on the back of expansion of services, manufacturing and agriculture plus an active export market. Inflation continued to pick up though at a slower pace in Q4'22 (7.8% in December). The central bank continued to raise the official rate, reaching 10.5% (5.5% at the end of 2021).
- **Brazil** (GDP: estimated +3.0% in 2022). The economy grew well but showed signs of a slowdown in the second half of the year, particularly in terms of private consumption. Inflation peaked in April but quickly fell back (5.8% in December). The central bank raised the official rate by 450 bps to 13.75% in August with no further rate increases in the rest of the year.
- **Chile** (GDP: 2.7% estimated in 2022). The economy adjusted after growing intensely in 2021. GDP contracted in the second half of the year, due to fiscal stimulus withdrawal and tighter monetary policy. Chile's central bank raised interest rates by 725 bps to 11.25% to combat high inflation (12.8%).
- **Argentina** (GDP: estimated +5.5% in 2022). Economic recovery continued despite high inflation (average monthly inflation rates of 5.7%). The IMF reached an agreement with the government to refinance debt maturities with the organization, backed by a programme focused on addressing macro imbalances.



The exchange rates of our main currencies against the euro in 2022 and 2021 were:

Exchange rates: 1 euro/currency parity

	Average		Period-end	
	2022	2021	2022	2021
US dollar	1.051	1.182	1.068	1.133
Pound sterling	0.853	0.859	0.887	0.840
Brazilian real	5.421	6.372	5.650	6.319
Mexican peso	21.131	23.980	20.805	23.152
Chilean peso	916.688	897.123	909.200	964.502
Argentine peso	134.786	112.383	189.116	116.302
Polish zloty	4.683	4.564	4.684	4.597

Geopolitical risk, lower growth forecasts amid considerable uncertainty, inflationary pressures and tighter monetary policy led to a tumultuous year in financial markets.

Government bond yields trended up as central banks raised interest rates. Short-term rates rebounded more strongly than long-term rates, inverting yield curves. In the UK, tensions warned that fiscal policy should accompany monetary policy to avoid undermining fiscal sustainability. Euro periphery spreads, especially Italian bonds, widened against German debt, due to initial doubts cast on the new Italian government and on the ECB's monetary policy shift.

Stock markets experienced episodes of instability and a decline due to rising interest rates, central banks' uncertainty about terminal interest rates and lower visibility on earnings estimates. In this lower risk appetite environment, the US dollar appreciated against most currencies, and fell below parity against a euro penalized by the ECB's slower reaction in raising interest rates and by the possibility of a recession in Europe caused by a potential energy crisis.

Latin American markets performed well in this volatile environment, helped by high commodity prices, lower current account imbalances, strong reserve buffers, lower currency mismatches, and the swift action by central banks in the region, which moved quickly to preserve their credibility.

Monetary policy tightening puts an end to the distortions created by very low or negative interest rates, and will have a positive impact on banks' margins. The speed and intensity of the interest rate rises, the ensuing economic slowdown and the effect of prices on private sector income, may impact on banks' credit quality, especially in highly indebted segments that were already vulnerable after the pandemic.

Loan delinquency was better than expected, due to the effective income support measures offered during the pandemic as well as economic recovery following it. Banks should monitor portfolio credit quality performance.

Banks faced the economic environment from an initial position of solid solvency, as demonstrated in the stress tests carried out by the main central banks and multilateral organizations. This indicates that banks were in a good position to face a potential further economic deterioration. Moreover, banks had ample initial liquidity, boosted by central bank covid-19-pandemic support measures and by savings that households and corporates had accumulated during lockdowns. However,

monetary policy tightening withdrew excess liquidity and credit institutions' wholesale funding costs increased.

The medium-term challenges that banks face remain unchanged. Digital transformation accelerated during the pandemic, forcing entities to offer customers better digital experience in the wake of a surge in new competitors. Climate transition also requires a significant effort as institutions must develop new portfolio classification models and risk scenarios to assess the potential balance sheet impacts and understand exposure to transitional and physical risks to companies and households owing to climate change in the coming years.

Regulatory and competitive environment

The 2022 regulatory agenda was once again marked by discussions around three main areas: prudential and resolution, sustainability and digital. The outbreak of the war in Ukraine at the beginning of the year influenced regulatory debates: generally, on the need to ensure banks can continue to play a key role in financing the economy (as they did during covid-19) and specifically, on energy sources and sustainability.

Main regulatory actions in these three areas in 2022 were:

- **Prudential and resolution:** most discussions focused on the European Commission's (EC) proposal to implement Basel III in Europe, a reform aimed at reducing the variability of risk-weighted assets and favouring comparability between institutions. In view of the war in Ukraine, the Eurogroup unsuccessfully pushed for an agreement to set up a Deposit Guarantee Fund. International debate focused on the Basel Committee's new consultation on the prudential treatment of financial institutions' exposures to crypto-assets.
- **Sustainability:** Europe continued to lead the way in sustainability talks. The final Pillar 3 disclosure framework defined by the European Banking Authority (EBA) was approved and will apply from 2023. Work continued this year on the green taxonomy, the revision of the non-financial disclosure reporting directive (NFRD), which will define new transparency requirements for financial and non-financial companies, and the development of sustainability reporting standards. The EC published three new proposals: green bonds, due diligence and deforestation. At the international level, the Basel Committee established guidelines on the management and supervision of climate-related financial risks.
- **Digitalization:** the EC finalized key parts of the digital finance plan announced in 2020. The new Markets in cryptoassets (MiCA) regulation establishes a common European framework for the issuance, custody and exchange of cryptoassets. The new Digital Operational Resilience Act (DORA) establishes a harmonized supervisory framework for technology providers that offer services to financial institutions and imposes common cybersecurity requirements. The Digital Markets Act (DMA) was also passed. It establishes obligations and prohibitions for digital platforms considered gatekeepers, in order to ensure competition in the EU digital market. At the same time, practically all central banks continued to explore the issuance of digital currencies (CBDCs). The ECB in particular stands out as one of the most advanced in its research.



Amid rising inflation and cost of living, some national governments adopted mortgage payment regulations for vulnerable groups and, in general, for others struggling to meet their financial obligations. Entities adopted additional measures individually and collectively.

For more details, see [note 1.e](#) to the consolidated financial statements.



Santander and public policy

Santander has always defended the need for robust, high-quality regulation that supports bank strength and solvency, establishes strong consumer protection and market stability standards, and favours transparency regarding risk and resilience for investors and supervisors. We are committed to engaging constructively and transparently with public policy makers and regulators on the aims, design and implementation of banking rules and policy frameworks that impact our banks' or our customers' interests.

Capital and bank resilience

We believe that the reforms of the last decade have made financial institutions more robust in terms of capital. However, the covid-19 crisis raised some issues regarding the functioning of the regulatory framework that need to be carefully assessed. Additionally, the EU still has work to do to build the foundations of a true banking union. We continue to advocate for:

1

- An approach to continue working on the implementation of Basel III standards that does not materially increase new post-crisis capital requirements and takes into account the demands of digitalization, the green transformation and the post-covid recovery.
- The need for a stable and predictable framework to facilitate management by institutions and investors' understanding of this agenda.
- Banking regulation needs to recognize some of the realities of banks with a global footprint, such as the recognition of the Multiple Point of Entry resolution framework.
- A common deposit insurance scheme for EU banks that breaks the bank/sovereign loop.

Sustainability and sustainable finance

We believe that decarbonization is a first order social and environmental challenge in which banks have an important role to play and we are fully committed to the objectives. We continue to advocate for regulation that:

2

- Ensures business competitiveness and avoids fragmentation to promote economic growth. Encourages harmonization across jurisdictions by agreeing on a global, principle-based sustainability regulatory framework.
- Does not restrict banks' ability to support their customers' transitions. It is not only important to finance companies that are already green, but to help those in carbon-intensive sectors develop more sustainable models.
- Supports governments with their responsibility to define transition paths for the different economic sectors, along with implementation tools and policies, with banks as a major player in supporting individuals and companies in their transitions.

The digital landscape

The banking sector is undergoing significant changes during its digital transformation with the aim of leveraging technology and innovation opportunities and improving customer choice. We continue to advocate for:

3

- Simple, future-proof regulation and supervision that allows the banking sector to innovate and take advantage of the potential benefits of technology and digitalization on an equal basis with other companies.
- A data economy that is fair (level-playing field), competitive (with incentives for innovation) and secure (appropriate distribution of responsibility). Consumers and users must have real control over their data. In addition, a sharing of data across sectors that will really make a difference in better provision of services and products for those consumers and customers.
- Discussions on central bank digital currencies should take into consideration the role the financial system plays in financing the economy.



2. Group selected data

BALANCE SHEET (EUR million)	2022	2021	% 2022 vs. 2021	2020
Total assets	1,734,659	1,595,835	8.7	1,508,250
Loans and advances to customers	1,036,004	972,682	6.5	916,199
Customer deposits	1,025,401	918,344	11.7	849,310
Total funds ^A	1,255,660	1,153,656	8.8	1,056,127
Total equity	97,585	97,053	0.5	91,322

INCOME STATEMENT (EUR million)	2022	2021	% 2022 vs. 2021 ^B	2020
Net interest income	38,619	33,370	15.7	31,994
Total income	52,117	46,404	12.3	44,279
Net operating income	28,214	24,989	12.9	23,149
Profit before tax	15,250	14,547	4.8	(2,076)
Profit attributable to the parent	9,605	8,124	18.2	(8,771)

EPS, PROFITABILITY AND EFFICIENCY (%)	2022	2021	% 2022 vs. 2021	2020
EPS (euro)	0.539	0.438	23.1	(0.538)
RoE	10.67	9.66		(9.80)
RoTE	13.37	11.96		1.95
RoA	0.63	0.62		(0.50)
RoRWA	1.77	1.69		(1.33)
Efficiency ratio ^C	45.8	46.2		47.0

UNDERLYING INCOME STATEMENT ^C (EUR million)	2022	2021	% 2022 vs. 2021 ^D	2020
Net interest income	38,619	33,370	15.7	31,994
Total income	52,154	46,404	12.4	44,600
Net operating income	28,251	24,989	13.1	23,633
Profit before tax	15,250	15,260	(0.1)	9,674
Attributable profit to the parent	9,605	8,654	11.0	5,081

UNDERLYING EPS AND PROFITABILITY ^C (%)	2022	2021	% 2022 vs. 2021	2020
Underlying EPS (euro)	0.539	0.468	15.0	0.262
Underlying RoE	10.67	10.29		5.68
Underlying RoTE	13.37	12.73		7.44
Underlying RoA	0.63	0.65		0.40
Underlying RoRWA	1.77	1.78		1.06



SOLVENCY (%)	2022	2021	2020
Fully-loaded CET1	12.04	12.12	11.89
Fully-loaded total capital ratio	15.81	16.41	15.73

CREDIT QUALITY (%)	2022	2021	2020
Cost of risk	0.99	0.77	1.28
NPL ratio	3.08	3.16	3.21
Total coverage ratio	68	71	76

THE SHARE AND MARKET CAPITALIZATION	2022	2021	% 2022 vs. 2021	2020
Number of shareholders	3,915,388	3,936,922	(0.5)	4,018,817
Shares (millions)	16,794	17,341	(3.2)	17,341
Share price (euro)	2.803	2.941	(4.7)	2.538
Market capitalization (EUR million)	47,066	50,990	(7.7)	44,011
Tangible book value per share (euro)	4.26	4.12		3.79
Price / Tangible book value per share (X)	0.66	0.71		0.67

CUSTOMERS (thousands)	2022	2021	% 2022 vs. 2021	2020
Total customers	159,843	152,943	4.5	148,256
Loyal customers ^E	27,490	25,548	7.6	22,838
Loyal retail customers	25,298	23,359	8.3	20,901
Loyal SME & corporate customers	2,191	2,189	0.1	1,938
Digital customers ^F	51,470	47,489	8.4	42,362
Digital sales / Total sales (%)	55.1	54.4		44.3

OPERATING DATA	2022	2021	% 2022 vs. 2021	2020
Number of employees	206,462	199,177	3.7	193,226
Number of branches	9,019	9,229	(2.3)	10,586

A. Includes customer deposits, mutual funds, pension funds and managed portfolios.

B. In constant euros: Net interest income: +9.0%; Total income: +5.8%; Net operating income: +4.9%; Profit before tax: -3.9%; Attributable profit: +8.5%.

C. In addition to IFRS measures, we present non-IFRS measures including some which we refer to as underlying measures. These non-IFRS measures exclude items outside the ordinary course of business and reclassify certain items under some headings of the underlying income statement as described at the end of section 3.2 'Results' and in section 8 'Alternative Performance Measures' of this chapter. In our view, this provides a better year-on-year comparison.

D. In constant euros: Net interest income: +9.0%; Total income: +5.9%; Net operating income: +5.0%; Profit before tax: -8.0%; Attributable profit: +2.3%.

E. Active customers who receive most of their financial services from the Group according to the commercial segment to which they belong. Various engaged customer levels have been defined taking profitability into account.

F. Every physical or legal person, that, being part of a commercial bank, has logged into its personal area of internet banking or mobile phone or both in the last 30 days.



3. Group financial performance

Santander follows IFRS to report its results (see [note 1.b](#) to the consolidated financial statements), which generally inform reporting of our financial situation in this consolidated directors' report. However, we also use non-IFRS measures and Alternative Performance Measures (APMs) to assess our performance (see section [8 'Alternative Performance Measures'](#) of this chapter). Thus, the main adjustments to our IFRS results consist of:

- underlying results measures: we present what we call underlying results measures which exclude items outside the ordinary course of business and reclassify certain items under some headings of the underlying income statement as described at the end of section [3.2 'Results'](#) in this chapter and in [note 51.c](#) of the consolidated financial statements. In our view, this provides a better year-on-year comparison.

In section [4 'Financial information by segment'](#), we present results by business area only in underlying terms in accordance with IFRS 8. We reconcile them in aggregate terms with our IFRS consolidated results in [note 51.c](#) to the consolidated financial statements; and

- local currency measures: we use certain non-IFRS financial indicators in local currency to assess our ongoing operating performance. They include the results from our subsidiary banks outside the eurozone excluding the exchange rate impact (i.e. in constant euros). Because changes in exchange rates have a non-operating impact on results, we believe assessing performance in local currency provides management and investors an additional and meaningful assessment of performance. Section [8 'Alternative Performance Measures'](#) of this chapter explains how we exclude the exchange rate impact from financial measures in local currency.

We have rounded certain figures in this consolidated directors' report to present them more clearly. Thus, the amounts given in the totals columns and rows of tables in certain instances may not match the sum of that column or row.

3.1 Situation of Santander

Santander is one of the largest banks in the eurozone. At year-end 2022, we had EUR 1,734,659 million in assets and EUR 1,255,660 million in total customer funds. Santander was the second largest bank by market capitalization (EUR 47,066 million as of 30 December 2022).

Our purpose to help people and businesses prosper by being Simple, Personal and Fair remains the same. We do not merely meet our legal and regulatory obligations but also aim to exceed our stakeholders' expectations. We strive to aid our customers' green transitions, while also promoting financial inclusion.

We engage in all types of typical banking activities, operations and services. Our track record, business model and strategic execution drive our aim to be the best open digital financial services platform, by acting responsibly and earning the lasting loyalty of our stakeholders (people, customers, shareholders and communities).

2022 was another challenging year, as certain adverse social and economic effects of the covid-19 pandemic continued to impact the macroeconomic environment and Santander. Moreover, the current context, in part as a result of the war in Ukraine, is geopolitically and economically more complex, volatile and uncertain. In 2022, we continued to play an active role in economic recovery, supporting our 160 million customers and broader society.

We had 206,462 **employees** at 31 December 2022. We continue to work towards being an employer of choice, chosen for our purpose and culture and for generating profit responsibly. Our strategic priorities centred around talent and culture help us ensure we have the right people, encourage and empower them and develop their skills while providing an excellent employee experience.

In 2022, we launched our new T.E.A.M.S. corporate behaviours and 'Your Voice', our continuous listening tool through which our employees can share their opinions, ideas and experiences. In its first year, 'Your Voice' addressed such issues as engagement, flexibility, co-worker relationships, inclusion, well-being and culture. Santander's global eNPS (employee Net Promoter Score) stood well above the average of all companies in the survey.



We interact with our **customers** through several channels to ensure their access to financial services. At the year end, we had 9,019 branches, which we have improved in recent years. These include WorkCafés, SmartBank and Ágil ('Agile') branches, and other specialist centres for businesses, private banking, universities and other customer segments. We are also promoting new, more digital collaborative spaces.

Additionally, our contact centres, which provide best-in-class service quality, continue to serve our customers.

Amid faster digitalization, our aim, now more than ever, is to continue to offer customers digital products and services that will meet their needs and support them in their digital journey.

Santander continues to invest in ensuring access to financial services for customers who prefer to bank in-person, do not have a branch nearby or do not feel comfortable using mobile banking or digital channels. Our priority is to ensure that no one is left behind and everyone has the opportunity to access our products and services.

Some examples of our commitment to financial inclusion are our initiatives in rural Spain. Through our branches, ATMs and network of financial agents in communities with under 10,000 inhabitants and Correos Cash, we provide access to financial services to customers in these rural areas that might otherwise have been left off the grid. In 2022, we also joined the Asociación Española de Banca's (AEB) agreement to make further headway in financial inclusion. In Mexico, around 80% of our Tuio (our microfinance programme) customers were able to grow their business through our loans and 48% of them were able to hire more employees.

As another example, Santander has been working on enhancing services for our elderly customers and on preventing digitalization from becoming an obstacle to accessing financial services. Our cross-functional team has put in place measures that include extending the hours of counter/teller services and creating senior ambassadors to make sure senior citizens receive the best possible service.

In addition to these improvements in the way we serve our customers, we are simplifying our retail and commercial banking products and automating processes, while working to lower our cost to serve and increase our local competitiveness.

This is reflected in customer growth and enhanced customer experience and satisfaction. In terms of NPS, we are one of the top three banks in eight markets (including ranking first in Chile and Argentina).

The number of digital and loyal customers as well as digital activity continued to increase. We now have more than 27 million loyal customers (+8% year-on-year), mainly due to the increase in individuals. Digital customers rose 8% to over 51 million. Digital sales accounted for 55% of total sales (54% in 2021, 44% in 2020 and 36% in 2019) and 80% of transactions carried out were digital (+4 pp in 2022).

We promote financial inclusion as part of our ESG strategy, in a society that is increasingly aware of its importance. Because we have an opportunity and a responsibility to do things the right way, we embed ESG factors in all our businesses.

We have a competitive advantage to aid our customers' green transitions. In 2022, we performed these actions:

- in SCIB, we continued to deliver on our green finance target of mobilizing EUR 120 billion by 2025, having so far achieved approximately EUR 94.5 billion since 2019. We remained a leader in renewables financing in Europe and Latin America and ranked second globally (by number of deals and volume).

We continued to move forward in our Net zero ambition by setting three new interim decarbonization targets for our energy, steel and aviation portfolios;

- in Consumer, we provided over EUR 5 billion in green finance loans, mainly for electric vehicles but also for bicycles, solar panels, electric chargers, green heating systems and others; and
- in WM&I, we achieved EUR 53 billion of the EUR 100 billion we had pledged to hold in Socially Responsible Investment (SRI) assets under management (AuMs) by 2025.

Our ability to attract a diverse and talented workforce, our culture of teamwork and our financial inclusion initiatives drive our success, which is recognized inside and outside the Group.

- Santander employees are highly engaged with a global eNPS score of 54 that falls within the top 10% in the financial sector and is 16 points above the average for all companies in the external benchmark Workday Peakon Employee Voice.
- We addressed the importance of gender equality and pay gap by implementing a diversity and inclusion strategy for remuneration. We are working towards reducing the pay gap to near 0% (already 1%).
- We have increased the number of women in top management, progressing towards our 2025 target of 30%. The greatest gain has been in the past two years from 24% to around 29%.

These efforts are reflected in our ranking as the world's highest-scoring bank and the second highest scoring company overall worldwide in the 2023 Bloomberg Gender-Equality Index, which recognizes excellence and commitment to equality. Our score of 92.87 was over 2 pp up on the previous year.



- In terms of financial inclusion, we have already exceeded our target to financially empower 10 million people by 2025, and were named The World's Best Bank for Financial Inclusion by *Eurromoney* for our efforts.
- Finally, we continue to be a reference in the sector, as 40% of the Group's board members are women. We have long ensured that the Group's visions and decisions are informed by diverse views. We expect this diverse vision to also be a reality in each of the countries in which we operate.

In 2022, we delivered solid **financial results**. We achieved record attributable profit of EUR 9,605 million, supported by strong net operating income, translated into higher profitability and **shareholder** remuneration. Our credit quality, liquidity and capital positions were strong.

We reached the targets we had set at the beginning of the year: mid-single digit revenue growth in constant euros (+6% achieved), cost of risk below 1% (0.99%), fully-loaded CET1 ratio over 12% (12.04%) and RoTE over 13% (13.4% achieved). In a year with considerable inflationary pressure, we improved the efficiency ratio and ended the year close to our efficiency target of 45% (45.8%).

Looking ahead, we plan to continue helping companies, businesses and countries prosper making the most of our opportunities and commitments.

Our goal is to build a digital bank with branches for our customers through global technology initiatives to further transform our business and operating model.

In our view, we have built the foundations of a simple, fair and innovative product offering that creates more value for our shareholders, sustains our solid capital position and improves profitability going forward. We will rely on our business model that combines local scale and expertise with our global reach.

Our in-market scale in each of our core markets provides strong support for increased profitability. At the same time, our global reach, backed by our global divisions and leveraging our auto and payments capabilities, generates additional business and revenue opportunities, and supports growth with greater efficiency and profitability.

Our regions' **2022 achievements and strategic priorities** were:

- **Europe:** customers, loans and deposits grew in most of our markets. Underlying attributable profit grew by double-digits, supported by robust NII and cost control and contained cost of risk. We improved our efficiency ratio by 5 pp on the back of structural changes to our operating model.

Our countries are starting from a strong position, but these changes and business transformation will help achieve our objective of greater profitability and contribution to the Group's capital.

- **North America:** we grew our customer base and enhanced customer experience through tailored products and services. Loan growth was driven by most segments in Mexico and by CIB, Commercial Real Estate (CRE) and Auto in the US. North America's profitability remained strong, driven by good results in Mexico and high profit in the US.

Profitability, transforming our retail business and building on synergies between countries to realize North America's growth and efficiency potential will remain a top priority.

- **South America:** we continued to strengthen ties and share best practices between units, capture new business opportunities and add customers (+7 million). Profit was boosted by revenue and by a lower tax burden, which more than offset inflationary pressures and higher provisions. We closed the year with high profitability (double-digit RoTEs in all our markets).

Santander is among the most efficient banks in the region, supported by regional and global collaboration opportunities. Our priorities will continue to focus on leveraging the regions' high structural growth and on increasing profitability.

- **Digital Consumer Bank:** we delivered significant market share gains, as new lending rose 10% year-on-year in a shrinking market. Revenue increased, backed by leasing and net fee income, and absorbed negative sensitivity to interest rate increases and new TLTRO conditions. In addition, costs grew well below inflation and credit quality remained solid.

We are the leader in consumer finance in Europe in terms of scale, profitability and digital capabilities. Going forward, we will focus on profitable growth by reinforcing our leadership and leveraging our global OEM and dealer relationships and new business platforms (leasing, subscription, BNPL), which will also enable us to support our businesses in North America and South America in their expansion and revenue growth.



Our **global business' 2022 achievements and strategic priorities** were:

- **Santander Corporate & Investment Banking (SCIB):** our client-centric transformation from lenders to strategic partners delivered strong results, with double-digit growth in all core businesses.

We are leaders in Latin America and are strengthening our value proposition in Europe and the US. We have further diversified our business model in terms of clients, countries and products and accelerated capital rotation. Going forward, we will focus on capitalizing on our global coverage and product factories to increase profits both for SCIB and countries.

- **Wealth Management & Insurance (WM&I):** double-digit increase in WM&I's contribution to the Group's profit, despite a complex landscape. **Private Banking** was recognized as one of the top 3 Best Global Private Banks by *Euromoney* and achieved a record year in results and cross-border business. **Santander Asset Management** showed resilience amid market turmoil maintaining its contribution to profit and **Insurance** sustained growth in gross written premiums (+24%).

We strive to become the best wealth and insurance manager (asset management, wealth management and insurance businesses) in Europe and the Americas. Going forward, we will focus on boosting network collaboration and capabilities for higher global revenue and efficiency.

- **Payments:** we continued to expand our merchant, payments and cards capabilities across our footprint.

In **PagoNxt's** second year, we continued our strategy to deliver innovative payments technology, better user experiences and greater efficiency. PagoNxt's revenue rose 72% in constant euros year-on-year, achieving our 2022 target set earlier this year of 50% revenue growth.

PagoNxt aims to achieve a global leadership position in payments as one-of-a-kind paytech business that provides customers with a wide range of innovative payments and integrated value-added services. We are laying the groundwork for further growth in the coming years by integrating our payments volumes into a global platform to increase efficiency and boost our share in the open market.

In 2022, our cards business, **Cards & Digital Solutions**, managed 97 million cards globally. Revenue rose 19% in constant euros and we maintained high profitability with an RoTE close to 30%.

Santander IT's global scale enables us to enhance our transformation journey. We focus on increasing our **Technology and Operations (T&O)** division's global reach to bolster initiatives and benefit from economies of scale.

To conclude, looking ahead, we believe Grupo Santander is well positioned to drive further growth on the back our customer focus, scale, diversification, disciplined capital allocation and consistent track record of increasing profitability.

3.2 Results

Executive summary

Attributable profit

Strong profit growth underpinned by our geographic and business diversification

EUR 9,605 mn

+18% in euros

+8% in constant euros

Efficiency

The Group's efficiency ratio strengthened driven by Europe

Group

45.8%

-0.4 pp

Europe

47.3%

-4.9 pp

Changes 2022 vs. 2021.

Performance (2022 vs. 2021)

Profit supported by growth in revenue, improved efficiency and controlled cost of risk

Total income	Costs	Provisions	
+12.4%	+11.6%	+41.3%	in euros
+5.9%	+7.0%	+31.2%	in constant euros

Profitability

Strong improvement in our profitability

RoTE		RoRWA	
13.4%		1.77%	
+1.4 pp	+0.6 pp ¹	+0.08 pp	-0.01 pp ²

1. vs. underlying RoTE. 2. vs. underlying RoRWA.

Condensed income statement

EUR million

	2022	2021	Change			2020
			Absolute	%	% excl. FX	
Net interest income	38,619	33,370	5,249	15.7	9.0	31,994
Net fee income (commission income minus commission expense)	11,790	10,502	1,288	12.3	6.7	10,015
Gains or losses on financial assets and liabilities and exchange differences (net)	1,653	1,563	90	5.8	2.6	2,187
Dividend income	488	513	(25)	(4.9)	(5.0)	391
Income from companies accounted for using the equity method	702	432	270	62.5	55.8	(96)
Other operating income/expenses	(1,135)	24	(1,159)	—	—	(212)
Total income	52,117	46,404	5,713	12.3	5.8	44,279
Operating expenses	(23,903)	(21,415)	(2,488)	11.6	7.0	(21,130)
Administrative expenses	(20,918)	(18,659)	(2,259)	12.1	7.4	(18,320)
Staff costs	(12,547)	(11,216)	(1,331)	11.9	7.5	(10,783)
Other general administrative expenses	(8,371)	(7,443)	(928)	12.5	7.1	(7,537)
Depreciation and amortization	(2,985)	(2,756)	(229)	8.3	4.7	(2,810)
Provisions or reversal of provisions	(1,881)	(2,814)	933	(33.2)	(33.6)	(2,378)
Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss (net)	(10,863)	(7,407)	(3,456)	46.7	36.1	(12,382)
Impairment of other assets (net)	(239)	(231)	(8)	3.5	0.6	(10,416)
Gains or losses on non-financial assets and investments (net)	12	53	(41)	(77.4)	(81.4)	114
Negative goodwill recognized in results	—	—	—	—	—	8
Gains or losses on non-current assets held for sale not classified as discontinued operations	7	(43)	50	—	—	(171)
Profit or loss before tax from continuing operations	15,250	14,547	703	4.8	(3.9)	(2,076)
Tax expense or income from continuing operations	(4,486)	(4,894)	408	(8.3)	(16.6)	(5,632)
Profit from the period from continuing operations	10,764	9,653	1,111	11.5	2.6	(7,708)
Profit or loss after tax from discontinued operations	—	—	—	—	—	—
Profit for the period	10,764	9,653	1,111	11.5	2.6	(7,708)
Profit attributable to non-controlling interests	(1,159)	(1,529)	370	(24.2)	(29.2)	(1,063)
Profit attributable to the parent	9,605	8,124	1,481	18.2	8.5	(8,771)

Main income statement items

Total income

Total income amounted to EUR 52,117 million in 2022, up 12% year-on-year. In constant euros, it increased 6%. Net interest income and net fee income accounted for 97% of total income. By line:

Net interest income

Net interest income amounted to EUR 38,619 million, 16% higher than 2021.

The tables below show the average balances of each year –calculated as the monthly average over the period, which we believe should not differ materially from using daily balances–, and the generated interest.

The tables also include average balances and interest rates in 2022 and 2021, based on the domicile of the entities at which the relevant assets or liabilities are recorded. Domestic balances relate to our entities domiciled in Spain. International balances relate to entities domiciled outside of Spain (reflecting our foreign activity), and are divided into mature markets (the US and Europe, except Spain and Poland) and developing markets (South America, Mexico and Poland).

Average balance sheet - assets and interest income

EUR million

Assets	2022			2021		
	Average balance	Interest	Average rate	Average balance	Interest	Average rate
Cash and deposits on demand and loans and advances to central banks and credit institutions	304,935	7,139	2.34%	265,417	2,682	1.01%
Domestic	111,697	1,166	1.04%	112,621	809	0.72%
International - Mature markets	139,105	1,971	1.42%	109,672	542	0.49%
International - Developing markets	54,133	4,002	7.39%	43,124	1,331	3.09%
<i>of which:</i>						
Reverse repurchase agreements	39,572	1,862	4.71%	38,236	707	1.85%
Domestic	19,072	146	0.77%	23,390	29	0.12%
International - Mature markets	4,713	55	1.17%	5,101	15	0.29%
International - Developing markets	15,787	1,661	10.52%	9,745	663	6.80%
Loans and advances to customers	1,031,226	54,110	5.25%	943,071	38,649	4.10%
Domestic	272,826	5,929	2.17%	254,232	4,799	1.89%
International - Mature markets	552,674	19,821	3.59%	513,910	16,090	3.13%
International - Developing markets	205,726	28,360	13.79%	174,929	17,760	10.15%
<i>of which:</i>						
Reverse repurchase agreements	43,505	1,026	2.36%	36,660	60	0.16%
Domestic	9,509	42	0.44%	9,521	7	0.07%
International - Mature markets	33,068	919	2.78%	25,622	18	0.07%
International - Developing markets	928	65	7.00%	1,517	35	2.31%
Debt securities	183,013	10,416	5.69%	168,834	5,724	3.39%
Domestic	45,932	809	1.76%	42,740	313	0.73%
International - Mature markets	43,877	803	1.83%	40,579	446	1.10%
International - Developing markets	93,204	8,804	9.45%	85,515	4,965	5.81%
Hedging income		(236)			(723)	
Domestic		16			20	
International - Mature markets		480			(91)	
International - Developing markets		(732)			(652)	
Other interest		1			131	
Domestic		(121)			(29)	
International - Mature markets		40			13	
International - Developing markets		82			147	
Total interest-earning assets	1,519,174	71,430	4.70%	1,377,322	46,463	3.37%
Domestic	430,455	7,799	1.81%	409,593	5,912	1.44%
International - Mature markets	735,656	23,115	3.14%	664,161	17,000	2.56%
International - Developing markets	353,063	40,516	11.48%	303,568	23,551	7.76%
Other assets	201,099			186,577		
Assets from discontinued operations	—			—		
Average total assets	1,720,273	71,430		1,563,899	46,463	



The average balance of interest-earning assets in 2022 was 10% higher than in 2021. Domestic assets grew 5%, international mature markets increased 11% and international developing markets were up 16%, driven by greater loans and advances to customers (which increased in local currency in almost all markets).

The average balance of interest-bearing liabilities in 2022 was 10% higher year-on-year, also spurred by growth in domestic (+3%), mature international (+13%) and developing international (+15%) markets, which were all boosted by customer deposits and deposits from central banks and credit institutions.

Higher interest rates in our markets led to a general increase in asset yields and liability costs.

The average return on interest-earning assets increased from 3.37% in 2021 to 4.70% in 2022, with general rises across our markets (domestic +37 bps, international mature +58 bps, international developing +372 bps). Moreover, returns across all balance sheet items grew: cash, demand deposits and loans and advances to central banks and credit institutions +133 bps, loans and advances to customers +115 bps, debt securities +230 bps.

The average cost of interest-bearing liabilities rose 127 bps to 2.25%, with increases in all markets. Domestic liabilities increased 35 bps, +61 bps in international mature markets and +411 bps in international developing markets. By balance sheet item, average costs increased 81 bps in central banks and credit institution deposits, +112 bps in customer deposits and +125 bps in marketable debt securities.

We calculated the change in interest income/(expense) shown in the tables below by:

- applying the interest rate of the previous period to the difference between the average balances from the current and previous periods to obtain the change in volumes; and
- applying the difference between the rates from the current and previous periods to the average balance from the previous year to obtain the change in interest rate.

Both interest income and costs increased in 2022, mainly due to higher interest rates and to a lesser extent greater volumes.

Net interest income increased 16%, as shown in the table below that summarizes the performance of net interest income by market. In constant euros, growth was 9%.

In constant euros, net interest income increased across Europe: +9% in Spain, +13% in the UK, +99% in Poland and +3% in Portugal. There were also increases in North America: +3% in the US and +13% in Mexico.

The positive effect of higher interest rates is mainly reflected in Poland, the UK and Mexico. However, the full benefit of interest rate rises has not yet passed through to results in Spain, Portugal or the US.

In South America, higher volumes and interest rates did not translate to growth in some countries due to their initial negative sensitivity to increases. Net interest income rose in Argentina (+171%), while it fell in Brazil (-4%) and Chile (-9%).

In DCB, NII was slightly down due to higher funding costs (steep rate rises) and TLTRO changes, partially mitigated by new business repricing initiatives.

Average balance sheet - liabilities and interest expense

EUR million

	2022			2021		
	Average balance	Interest	Average rate	Average balance	Interest	Average rate
Liabilities and stockholders' equity						
Deposits from central banks and credit institutions^A	214,879	3,636	1.69%	197,997	1,750	0.88%
Domestic	92,373	560	0.61%	96,209	376	0.39%
International - Mature markets	78,230	972	1.24%	63,047	227	0.36%
International - Developing markets	44,276	2,104	4.75%	38,741	1,147	2.96%
<i>of which:</i>						
Repurchase agreements	34,298	1,349	3.93%	28,763	703	2.44%
Domestic	17,321	186	1.07%	11,268	18	0.16%
International - Mature markets	2,743	50	1.82%	2,300	8	0.35%
International - Developing markets	14,234	1,113	7.82%	15,195	677	4.46%
Customer deposits	979,840	16,994	1.73%	889,041	5,452	0.61%
Domestic	299,046	698	0.23%	287,525	282	0.10%
International - Mature markets	464,054	3,279	0.71%	410,695	706	0.17%
International - Developing markets	216,740	13,017	6.01%	190,821	4,464	2.34%
<i>of which:</i>						
Repurchase agreements	57,646	3,199	5.55%	41,475	520	1.25%
Domestic	2,327	24	1.03%	7,918	—	0.00%
International - Mature markets	37,380	1,099	2.94%	19,311	6	0.03%
International - Developing markets	17,939	2,076	11.57%	14,246	514	3.61%
Marketable debt securities^B	255,721	8,464	3.31%	234,887	4,838	2.06%
Domestic	111,682	2,262	2.03%	104,602	1,538	1.47%
International - Mature markets	107,374	2,262	2.11%	102,330	1,670	1.63%
International - Developing markets	36,665	3,940	10.75%	27,955	1,630	5.83%
<i>of which:</i>						
Commercial paper	17,907	375	2.09%	17,794	135	0.76%
Domestic	12,377	222	1.79%	12,247	22	0.18%
International - Mature markets	4,280	60	1.40%	4,582	59	1.29%
International - Developing markets	1,250	93	7.44%	965	54	5.60%
Other interest-bearing liabilities	6,595	216	3.28%	7,944	216	2.72%
Domestic	3,131	93	2.97%	4,146	70	1.69%
International - Mature markets	1,649	1	0.06%	1,948	30	1.54%
International - Developing markets	1,815	122	6.72%	1,850	116	6.27%
Hedging expenses		2,055			(368)	
Domestic		218			(153)	
International - Mature markets		207			(147)	
International - Developing markets		1,630			(68)	
Other interest		1,446			1,205	
Domestic		435			306	
International - Mature markets		186			109	
International - Developing markets		825			790	
Total interest-bearing liabilities	1,457,035	32,811	2.25%	1,329,869	13,093	0.98%
Domestic	506,232	4,266	0.84%	492,482	2,419	0.49%
International - Mature markets	651,307	6,907	1.06%	578,020	2,595	0.45%
International - Developing markets	299,496	21,638	7.22%	259,367	8,079	3.11%
Other liabilities	164,617			139,757		
Non-controlling interests	8,635			10,140		
Shareholders' equity	89,986			84,133		
Liabilities from discontinued operations	—			—		
Average total liabilities and equity	1,720,273	32,811		1,563,899	13,093	

A. Interest includes expenses from assets reported in "Cash and deposits on demand and loans and advances to central banks and credit institutions" related to liquidity placed at the European Central Bank.

B. Does not include contingently convertible preference shares and perpetual subordinated notes because they do not accrue interest. We include them under 'Other liabilities'.



Volume and profitability analysis

EUR million

	2022 vs. 2021		
	Increase (decrease) due to changes in		
	Volume	Rate	Net change
Interest income			
Cash and deposits on demand and loans and advances to central banks and credit institutions	586	3,871	4,457
Domestic	(7)	364	357
International - Mature markets	180	1,249	1,429
International - Developing markets	413	2,258	2,671
<i>of which:</i>			
Reverse repurchase agreements	523	632	1,155
Domestic	(6)	123	117
International - Mature markets	(1)	41	40
International - Developing markets	530	468	998
Loans and advances to customers	5,138	10,323	15,461
Domestic	368	762	1,130
International - Mature markets	1,274	2,457	3,731
International - Developing markets	3,496	7,104	10,600
<i>of which:</i>			
Reverse repurchase agreements	(11)	977	966
Domestic	—	35	35
International - Mature markets	7	894	901
International - Developing markets	(18)	48	30
Debt securities	546	4,146	4,692
Domestic	25	471	496
International - Mature markets	39	318	357
International - Developing markets	482	3,357	3,839
Hedging income	487	—	487
Domestic	(4)	—	(4)
International - Mature markets	571	—	571
International - Developing markets	(80)	—	(80)
Other interest	(130)	—	(130)
Domestic	(92)	—	(92)
International - Mature markets	27	—	27
International - Developing markets	(65)	—	(65)
Total interest-earning assets	6,627	18,340	24,967
Domestic	290	1,597	1,887
International - Mature markets	2,091	4,024	6,115
International - Developing markets	4,246	12,719	16,965



Volume and cost analysis

EUR million

	2022 vs. 2021		
	Increase (decrease) due to changes in		
	Volume	Rate	Net change
Interest expense			
Deposits from central banks and credit institutions	234	1,652	1,886
Domestic	(16)	200	184
International - Mature markets	67	678	745
International - Developing markets	183	774	957
<i>of which:</i>			
Repurchase agreements	(29)	675	646
Domestic	14	154	168
International - Mature markets	2	40	42
International - Developing markets	(45)	481	436
Customer deposits	797	10,745	11,542
Domestic	12	404	416
International - Mature markets	103	2,470	2,573
International - Developing markets	682	7,871	8,553
<i>of which:</i>			
Repurchase agreements	175	2,504	2,679
Domestic	—	24	24
International - Mature markets	11	1,082	1,093
International - Developing markets	164	1,398	1,562
Marketable debt securities	819	2,807	3,626
Domestic	110	614	724
International - Mature markets	86	506	592
International - Developing markets	623	1,687	2,310
<i>of which:</i>			
Commercial paper	14	226	240
Domestic	—	200	200
International - Mature markets	(4)	5	1
International - Developing markets	18	21	39
Other interest-bearing liabilities	(26)	26	0
Domestic	(20)	43	23
International - Mature markets	(4)	(25)	(29)
International - Developing markets	(2)	8	6
Hedging expenses	2,423	—	2,423
Domestic	371	—	371
International - Mature markets	354	—	354
International - Developing markets	1,698	—	1,698
Other interest	241	—	241
Domestic	129	—	129
International - Mature markets	77	—	77
International - Developing markets	35	—	35
Total interest-bearing liabilities	4,488	15,230	19,718
Domestic	586	1,261	1,847
International - Mature markets	683	3,629	4,312
International - Developing markets	3,219	10,340	13,559

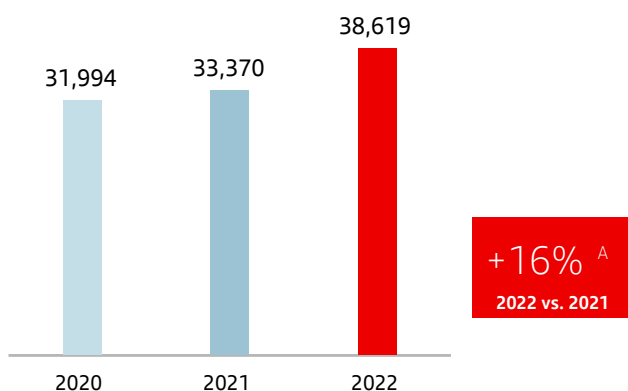
Net interest income. Volume, profitability and cost analysis summary

EUR million

	2022 vs. 2021		
	Increase (decrease) due to changes in		
	Volume	Rate	Net change
Interest income	6,627	18,340	24,967
Domestic	290	1,597	1,887
International - Mature markets	2,091	4,024	6,115
International - Developing markets	4,246	12,719	16,965
Interest expense	4,488	15,230	19,718
Domestic	586	1,261	1,847
International - Mature markets	683	3,629	4,312
International - Developing markets	3,219	10,340	13,559
Net interest income	2,139	3,110	5,249
Domestic	(296)	336	40
International - Mature markets	1,408	395	1,803
International - Developing markets	1,027	2,379	3,406

Net interest income

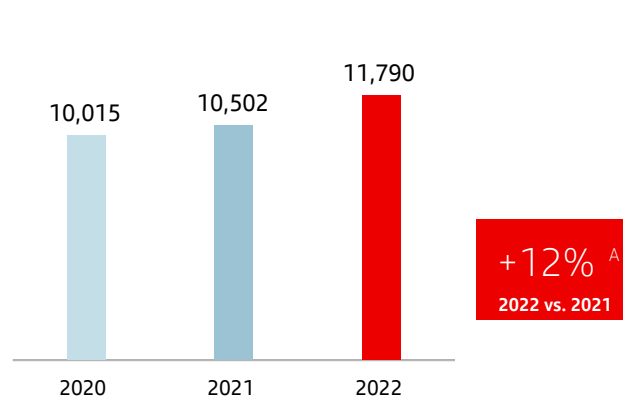
EUR million



A. In constant euros: +9%.

Net fee income

EUR million



A. In constant euros: +7%.

Net fee income

EUR million

	2022	2021	Change			2020
			Absolute	%	% excl. FX	
Asset management business, funds and insurance	4,032	3,649	383	10.5	6.9	3,416
Credit and debit cards	2,139	1,782	357	20.0	12.9	1,737
Securities and custody services	986	1,035	(49)	(4.7)	(12.0)	951
Account management and availability fees	2,032	1,850	182	9.8	11.8	1,649
Cheques and payment orders	797	642	155	24.1	31.5	594
Foreign exchange	788	522	266	51.0	44.3	500
Charges for past-due/unpaid balances and guarantees	277	266	11	4.1	1.9	295
Bill discounting	227	199	28	14.1	2.0	253
Other	512	557	(45)	(8.1)	(17.4)	620
Net fee income	11,790	10,502	1,288	12.3	6.7	10,015

**Net fee income**

Net fee income increased 12% year-on-year to EUR 11,790 million. In constant euros, it was 7% higher, driven by higher volumes and improved activity.

We had strong growth in high value-added products and services, with card and point of sale turnover increasing 14% and 21%, respectively. Transactional fees rose 8%.

In Wealth Management & Insurance (WM&I), and despite lower volumes than 2021, total fee income generated (including fees ceded to the commercial network) increased 3% year-on-year, supported by the growth in insurance premiums (+24%). In Santander Corporate & Investment Banking (SCIB), net fee income increased 9%, with widespread growth across its core businesses.

Together, the two businesses accounted for close to 50% of the Group's total fee income (SCIB: 17%; WM&I: 31%).

By region, net fee income in Europe was up 3%, supported by growth in all markets except the UK due to the transfer of its SCIB business to the London branch in Q4 2021. There was a 6% increase in North America, though the US was affected by the Bluestem portfolio disposal in 2021. Excluding the effect of the Bluestem portfolio disposal, net fee income would have increased 8% in the region. The 21% increase in Mexico was driven by payments and insurance. South America was up 11% boosted by greater transactionality, with growth in the main markets. Finally, Digital Consumer Bank rose 3% driven by greater new lending volumes.

Gains or losses on financial assets and liabilities and exchange differences (net)

Gains on financial transactions and liabilities and exchange differences (net) accounted only for 3% of total income. They were EUR 1,653 million, 6% higher than the previous year (+3% in constant euros) driven by growth in Brazil, Chile, Argentina and Spain. This growth was partially offset by falls in Portugal and Mexico and by the Corporate Centre due to negative results from the FX hedge which offset the positive impact of the exchange rates on the countries' results.

Gains and losses on financial assets and liabilities stem from valuing the trading portfolio and marked-to-market derivative instruments, which include spot market foreign exchange

transactions, sales of investment securities and liquidation of our hedging and other derivative positions.

For more details, see [note 43](#) to the consolidated financial statements.

Exchange rate differences primarily show gains and losses from foreign exchange and the differences that arise from converting monetary items in foreign currencies to the functional currency, and from selling non-monetary assets denominated in foreign currency at the time of their disposal. Because Santander manages currency exposures with derivative instruments, the changes in this line item should be analysed together with Gains/(losses) on financial assets and liabilities.

For more details, see [note 44](#) to the consolidated financial statements.

Dividend income

Dividend income was EUR 488 million, 5% lower than in 2021 (both in euros and in constant euros).

Income from companies accounted for by the equity method

The income from companies accounted for by the equity method climbed to EUR 702 million in 2022, increasing 63% year-on-year (+56% in constant euros) owing to the higher contribution from the Group's associated entities in Spain and South America.

Other operating income/expenses

Other operating income/expenses recorded a loss of EUR 1,135 million compared to a gain of EUR 24 million in 2021 owing to lower leasing income in the US, the creation of an Institutional Protection Scheme in Poland in Q2'22, greater contributions to the Single Resolution Fund (SRF) and to the Deposit Guarantee Fund (DGF), and the impact of high inflation in Argentina.

For more details, see [note 45](#) to the consolidated financial statement.

Operating expenses

EUR million

	2022	2021	Change		% excl. FX	2020
			Absolute	%		
Staff costs	12,547	11,216	1,331	11.9	7.5	10,783
Other administrative expenses	8,371	7,443	928	12.5	7.1	7,537
Information technology	2,473	2,182	291	13.3	11.5	2,075
Communications	410	401	9	2.2	0.5	473
Advertising	559	510	49	9.6	6.0	517
Buildings and premises	708	699	9	1.3	(1.7)	725
Printed and office material	96	90	6	6.7	0.7	100
Taxes (other than tax on profits)	559	558	1	0.2	2.7	534
Other expenses	3,566	3,003	563	18.7	14.6	2,980
Administrative expenses	20,918	18,659	2,259	12.1	7.4	18,320
Depreciation and amortization	2,985	2,756	229	8.3	4.7	2,810
Operating expenses	23,903	21,415	2,488	11.6	7.0	21,130

Operating expenses

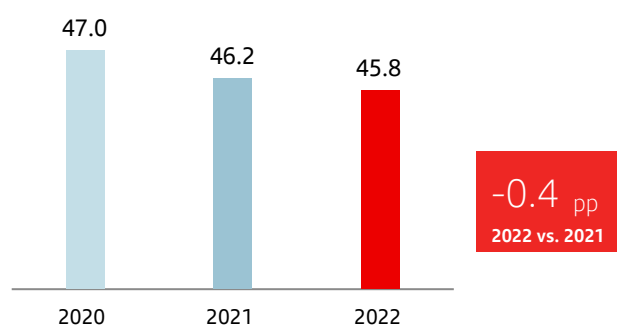
Operating expenses increased 12% from 2021 to EUR 23,903 million. In constant euros, costs rose 7% due to the sharp rise in inflation. However, in real terms (excluding the impact of average inflation), costs fell 5% in constant euros.

Our disciplined cost management enabled us to maintain one of the best efficiency ratios in the sector, which stood at 45.8%, a 0.4 pp improvement on 2021.

We continued to make headway with our transformation towards a more integrated and digital operating model, with better business dynamics and improved customer service and satisfaction.

Efficiency ratio (cost to income)

%



The trends by region and market in constant euros were:

- In **Europe**, costs were up 2% in nominal terms on the back of our transformation process and operational improvements. In real terms, costs decreased 7%, with falls across the region: -10% in Spain, -6% in the UK, -19% in Portugal and -7% Poland. The region's efficiency ratio stood at 47.3% (-4.9 pp compared to 2021), improving in all markets.

- In **North America**, costs increased 5%. In real terms, costs were down 3%. They remained stable in the US (-8% in real terms) while Mexico recorded an increase due to higher salaries, digitalization and technology spend and the increase in supply costs affected by inflation at 8%. The efficiency ratio stood at 47.7% (+1.9 pp on 2021).
- In **South America**, the rise in costs (+18%) was significantly distorted by soaring average inflation in the region (19% due to 71% inflation in Argentina) which was reflected in salary increases in Brazil and Argentina. In real terms, costs fell 5% in Chile and increased 1% in Brazil and 29% in Argentina. The efficiency ratio was 37.0% (+2.0 pp on 2021).
- **Digital Consumer Bank's** costs were 2% higher affected by inflation, strategic investments, transformational costs and business growth. In real terms, costs fell 6%. The efficiency ratio stood at 46.7% (-0.4 pp on 2021).

Provisions or reversal of provisions

Provisions (net of provisions reversals) amounted to EUR 1,881 million (EUR 2,814 million in 2021). This line includes the charges for restructuring costs recorded in 2021 (EUR 530 million net of tax).

For more details, see [note 25](#) to the consolidated financial statements.

Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss (net)

Impairment or reversal of impairment on financial assets not measured at fair value through profit or loss (net) was EUR 10,863 million (EUR 7,407 million in 2021), a 47% increase year-on-year in euros and +36% in constant euros.

This comparison was affected by the releases recorded in the UK and the US in 2021, macro provisions in 2022 (mainly in Spain, the UK and the US) resulting from a potential economic slowdown, the charges in Poland and DCB for CHF mortgages and the new mortgage payment holiday regulations in Poland (EUR 327 million). Lastly, there was a year-on-year rise in Brazil, driven by individual loans and a single name in CIB in the fourth quarter. However, there was a notable decline in Spain and Mexico.



For more details, see section 3 'Credit risk' in the 'Risk management and compliance' chapter.

Impairment of other assets (net)

The impairment of other assets (net) stood at -EUR 239 million, compared to -EUR 231 million in 2021.

Gains or losses on non-financial assets and investments (net)

Net gains on non-financial assets and investments were EUR 12 million (EUR 53 million in 2021).

For more details, see [note 48](#) to the consolidated financial statements.

Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss (net)

EUR million

	2022	2021	2020
Financial assets at fair value through other comprehensive income	7	19	19
Financial assets at amortized cost	10,856	7,388	12,363
Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss and net gains and losses from changes	10,863	7,407	12,382

Impairment on other assets (net)

EUR million

	2022	2021	2020
Impairment of investments in subsidiaries, joint ventures and associates, net	—	—	—
Impairment on non-financial assets, net	239	231	10,416
<i>Tangible assets</i>	140	150	174
<i>Intangible assets</i>	75	71	10,242
<i>Others</i>	24	10	—
Impairment on other assets (net)	239	231	10,416

Negative goodwill recognized in results

No negative goodwill was recorded in 2021 or 2022.

Gains or losses on non-current assets held for sale not classified as discontinued operations

This item mainly includes impairment of foreclosed assets recorded and the sale of properties acquired upon foreclosure. It totalled EUR 7 million in 2022 (-EUR 43 million in 2021).

For more details, see [note 49](#) to the consolidated financial statements.

Profit or loss before tax from continuing operations

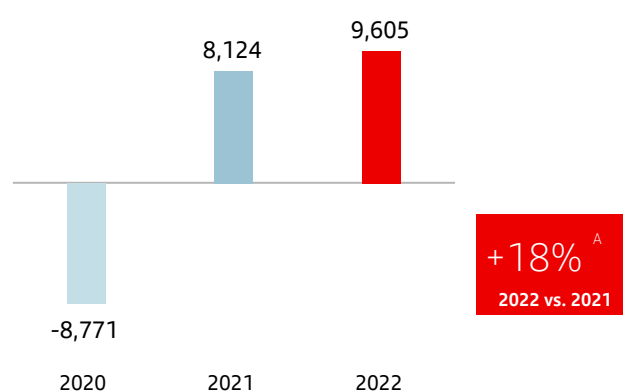
Profit before tax was EUR 15,250 million, +5% year-on-year. In constant euros it fell 4%.

Tax expense or income from continuing operations

Total income tax was EUR 4,486 million (EUR 4,894 million in 2021).

Profit attributable to the parent

EUR million



A. In constant euros: +8%.



Profit attributable to non-controlling interests

Profit attributable to non-controlling interests decreased 24% year-on-year (-29% in constant euros) to EUR 1,159 million, due to the buyback of minority interests in Mexico and in the US of Santander Consumer USA (SC USA).

For more details, see [note 28](#) to the consolidated financial statements.

Profit attributable to the parent

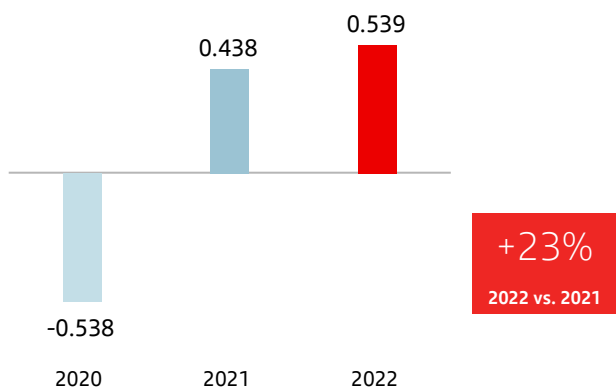
Profit attributable to the parent amounted to EUR 9,605 million in 2022, compared to EUR 8,124 million in 2021. The performance of the above-mentioned income statement items is reflected in profit growth of 18% in euros and 8% in constant euros.

Sustained earnings per share, which rose +23% year-on-year to EUR 53.9 cents.

RoTE stood at 13.37% (11.96% in 2021) and RoRWA at 1.77% (1.69% in 2021).

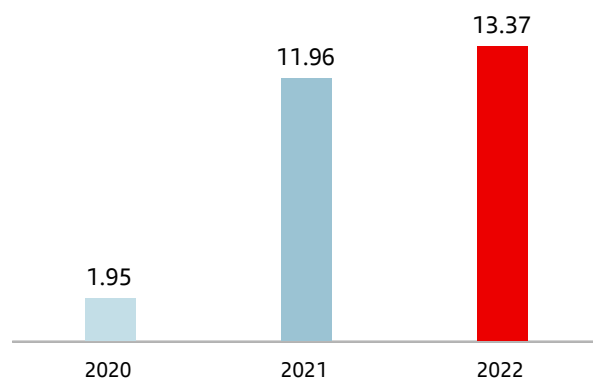
Earnings per share

EUR



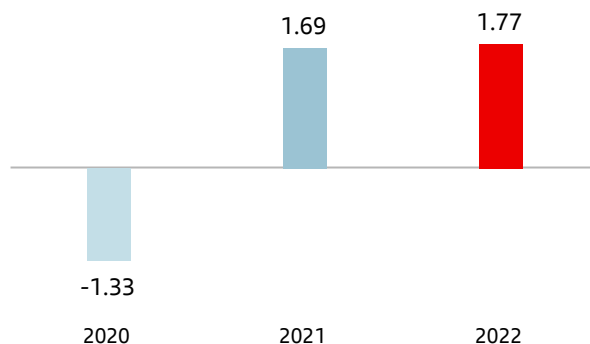
RoTE

%



RoRWA

%





Below is the condensed income statement adjusted to items beyond the ordinary course of business as described in [note 51.c](#) of the consolidated financial statements, where our segments' aggregate underlying consolidated results are reconciled to the statutory consolidated results.

Condensed underlying income statement

EUR million

	2022	2021	Change			2020
			Absolute	%	% excl. FX	
Net interest income	38,619	33,370	5,249	15.7	9.0	31,994
Net fee income	11,790	10,502	1,288	12.3	6.7	10,015
Gains (losses) on financial transactions and exchange differences	1,653	1,563	90	5.8	2.6	2,187
Other operating income	92	969	(877)	(90.5)	(92.1)	404
Total income	52,154	46,404	5,750	12.4	5.9	44,600
Administrative expenses and amortizations	(23,903)	(21,415)	(2,488)	11.6	7.0	(20,967)
Net operating income	28,251	24,989	3,262	13.1	5.0	23,633
Net loan-loss provisions	(10,509)	(7,436)	(3,073)	41.3	31.2	(12,173)
Other gains (losses) and provisions	(2,492)	(2,293)	(199)	8.7	8.1	(1,786)
Profit before tax	15,250	15,260	(10)	(0.1)	(8.0)	9,674
Tax on profit	(4,486)	(5,076)	590	(11.6)	(19.3)	(3,516)
Profit from continuing operations	10,764	10,184	580	5.7	(2.4)	6,158
Net profit from discontinued operations	—	—	—	—	—	—
Consolidated profit	10,764	10,184	580	5.7	(2.4)	6,158
Non-controlling interests	(1,159)	(1,530)	371	(24.2)	(29.2)	(1,077)
Net capital gains and provisions	—	(530)	530	(100.0)	(100.0)	(13,852)
Profit attributable to the parent	9,605	8,124	1,481	18.2	8.5	(8,771)
Underlying profit attributable to the parent^A	9,605	8,654	951	11.0	2.3	5,081

A. Excluding net capital gains and provisions.

Underlying profit attributable to the parent

Profit attributable to the parent and underlying profit were the same in 2022, as profit was not affected by results that fall outside the ordinary course of our business, but there is a reclassification in the presentation of certain items under some headings of the underlying income statement. Attributable profit and underlying profit in 2022 both amounted to EUR 9,605 million.

In 2021, attributable profit was affected by restructuring costs, mainly in the UK and Portugal. Excluding these charges from the line where they were recorded, and including them separately in the net capital gains and provisions line, adjusted profit or underlying profit attributable to the parent in 2021 stood at EUR 8,654 million.

Adjusted profit or underlying profit attributable to the parent in 2022 was 11% higher in euros (+2% in constant euros) compared to 2021.

For more details, see [note 51.c](#) to the consolidated financial statements.

The Group's cost of risk was 0.99%, consistent with our 1% forecast, and higher than in 2021 but a significant improvement compared to 2020 and 2019 (1.28% and 1.00%, respectively).

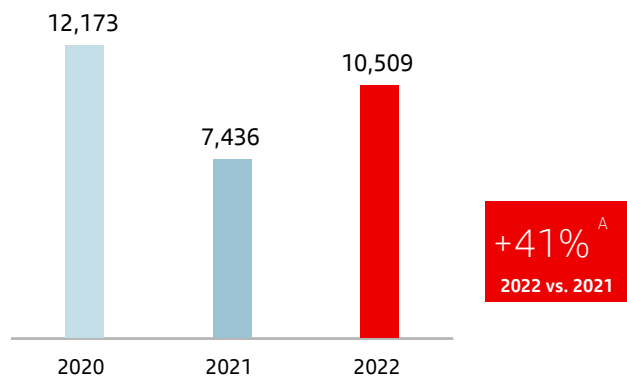
Before recording loan-loss provisions, Santander's net operating income¹ (i.e. total income less operating expenses) was EUR 28,251 million, 13% higher year-on-year, +5% in constant euros. The performance in constant euros is detailed below.

1. As described in [note 51.c](#) of the consolidated financial statements, net operating income is used for the Group's internal operating and management reporting purposes but is not a line item in the statutory consolidated income statement.



Net loan-loss provisions

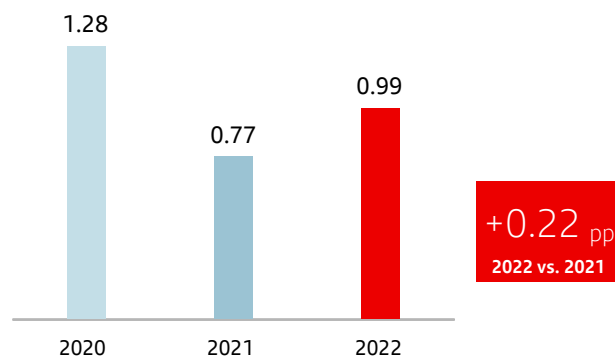
EUR million



A. In constant euros: +31%.

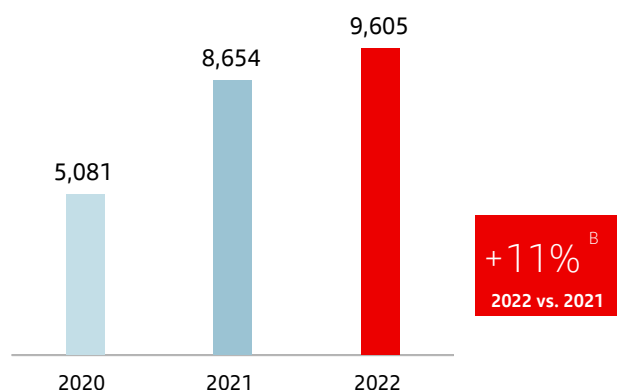
Cost of risk

%



Underlying profit attributable to the parent^A

EUR million

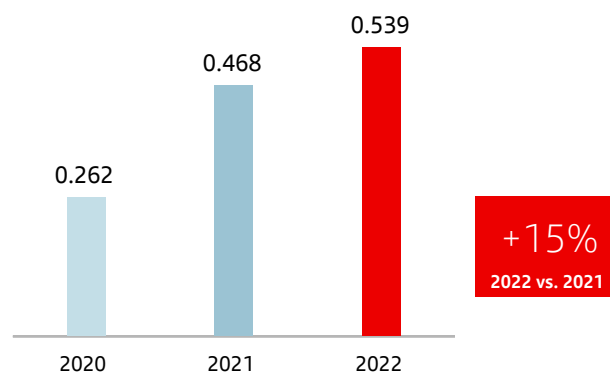


A. Excluding net capital gains and provisions.

B. In constant euros: +2%.

Underlying earnings per share^A

EUR



A. Excluding net capital gains and provisions.

By line:

- Total income increased mainly due to net interest income (+9%) improving consistently every quarter, and net fee income (+7%), which recovered further due to greater commercial activity.
- Costs were driven up by soaring inflation and investments in technology associated with the transformation process.

By region:

- In **Europe**, net operating income increased 25% with better performance in all markets.
- In **North America**, net operating income fell 3%. It dropped 12% in the US (mainly due to lower leasing income) and was up 17% in Mexico.
- In **South America**, net operating income grew 2% despite a 3% decrease in Brazil and 1% decrease in Chile. It rose 136% in Argentina.
- In **Digital Consumer Bank**, net operating income increased by 4%.

In 2022, the Santander's underlying RoTE (same as statutory RoTE) was 13.37% (12.73% in 2021), underlying RoRWA was 1.77% (1.78% in 2021) and underlying earnings per share was EUR 0.539 (EUR 0.468 in 2021), with all three showing an improvement compared to 2020 and 2019.



3.3 Balance sheet

Balance sheet

EUR million

Assets	2022	2021	Change		2020
			Absolute	%	
Cash, cash balances at central banks and other deposits on demand	223,073	210,689	12,384	5.9	153,839
Financial assets held for trading	156,118	116,953	39,165	33.5	114,945
Non-trading financial assets mandatorily at fair value through profit or loss	5,713	5,536	177	3.2	4,486
Financial assets designated at fair value through profit or loss	8,989	15,957	(6,968)	(43.7)	48,717
Financial assets at fair value through other comprehensive income	85,239	108,038	(22,799)	(21.1)	120,953
Financial assets at amortized cost	1,147,044	1,037,898	109,146	10.5	958,378
Hedging derivatives	8,069	4,761	3,308	69.5	8,325
Changes in the fair value of hedged items in portfolio hedges of interest risk	(3,749)	410	(4,159)	(1,014.4)	1,980
Investments	7,615	7,525	90	1.2	7,622
Assets under insurance or reinsurance contracts	308	283	25	8.8	261
Tangible assets	34,073	33,321	752	2.3	32,735
Intangible assets	18,645	16,584	2,061	12.4	15,908
Tax assets	29,987	25,196	4,791	19.0	24,586
Other assets	10,082	8,595	1,487	17.3	11,070
Non-current assets held for sale	3,453	4,089	(636)	(15.6)	4,445
Total assets	1,734,659	1,595,835	138,824	8.7	1,508,250
Liabilities and equity					
Financial liabilities held for trading	115,185	79,469	35,716	44.9	81,167
Financial liabilities designated at fair value through profit or loss	55,947	32,733	23,214	70.9	48,038
Financial liabilities at amortized cost	1,423,858	1,349,169	74,689	5.5	1,248,188
Hedging derivatives	9,228	5,463	3,765	68.9	6,869
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	(117)	248	(365)	(147.2)	286
Liabilities under insurance or reinsurance contracts	747	770	(23)	(3.0)	910
Provisions	8,149	9,583	(1,434)	(15.0)	10,852
Tax liabilities	9,468	8,649	819	9.5	8,282
Other liabilities	14,609	12,698	1,911	15.0	12,336
Liabilities associated with non-current assets held for sale	—	—	—	—	—
Total liabilities	1,637,074	1,498,782	138,292	9.2	1,416,928
Shareholders' equity	124,732	119,649	5,083	4.2	114,620
Other comprehensive income	(35,628)	(32,719)	(2,909)	8.9	(33,144)
Non-controlling interest	8,481	10,123	(1,642)	(16.2)	9,846
Total equity	97,585	97,053	532	0.5	91,322
Total liabilities and equity	1,734,659	1,595,835	138,824	8.7	1,508,250

Executive summary ^A

Loans and advances to customers (minus reverse repos)

Positive trend in loans and advances to customers in 2022

EUR 1,019 billion **+5%**

→ By segment:

Growth backed by individuals and large corporates

Individuals	SMEs and corporates	CIB
+7%	0%	+11%

Customer funds (deposits minus repos + mutual funds)

Strong increase in customer funds benefiting from the higher customer deposits

EUR 1,146 billion **+6%**

→ By product:

Demand deposits accounted for 62% of customer funds. Increase in time deposits due to higher interest rates and mutual funds were impacted by market performance

Demand	Time	Mutual funds
-1%	+48%	-5%

A. 2022 vs. 2021 changes in constant euros.

Loans and advances to customers totalled EUR 1,036,004 million in December 2022, up 7% compared to December 2021.

For the purpose of analysing traditional commercial banking loans, the Group uses gross loans and advances to customers excluding reverse repurchase agreements which amounted to EUR 1,019,188 million, 6% higher year-on-year. To facilitate the analysis of the Santander's management, as usual the comments below do not consider the exchange rate impact.

Gross loans and advances to customers, excluding reverse repurchase agreements and in constant euros, increased 5%, with broad-based growth across regions, as follows:

- **Europe:** growth was 3%. By market, lending in the UK rose 4% due to mortgages; 2% in Spain, boosted by strong performance in individuals and SCIB; and 1% in Poland driven by corporates and CIB. In 'Other Europe', loans increased 13% owing mainly to SCIB. In Portugal, they remained flat.

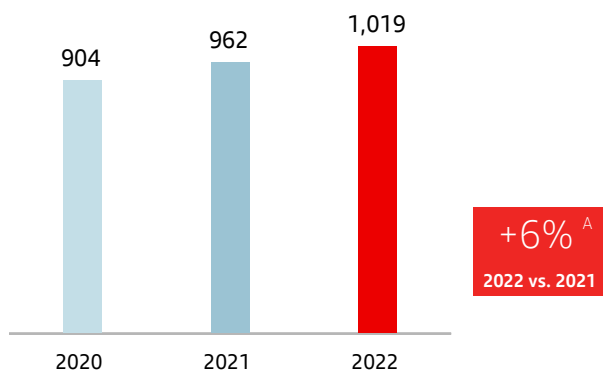
Loans and advances to customers

EUR million

	2022	2021	Change		2020
			Absolute	%	
Commercial bills	56,688	49,603	7,085	14.3	37,459
Secured loans	565,609	542,404	23,205	4.3	503,014
Other term loans	290,031	269,526	20,505	7.6	269,143
Finance leases	39,833	38,503	1,330	3.5	36,251
Receivable on demand	11,435	10,304	1,131	11.0	7,903
Credit cards receivable	22,704	20,397	2,307	11.3	19,507
Impaired assets	32,888	31,645	1,243	3.9	30,815
Gross loans and advances to customers (minus repurchase agreements)	1,019,188	962,382	56,806	5.9	904,092
Repurchase agreements	39,500	33,264	6,236	18.7	35,702
Gross loans and advances to customers	1,058,688	995,646	63,042	6.3	939,794
Loan-loss allowances	22,684	22,964	(280)	(1.2)	23,595
Net loans and advances to customers	1,036,004	972,682	63,322	6.5	916,199

Gross loans and advances to customers (minus reverse repos)

EUR billion



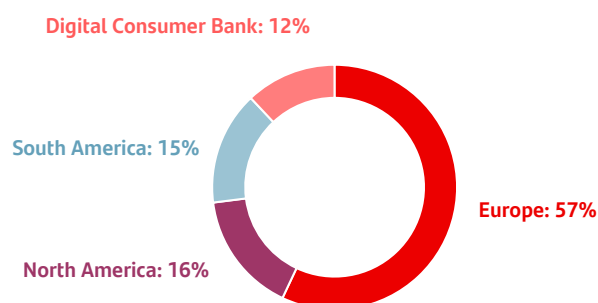
A. In constant euros: +5%.

- In **North America**, growth was 9%. In the US, lending grew 9% propelled by auto financing, CIB and CRE, while lending in Mexico was up 8% with widespread rises across segments (except SMEs).
- Growth in **South America** was 10%. In Argentina, lending increased 72% driven by consumer, SMEs and corporates. In Brazil, it climbed 8% owing to positive performance in individuals (mainly in mortgages and payrolls) and corporates. In Chile, loans increased 8% backed by mortgages, corporates, institutions and SCIB. In Uruguay, they rose 14%.
- **Digital Consumer Bank (DCB)** rose 9%, receiving an uplift from new lending, which rose 10% year-on-year, and increased in most markets. Openbank loans grew 30%.

As of December 2022, gross loans and advances to customers minus reverse repurchase agreements maintained a balanced structure: individuals (62%), SMEs and corporates (24%) and SCIB (14%).

Gross loans and advances to customers (minus reverse repos)

% of operating areas. December 2022



By the end of 2022, 62% of loans and advances to customers maturing in more than a year had a fixed interest rate, while the other 38% had a floating interest rate:

- In Spain, 50% of loans and advances to customers were fixed rate and 50% were floating rate.
- Outside Spain, 65% of loans and advances to customers were fixed rate and 35% were floating rate.

For more details on the distribution of loans and advances to customers by business line, see [note 10.b](#) to the consolidated financial statements.

Tangible assets amounted to EUR 34,073 million in December 2022, up EUR 752 million compared to December 2021 due to exchange rate movements.

Intangible assets stood at EUR 18,645 million, of which EUR 13,741 million corresponds to goodwill (which increased EUR 1,028 million) and EUR 4,904 million to other intangible assets, mostly IT developments (up EUR 1,033 million).

Loans and advances to customers with maturities exceeding one year at 2022 year end

EUR million

	Domestic		International		TOTAL	
	Amount	Weight as % of the total	Amount	Weight as % of the total	Amount	Weight as % of the total
Fixed	81,874	50%	369,353	65%	451,227	62%
Floating	81,178	50%	197,219	35%	278,397	38%
TOTAL	163,052	100%	566,572	100%	729,624	100%

Total customer funds

EUR million

	2022	2021	Change		2020
			Absolute	%	
Demand deposits	710,232	717,728	(7,496)	(1.0)	642,897
Time deposits	251,778	164,259	87,519	53.3	171,939
Mutual funds ^A	184,054	188,096	(4,042)	(2.1)	164,802
Customer funds	1,146,064	1,070,083	75,981	7.1	979,638
Pension funds ^A	14,021	16,078	(2,057)	(12.8)	15,577
Managed portfolios ^A	32,184	31,138	1,046	3.4	26,438
Repurchase agreements	63,391	36,357	27,034	74.4	34,474
Total funds	1,255,660	1,153,656	102,004	8.8	1,056,127

A. Including managed and marketed funds.

Customer deposits grew 12% year-on-year to EUR 1,025,401 million in December 2022.

Santander uses customer funds (customer deposits, minus repurchase agreements, plus mutual funds) to analyse traditional retail banking funds, which stood at EUR 1,146,064 million.

Customer funds increased 7%. In constant euros they rose 6%, as follows:

- By product, customer deposits minus repurchase agreements were up 9%. Time deposits grew 48% (higher interest rates) in all markets except Portugal and Peru, to the detriment of demand deposits, which fell 1% (declines in most countries). Mutual funds declined 5%, affected by market trends mainly in Europe.

- Customer funds increased 11% in North America (the US: +16% and Mexico: +2%), 5% in South America (Argentina: +98%; Uruguay: +8%; Brazil: +3%) and 5% in Europe (increases of 10% in Spain and 2% in the UK and Poland that more than offset the 3% drop in Portugal).
- Positive performance also in DCB, whose funds increased 7%. Growth in Openbank was 5%.

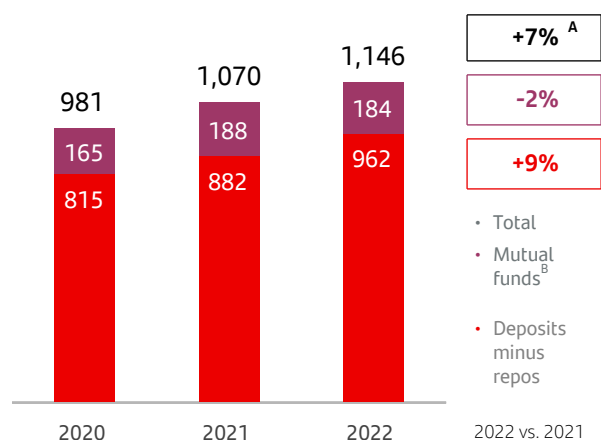
The weight of demand deposits was 62% of total customer funds, while time deposits accounted for 22% and mutual funds 16%.

In addition to capturing customer deposits, the Group, for strategic reasons, has a selective policy on issuing securities in international fixed income markets. We strive to adapt the frequency and volume of market operations to each unit's structural liquidity needs and to each market's receptiveness.

For more details on debt issuances and maturities, see section [3.4 'Liquidity and funding management'](#) in this chapter.

Customer funds (minus repos)

EUR billion

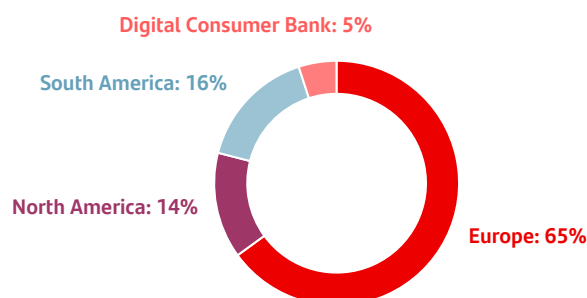


A. In constant euros: +6%.

B. Including managed and marketed funds.

Customer funds (minus repos)

% of operating areas. December 2022

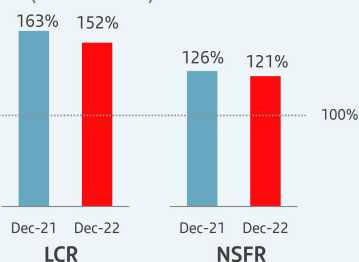


3.4 Liquidity and funding management

Executive Summary

Regulatory ratios

The LCR and NSFR ratios amply exceed regulatory requirements (both 100%)



Debt issuances in 2022

We issued more than EUR 57 bn in debt in 2022, diversified by product, currency, country and maturity

EUR 39.6 bn	Medium- and long-term debt
EUR 17.6 bn	Securitizations

Comfortable and stable funding structure

High contribution from customer deposits

101%	LTD ratio
-------------	-----------

Liquidity management

Our structural liquidity management aims to optimize maturities and costs, and to avoid undesired liquidity risks in funding Santander's operations.

It follows these principles:

- Decentralized liquidity model.
- Medium- and long-term (M/LT) funding needs must be covered by medium- and long-term instruments.
- High contribution from customer deposits due to the retail nature of the balance sheet.
- Wholesale funding sources diversified by instrument, investor, market, currency and maturity.
- Limited use of short-term funding.
- Sufficient liquidity reserves (including standing facilities/discount windows at central banks) to be used in adverse situations.
- Group and subsidiary-level compliance with regulatory liquidity requirements.

To apply these principles effectively across the Group, we developed a unique, three-pronged management framework:

- **Organization and governance.** Strict organization and governance that involve subsidiaries' senior managers in decision-making and our global strategy. Decisions about structural risks, including liquidity and funding risk, falls on the local asset and liability committees (ALCOs), which coordinate with the global ALCO. The global ALCO is empowered by the board of directors under the corporate Asset and Liability Management (ALM) framework.

This enhanced governance model is part of our risk appetite framework, which meets regulatory and market standards for strong risk management and control systems.

- **Balance sheet and liquidity risk.** In-depth balance sheet analysis and liquidity risk measurement that support decisions and controls to ensure liquidity levels cover short- and long-

term needs with stable funding sources, and manage funding costs.

Each subsidiary has a conservative risk appetite framework (based in their commercial strategy) which sets out the liquidity risk management framework. Subsidiaries must work within the framework limits to achieve their strategic objectives.

- **Liquidity management adapted to the needs of each business.** We develop a liquidity plan every year to achieve:
 - a solid balance sheet structure, with a diversified footprint in wholesale markets;
 - stable liquidity buffers and limited asset encumbrance; and
 - compliance with regulatory and other metrics included in each entity's risk appetite statement.

We monitor all the plan's components throughout the year.

Santander continues to carry out the Internal Liquidity Adequacy Assessment Process (ILAAP) as part of our other risk management and strategic processes to measure liquidity in ordinary and stressed scenarios. The quantitative and qualitative items we consider are also inputs for the Supervisory Review and Evaluation Process (SREP).

Once a year, we must submit a board-approved ILAAP assessment to supervisors that shows our funding and liquidity structures will remain solid in all scenarios and our internal processes will ensure sufficient liquidity (based on analyses that each subsidiary conducts according to local liquidity management models).

Our governance structure is robust and suited to identify, manage, monitor and control liquidity risks. It rests on common frameworks, conservative principles, clearly defined roles and responsibilities, a consistent committee structure, effective local lines of defence and well-coordinated corporate supervision.

We produce frequent, detailed liquidity monitoring reports for management, control and reporting purposes. We also regularly



send the most relevant information to senior managers, the executive committee and the board of directors.

Over the last few years, Santander and each subsidiary have developed a comprehensive special situations management framework that centralizes our governance for such scenarios. It contains contingency funding plans, that form part of our governance model, including feasible, pre-assessed actions that follow a defined timeline, are categorized and prioritized, and provide for sufficient liquidity and execution time to mitigate stress scenarios.

Funding strategy and liquidity in 2022

Funding strategy and structure

In recent years, our funding strategy has focused on extending our management model to all subsidiaries.

It is based on a model of autonomous subsidiaries that are responsible for covering their own liquidity needs. This enables our solid retail banking model to maintain sound liquidity positions in the Group and our core country units, even amid market stress.

We have had to adapt funding strategies to business trends, market conditions and new regulations. In 2022, we improved specific aspects, without significant changes in liquidity management or funding policies and practices. This will enable us to start 2023 from a strong position and with no growth restrictions.

Our subsidiaries continue to apply the same funding and liquidity management strategies to:

- maintain sufficient and stable medium- and long-term wholesale funding levels;
- ensure the right volume of assets that can be discounted in central banks as part of the liquidity buffer; and
- generate liquidity from the retail business.

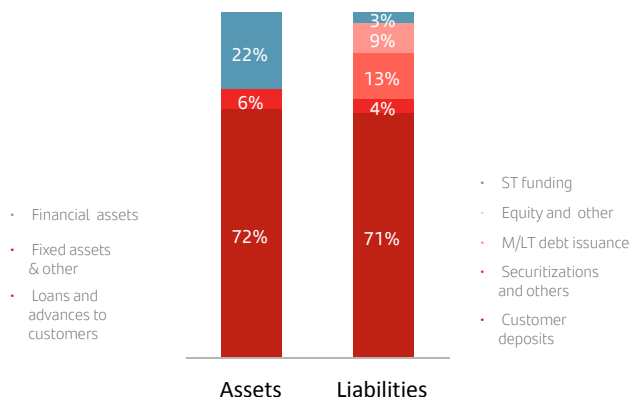
These developments have strengthened Santander's funding structure:

- Customer deposits are our main funding source . They are highly stable because they mainly arise from retail customer

activity. At the end of December 2022, they represented just over two thirds of net liabilities (i.e. of the liquidity balance sheet) and nearly 99% of loans and advances to customers. Their weight (as a percentage of loans and advances to customers) increased year-on-year. For more details, see the [Liquidity in 2022](#) section.

Group's liquidity balance sheet

% December 2022



Note: Liquidity balance sheet for management purposes is the consolidated balance sheet, net of trading derivatives and interbank balances. For more information on the consolidated balance sheet, see the [Consolidated financial statements](#) chapter.

- M/LT funding accounted for nearly 17% of net liabilities at the end of 2022 (similar to 2021). It amply covers the retail funding gap (i.e. loans and advances to customers not funded by customer deposits).

The outstanding balance of M/LT debt issued (to third parties) at the end of 2022 was EUR 186,689 million. Our maturity profile is comfortable and well balanced by instruments and markets with a weighted average maturity of 4.3 years (slightly below average maturity of 4.8 years at the end of 2021).

These tables show our funding by instrument over the past three years and by maturity profile:

Group. Stock of medium- and long-term debt issuances^A

EUR million

	2022	2021	2020
Preferred	8,693	10,238	8,925
Subordinated	17,573	16,953	13,831
Senior debt	116,350	104,553	95,208
Covered bonds	44,073	41,908	49,388
Total	186,689	173,652	167,351

A. Placed in markets. Does not include securitizations, agribusiness notes and real estate credit notes.

Group. Distribution by contractual maturity. December 2022

EUR million

	0-1 month	1-3 months	3-6 months	6-9 months	9-12 months	12-24 months	2-5 years	more than 5 years	Total
Preferred	—	—	—	—	—	—	—	8,693	8,693
Subordinated	—	—	—	—	663	—	7,538	9,373	17,573
Senior debt	1,818	3,386	4,119	2,216	2,795	22,891	51,581	27,543	116,350
Covered bonds	—	1,248	1,000	987	200	7,642	20,378	12,618	44,073
Total	1,818	4,634	5,119	3,202	3,658	30,533	79,497	58,226	186,689

Note: There are no additional guarantees for any of the debt issued by the Group's subsidiaries.

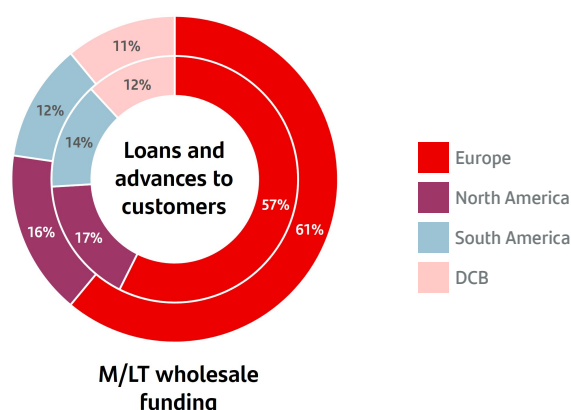
Covered bond issuance recovered sharply in 2022. Santander was not very active in this market in previous years due to Santander's focus on building the MREL and TLAC requirements.

In addition to M/LT wholesale debt issuances, we have securitizations placed in the market and collateralized and other specialist funding totalling EUR 54,890 million (including EUR 10,720 million in debt instruments placed with private banking clients in Brazil). Average maturity was around 1.6 years.

This chart shows the similarity of the geographic breakdown of our loans and advances to customers and M/LT wholesale funding across our footprint. This distribution is almost identical to 2021.

Loans and advances to customers and M/LT wholesale funding

%. December 2022



Wholesale funding from short-term issuance programmes is a residual part of Santander's funding structure, which is related to treasury activities and is comfortably covered by liquid assets.

The outstanding short-term wholesale funding balance at the end of 2022 was EUR 44,146 million. 61% was in European Commercial Paper, US Commercial Paper and domestic programmes issued by Banco Santander, S.A.; 12% in certificates of deposit and commercial paper programmes in the UK; 15% in Santander Consumer Finance (SCF) commercial paper programmes; and 12% in issuance programmes in other subsidiaries.

Liquidity in 2022

The key liquidity takeaways from 2022 were:

- basic liquidity ratios remained at comfortable levels;
- regulatory liquidity ratios were well above minimum requirements; and
- our use of encumbered assets in funding operations was moderate.

In order to tackle high inflation and return it to more normalized levels, central banks continued to withdraw stimulus measures that were introduced in 2021. This was done both by removing liquidity from the system and by raising interest rates.

Santander repaid a significant part of the funding (with original maturity in 2023) from the ECB's TLTRO-III programme early in Q4 2022. We were able to replace these funds as we strengthened balance sheets through a combination of growth in customer deposits, an increase in short-term instruments and greater activity in medium and long-term issuances, with the objective of maintaining regulatory liquidity ratios and internal metrics at prudent levels after repayment.



Our liquidity position has always remained solid. Commercial activity was not a significant drain on liquidity in 2022, given that credit growth was coupled with deposit growth.

i. Basic liquidity ratios at comfortable levels

At the end of 2022, Santander recorded:

- a stable credit to net assets ratio (i.e. total assets minus trading derivatives and inter-bank balances) of 72%, slightly lower than previous years. Such a high level compared to our competitors in Europe speaks to the retail nature of our balance sheet;
- a net loan-to-deposit ratio (LTD) of 101%, a very comfortable level (well below 120%) and lower than 2021 year-end. Lending grew moderately in constant euros in almost all our markets, including consumer businesses, and deposits performed positively;
- a customer deposit plus M/LT funding to net loans and advances ratio of 122% (117% in 2021);
- limited recourse to short-term wholesale funding (around 3% of total funding), in line with previous years; and
- an average structural surplus balance, defined as the excess of structural funding sources (deposits, M/LT funding and capital) against structural liquidity needs from fixed assets and loans, of EUR 237,141 million in the year.

The consolidated structural surplus stood at EUR 274,492 million at year-end. Fixed-income assets (EUR 171,900 million), equities (EUR 12,745 million) and net interbank and central bank deposits (EUR 133,993 million) were partly offset by short-term wholesale funding (-EUR 44,146 million). This totalled around 19% of our net liabilities (slightly up from the end of 2021).

This table shows Santander's basic liquidity monitoring metrics in recent years:

Group's liquidity monitoring metrics

	2022	2021	2020
Loans ^A / Net assets	72%	75%	76%
Loan ^A -to-deposit ratio (LTD)	101%	106%	108%
Customer deposits and medium- and long-term funding / Loans ^A	122%	117%	116%
Short-term wholesale funding / Net liabilities	3%	2%	2%
Structural liquidity surplus (% of net liabilities)	19%	16%	15%

A. Loans and advances to customers.

The table below shows the principal liquidity ratios of our main subsidiaries at the end of 2022:

Main subsidiaries' liquidity metrics

% December 2022

	LTD ratio	Deposits + M/ LT funding / Loans ^A
Spain	75%	143%
United Kingdom	109%	107%
Portugal	93%	115%
Poland	75%	135%
United States	105%	123%
Mexico	93%	117%
Brazil	96%	126%
Chile	149%	89%
Argentina	53%	189%
Digital Consumer Bank	209%	69%
Group	101%	122%

A. Loans and advances to customers.

In 2022, the key drivers of Santander's and its subsidiaries' liquidity (in constant euros, i.e. excluding exchange rate impact) were:

- lending growth in all our markets, including Digital Consumer Bank (DCB). There was also general growth in customer deposits. As a result, the retail funding gap increased only slightly; and
- issuances continued at a similar rate to the previous year and, overall, were in line with our funding plan for the year. North America and DCB issued less than planned due to lower-than-expected business growth, while we were more active in capital markets in Europe.

In 2022, Santander issued EUR 57,247 million in M/LT funding (at year-average exchange rates).

By instrument, the stock of M/LT fixed income debt (i.e. covered bonds, senior debt, subordinated debt and capital hybrid instruments) increased by around 36% to EUR 39,602 million at the end of the year. Greater activity in preferred and TLAC eligible senior debt and covered bonds more than offset lower hybrids issuances. Securitizations and structured finance totalled EUR 17,645 million in 2022, down 23% year-on-year.

Spain and the UK issued the most M/LT fixed income debt (not including securitizations), followed by the US and Brazil. The UK and the US registered the highest absolute increases in the year. The main year-on-year decrease occurred in Brazil.

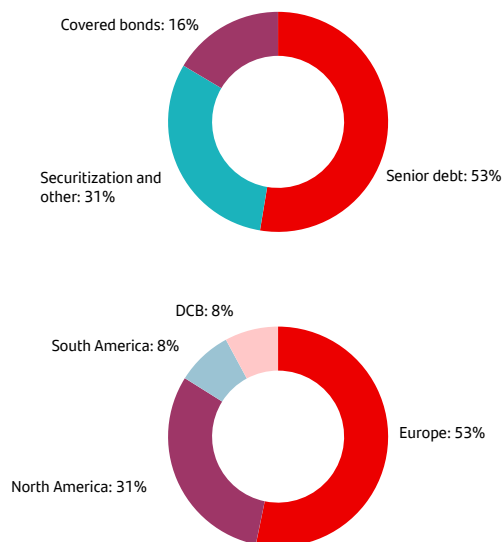
SCF and SC USA were the main issuers of securitizations.



The charts below show issuances by instrument and region:

Distribution by instrument and region

% December 2022



Mortgage covered bonds represented 16% of the total issuances in 2022, compared to just 1% in 2021. This increase was due to the recovery of this product in its traditional markets (Spain and the UK) for the reasons mentioned above. Senior debt accounted for 53% of total issuances compared with 45% in 2021. In 2022, the weight of TLAC-eligible senior debt versus senior preferred debt was lower than in 2021. The issuance of eligible hybrid instruments as AT1 or subordinated debt depends on changes in risk-weighted assets. Since no additional issuance was necessary in 2022 as the AT1 and T2 buffers (1.5% and 2%, respectively) were covered, liquidity was replaced by other, more cost-efficient instruments.

In 2022 at average exchange rates, the Group issued EUR 12,093 million in subordinated instruments, including EUR 11,970 million in senior non-preferred debt from Banco Santander, S.A. and senior preferred from the holdings in the UK and the US; EUR 123 million in subordinated debt issued from Chile; and, as mentioned, no AT1 eligible hybrid instruments were issued.

We retained comfortable access to all our markets having issued and securitized debt in 14 currencies, involving 20 major issuers from 12 countries and an average maturity of 4.1 years (slightly lower than 4.5 years in 2021).

ii. Compliance with regulatory liquidity ratios

Within the liquidity management model, in recent years, Santander has implemented, monitored and complied with the liquidity requirements established under international financial regulations early.

Liquidity Coverage Ratio (LCR)

As the regulatory LCR requirement has been at the maximum level of 100% since 2018, we set a risk appetite of 110% at the consolidated and subsidiary level.

Our strong short-term liquidity base and our core subsidiaries' autonomous management helped us reach compliance levels above 100% (both at the Group and subsidiary level) throughout the year. Our LCR in December 2022 was 152%, well above the regulatory requirement.

Moreover, this ratio considers the EUR 55 billion of TLTRO funds amortized (the vast majority of which were repaid early). Of these, EUR 50 billion were at the parent bank (82% of its total outstanding at the beginning of 2022).

This table shows that all our subsidiaries substantially exceeded the required minimum in 2022 and the comparison versus 2021. Santander UK's figures only include activities that the Financial Services and Markets Act 2000 leaves within the Ring-Fenced Bank.

Liquidity Coverage Ratio (LCR)

%	December 2022	December 2021
Parent bank	148%	151%
United Kingdom	157%	168%
Portugal	132%	138%
Poland	178%	197%
United States	125%	150%
Mexico	197%	184%
Brazil	127%	141%
Chile	189%	148%
Argentina	235%	258%
Santander Consumer Finance	241%	319%
Group	152%	163%



NSFR (Net Stable Funding Ratio)

The Regulation (EU) 2019/876 of the European Parliament dictated that entities must have a net stable funding ratio greater than 100% from June 2021.

The NSFR is a structural measurement that gives banks an incentive to ensure long-term stability and proper management of maturity mismatches by funding long-term assets with long-term liabilities. It is the quotient of available stable funding (ASF) and required stable funding (RSF).

ASF comprises sources of funding (i.e. capital and other liabilities) considered stable over one year. As RSF primarily refers to any asset deemed illiquid over one year, it needs to be matched with stable sources of funding.

We set a risk appetite limit for the NSFR of 101.5% at the consolidated and subsidiary level.

The high weight of customer deposits (which are more stable); permanent liquidity needs deriving from commercial activity funded by medium- and long-term instruments; and limited recourse to short-term funding help maintain our balanced liquidity structure as reflected in our consolidated and subsidiary NSFRs which all exceeded 100% in December 2022.

The following table provides details by entities as well as a comparison with 2021. Santander UK's figures only include activities that the Financial Services and Markets Act 2000 leaves within the Ring-Fenced Bank. All figures were calculated using European regulations.

Net Stable Funding Ratio

%	December 2022		December 2021	
Parent bank	118%		118%	
United Kingdom	137%		138%	
Portugal	116%		124%	
Poland	146%		156%	
United States	109%		128%	
Mexico	120%		134%	
Brazil	112%		116%	
Chile	117%		124%	
Argentina	195%		180%	
Santander Consumer Finance	109%		115%	
Group	121%		126%	

iii. Asset Encumbrance

Santander's use of assets as collateral in structural balance sheet funding sources is moderate.

Per the 2014 European Banking Authority (EBA) guidelines on disclosure of encumbered and unencumbered assets, the concept of asset encumbrance includes on-balance-sheet assets pledged as collateral in operations to obtain liquidity, off-balance-sheet assets received and reused for a similar purpose, and other assets with liabilities for reasons other than funding.

The tables below show the asset encumbrance data we must submit to the EBA as of December 2022:

Group. Disclosure on asset encumbrance as at December 2022

EUR billion

	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets	308.9	—	1,425.7	—
Loans and advances	197.3	—	1,143.5	—
Equity instruments	8.3	8.3	7.4	7.4
Debt instruments	71.7	71.1	122.0	125.8
Other assets	31.6	—	152.8	—

Group. Collateral received as at December 2022

EUR billion

	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Collateral received	104.3	29.4
Loans and advances	1.3	—
Equity instruments	4.8	6.8
Debt instruments	98.2	22.5
Other collateral received	—	0.1
Own debt securities issued other than own covered bonds or ABSs	—	0.5

Group. Encumbered assets/collateral received and associated liabilities as at December 2022

EUR billion

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Total sources of encumbrance (carrying amount)	313.2	413.2

On-balance-sheet encumbered assets amounted to EUR 308.9 billion, of which 64% were loans and advances (e.g. mortgages and corporate loans). Off-balance-sheet encumbrance stood at EUR 104.3 billion and mainly related to debt securities received as collateral in reverse repurchase agreements and rehypothecated ('reused').

In total encumbered assets amounted to EUR 413.2 billion, giving rise to associated liabilities of EUR 313.2 billion.

At the end of 2022, total asset encumbrance in funding operations was 22.1% of the Group's extended balance sheet under EBA criteria (total assets plus guarantees received: EUR 1,868.4 billion). This is lower than the end-2021 figure (26.1%), mainly due to the early repayment of collateralized funding with central banks, in particular the European Central Bank (TLTRO) and the Bank of England (TFSME).

Rating agencies

Rating agencies influence Santander's access to wholesale funding markets and the cost of its issuances.

The agencies listed below regularly review our ratings. Debt ratings depend on several internal factors (business model, strategy, capital, income generation capacity, liquidity, ESG related factors, etc.) but also on external factors related to economic conditions, the industry and sovereign risk across our footprint.

The agencies' methodologies limit ratings in some cases to the sovereign's rating of the country where the bank is headquartered. However, as a testament of our financial

strength and diversification, Moody's, DBRS and Standard & Poor's (S&P) still rate Banco Santander, S.A. above the Kingdom of Spain's (where it is headquartered) sovereign rating while Fitch rates them equally.

At the end of 2022, the ratings from the main agencies were:

Rating agencies

	Long term	Short term	Outlook
DBRS	A (High)	R-1 (Middle)	Stable
Fitch Ratings	A-(SeniorA)	F2 (Senior F1)	Stable
Moody's	A2	P-1	Stable
Standard & Poor's	A+	A-1	Stable
Scope	AA-	S-1+	Stable
JCR Japan	A+	—	Stable

In 2021, S&P upgraded the long-term rating to A+ due to a change in its methodology. DBRS, Fitch, Moody's and JCR Japan confirmed their ratings again in 2022.

In 2021, Fitch upgraded its outlook from negative to stable due to the stabilization of the operating environment in Santander's main markets. In March 2022, S&P Global ratings raised Santander's outlook on the back of its upward revision to the sovereign's outlook, placing them both at stable again and keeping Santander one notch above the Kingdom of Spain.



Funding outlook for 2023

Santander has begun 2023 with a strong liquidity position, having already repaid a large part of the ECB financing maturities corresponding to 2023. The funding outlook for the year is positive, despite lingering uncertainties due to the macroeconomic and geopolitical landscape.

We expect lending to rise moderately in all our core markets, coupled with a solid performance in deposits leading to limited demand for liquidity from our retail business.

Maturities in the coming quarters are manageable, aided by limited recourse to short-term funding and an expected medium- and long-term issuance dynamic slightly up on last year. We will manage each country and optimize liquidity to maintain a solid balance sheet structure across our footprint.

Our funding plans consider costs and diversification by instrument, country and market as well as the construction of liability buffers with loss-absorbing capacity in resolution (whether capital eligible or not). We design them to ensure Santander and its subsidiaries satisfy regulatory requirements and those stemming from our risk appetite framework.

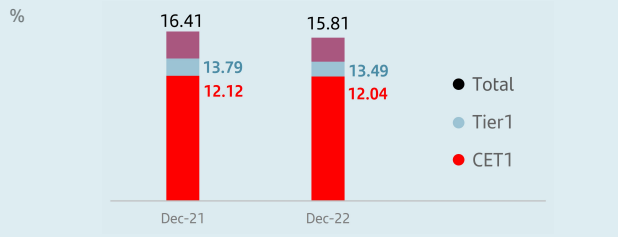
Santander has been very active at the beginning of 2023. The main issuers in the Group (Banco Santander, S.A., UK, Santander Consumer Finance and Santander Holdings USA) had already issued EUR 12.2 billion by the end of January 2023, which represents nearly half of their total funding plan for the year.

3.5 Capital management and adequacy. Solvency ratios

Executive summary

Fully-loaded capital ratio

The fully-loaded CET1 ratio remained above 12% in every quarter in 2022



Fully-loaded CET1

Strong organic generation driven by profit and RWA management

Organic generation* **+76 bps**

TNAV per share

The TNAV per share was **EUR 4.26**, +6% year-on-year including cash dividends

* Net of shareholder remuneration.

Capital management and adequacy at Santander aims to guarantee solvency and maximize profitability, while complying with internal capital targets and regulatory requirements.

Capital management is a key strategic tool for decision-making at both the subsidiary and corporate levels.

We have a common framework that covers capital management actions, criteria, policies, functions, metrics and processes.

Our most notable capital management activities are:

- establishing capital adequacy and capital contribution targets that align with minimum regulatory requirements and internal policies, to guarantee robust capital levels consistent with our risk profile and efficient use of capital to maximize shareholder value;
- drawing up a capital plan to meet our strategic plan objectives. Capital planning is an essential part of executing the three-year strategic plan;

- assessing capital adequacy to ensure the capital plan is also consistent with our risk profile and risk appetite framework and in stress scenarios;
- developing the annual capital budget as part of the Group's budgeting process;
- monitoring and controlling budget execution at Group and subsidiary level and drawing up action plans to correct any deviations;
- integrating capital metrics into our business management to ensure alignment with the Group's objectives;
- preparing internal capital reports, and reports for the supervisory authorities and the market; and
- planning and managing other loss absorbing instruments (MREL and TLAC).

Santander's capital function is comprised of three levels:

Regulatory capital



The first step in managing regulatory capital is to analyse the capital base, the capital adequacy ratios under the current regulatory criteria and the scenarios used in capital planning to make the capital structure as efficient as possible, both in terms of costs and compliance with regulatory requirements. Active capital management includes strategies for allocation and efficient use of capital, securitizations, asset sales and issuances of equity instruments (hybrid equity instruments and subordinated debt).

Economic capital



The economic capital model aims to ensure we adequately allocate our capital to cover every risk we are exposed to a result of our activity and risk appetite. It also aims to optimize economic value added at Group and business unit level.

Profitability and pricing



Creating value and maximizing profitability is one of Santander's main objectives. We carefully select the most appropriate markets and portfolios based on profitability while considering risk. Thus, profitability and pricing are integral to our key capital model processes.



The main measures we took in 2022 were:

Issuances of capital hybrid and other loss-absorbing instruments

Banco Santander, S.A. did not issue any hybrid instruments (subordinated debt and contingently convertible preferred shares - CoCos) in 2022 but did issue EUR 5,536 million in senior non-preferred debt.

Dividends and shareholder remuneration

For 2022, the board continued the policy of allocating approximately 40% of the Group's underlying profit to shareholder remuneration, split in approximately equal parts in cash dividends and share buybacks.

- **Interim remuneration.** On 27 September 2022, the board agreed to:
 - Pay an interim cash dividend of EUR 5.83 cents per share entitled to receive dividends (equivalent to approximately 20% of the Group's underlying profit in H1 2022), charged to 2022 results. It was paid on 2 November 2022.
 - Implement the First 2022 Buyback Programme worth approximately EUR 979 million (approximately 20% of the Group's underlying profit in H1 2022). It was approved by the ECB on 17 November 2022 and ran from 22 November 2022 to 31 January 2023. Banco Santander bought back 340,406,572 own shares, which was 2.03% its share capital at that time (see '[First 2022 Buyback Programme](#)' in the 'Corporate Governance' chapter).
- **Final remuneration.** On 27 February 2023, within the 2022 shareholder remuneration policy, the board of directors decided to:
 - Submit a resolution at the 2023 AGM to approve a final cash dividend in the gross amount of EUR 5.95 cents per share entitled to receive dividends. If approved at the AGM, the dividend would be payable from 2 May 2023.
 - Implement a Second 2022 Buyback Programme worth EUR 921 million, for which the appropriate regulatory authorization has already been obtained and that will be executed from 1 March 2023. For more details, see '[Second 2022 Buyback Programme](#)' in the 'Corporate Governance' chapter.

Once the above mentioned actions are completed, the shareholder remuneration for 2022 will have been EUR 3,842 million (approximately 40%¹ of the underlying profit in 2022) split in approximately equal parts in cash dividends (EUR 1,942 million) and share buybacks (EUR 1,900 million). For more details, see section [3.3 'Dividends and shareholder remuneration'](#) in the 'Corporate Governance' chapter.

Strengthening our active capital management culture

We continue to focus on disciplined capital allocation and shareholder remuneration while maintaining our fully-loaded CET1 target between 11%-12%.

Continuous improvement of our capital ratios reflects our profitable growth strategy and a culture of active capital management at all levels.

The Capital and Profitability Management team is in charge of our capital analysis, adequacy and management, coordination with subsidiaries on all matters related to capital and monitoring and measuring returns.

Every subsidiary and business unit has drawn up individual capital plans that focus on maximizing the return on equity.

Santander places a high value on its long-term sustainability and the efficient use of capital in the incentives of the Group's main executives. We considered certain aspects relating to capital management and returns when setting senior managers' 2022 variable remuneration:

- Metrics included return on tangible equity (RoTE), return on risk-weighted assets (RoRWA) and customer-related measures.
- Qualitative adjustments considered included efficient management of solvency metrics, operational risk management, risk appetite, sustainability and strength of results and effective cost management.

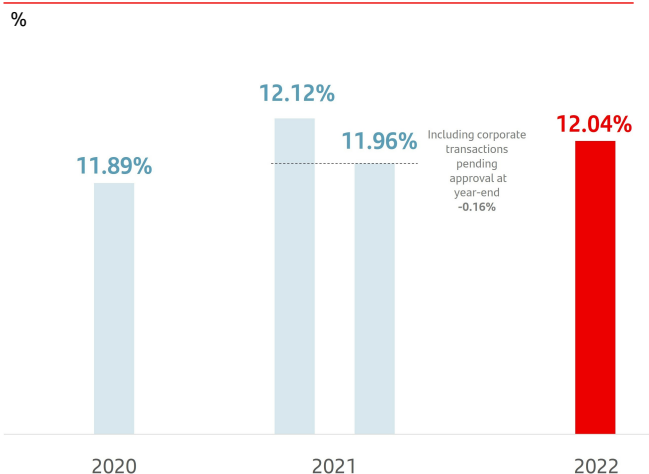
Action plans

We are working on a programme of continuous enhancement of capital-related infrastructure, processes and methodologies, to further bolster active capital management by responding quicker to the numerous and increasing regulatory requirements and efficiently carrying out all associated activities.

1. Subject to approval of the final dividend at the 2023 AGM and completion of the Second 2022 Buyback Programme under the terms agreed by the board (see section [3.3 'Dividends and shareholder remuneration'](#) in the 'Corporate Governance' chapter).



Fully-loaded CET1 ratio



Regulatory phased-in CET1 ratio^A

%

Year	Regulatory phased-in CET1 ratio (%)
2020	12.34
2021	12.51
2022	12.18

A. The phased-in ratios include the transitory treatment of IFRS 9, calculated in accordance with article 473 bis of the Regulation on Capital Requirements (CRR) and subsequent amendments introduced by Regulation 2020/873 of the European Union. Additionally, the Tier 1 and total phased-in capital ratios include the transitory treatment according to chapter 2, title 1, part 10 of the aforementioned CRR.

Fully-loaded capital ratios in 2022

The fully-loaded CET1 ratio was 12.04% if we do not apply the transitory IFRS 9 provisions or the subsequent amendments introduced by Regulation 2020/873 of the European Union.

Of note in the year was organic generation of 138 bps, supported by profit and our management of risk-weighted assets. We recorded an impact of 62 bps for shareholder

Main capital data and solvency ratios

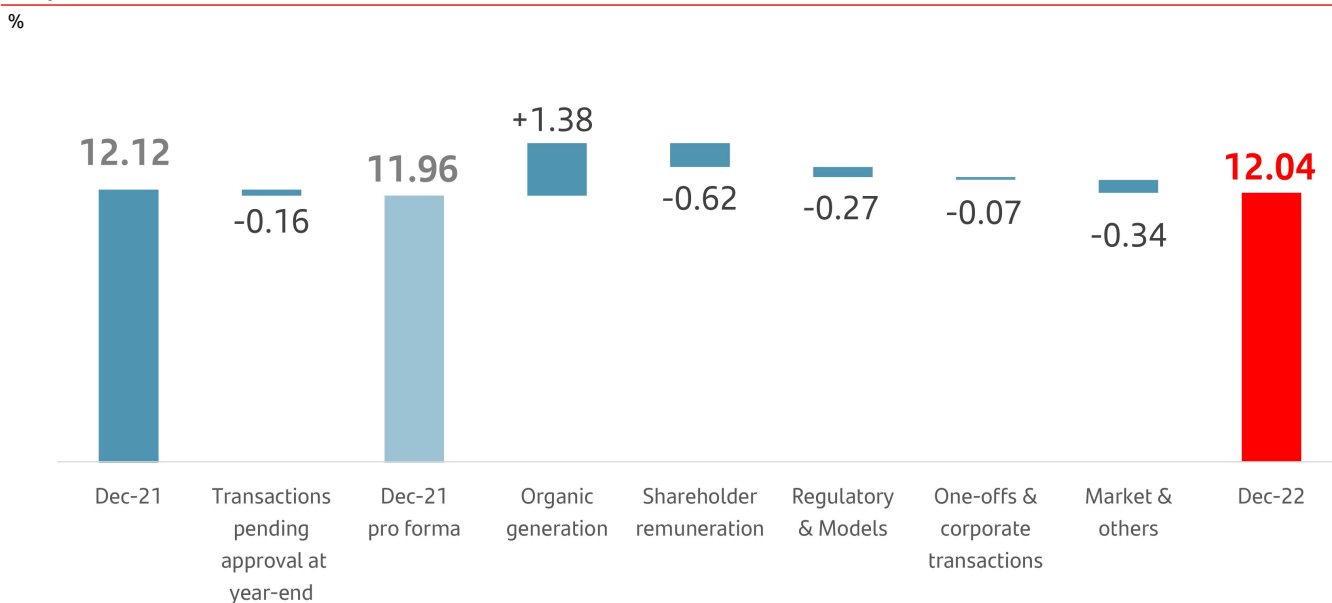
EUR million

	Fully loaded		Phased-in ^A	
	2022	2021	2022	2021
Common equity (CET1)	73,390	70,208	74,202	72,402
Tier1 (T1)	82,221	79,939	83,033	82,452
Eligible capital	96,373	95,078	97,392	97,317
Risk-weighted assets	609,702	579,478	609,266	578,930
CET1 capital ratio	12.04%	12.12%	12.18%	12.51%
T1 capital ratio	13.49%	13.79%	13.63%	14.24%
Total capital ratio	15.81%	16.41%	15.99%	16.81%
Leverage ratio	4.70%	5.21%	4.74%	5.37%

remuneration, which represents a net generation of 76 bps in 2022. This strong generation was partially offset by the negative market impacts on available for sale (HTC&S) portfolios and regulatory drivers.

The fully-loaded leverage ratio stood at 4.70%.

Fully-loaded CET1 ratio in 2022



Regulatory capital ratios (phased-in)

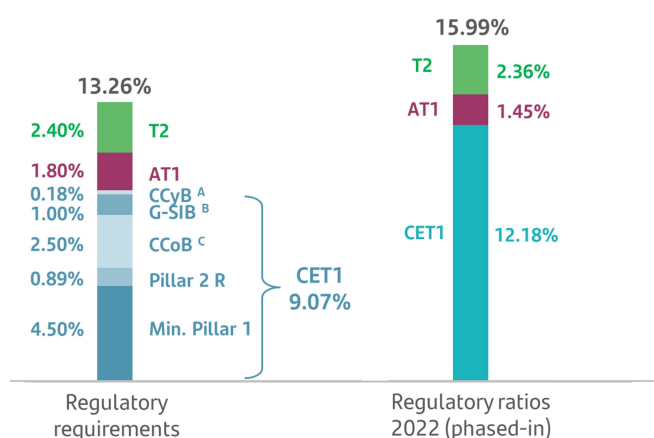
The phased-in ratios are calculated by applying the CRR transitory schedules.

On a consolidated basis, the minimum levels required by the European Central Bank are 9.07% for the CET1 ratio, 10.87% for the tier 1 ratio and 13.26% for the total capital ratio.

Our capital requirements increased in 2022, mainly due to the reactivation of countercyclical buffers by the competent authorities in the countries in which we operate (+0.16 pp) and the ECB's review of the Pillar 2 requirement (P2R), which increased 0.08 pp (0.05 pp in CET1 and the rest between AT1 and Tier 2).

At year-end, the phased-in CET1 ratio was 12.18%, resulting in a CET1 management buffer of 311 bps. This shows our ability to generate capital organically, our solid position to be able to pay dividends and our strong capital management.

The total phased-in capital ratio was 15.99%. Taking into account the shortfall in AT1 and Tier 2 (T2), Santander exceeded the 2022 minimum regulatory requirements (i.e. distance to the maximum distributable amount - MDA) by 272 bps.



A. Countercyclical buffer.

B. Global systemically important banks (G-SIB) buffer.

C. Capital conservation buffer.

The phased-in leverage ratio stood at 4.74%.

Regulatory capital (phased-in). Flow statement

EUR million

	2022
Capital Core Tier 1 (CET 1)	
Starting amount (31/12/2021)	72,402
Shares issued in the year and share premium	(1,979)
Treasury shares and own shares financed	906
Reserves	(2,305)
Attributable profit net of dividends	7,684
Other retained earnings	(2,654)
Minority interests	680
Decrease/(increase) in goodwill and other intangible assets	(1,118)
Other	587
Ending amount (31/12/2022)	74,202
Additional Capital Tier 1 (AT1)	
Starting amount (31/12/2021)	10,050
AT1 eligible instruments	(1,758)
AT1 excesses - subsidiaries	539
Residual value of intangible assets	—
Deductions	—
Ending amount (31/12/2022)	8,831
Capital Tier 2 (T2)	
Starting amount (31/12/2021)	14,865
T2 eligible instruments	(653)
Generic funds and surplus loan-loss provisions-IRB	(75)
T2 excesses - subsidiaries	223
Deductions	—
Ending amount (31/12/2022)	14,359
Deductions from total capital	—
Total capital ending amount (31/12/2022)	97,392

These tables show the total risk-weighted assets (comprising the denominator of capital requirements based on risk) as well as their distribution by geographic segment.

Risk-weighted assets (phased-in CRR, phased-in IFRS 9)

EUR million

	RWAs		Minimum capital requirements
	2022	2021	2022
Credit risk (excluding CCR)	507,775	477,977	40,622
Of which: standardized approach (SA)	274,922	262,869	21,994
Of which: the foundation IRB (FIRB) approach	11,759	9,483	941
Of which: slotting approach ^A	14,509	14,672	1,161
Of which: equities under the simple risk-weighted approach	2,828	2,219	226
Of which: the advanced IRB (AIRB) approach	188,442	173,956	15,075
Counterparty credit risk (CCR)	13,096	15,674	1,048
Of which: standardized approach ^B	9,493	13,639	759
Of which: internal model method (IMM)	—	—	—
Of which: exposures to a CCP	278	268	22
Of which: credit valuation adjustment (CVA)	1,097	1,767	88
Of which: other CCR	2,229	—	178
Settlement risk	4	1	0
Securitization exposure in the banking book (after the cap)	9,898	9,268	792
Of which: SEC-IRBA approach	4,471	5,226	358
Of which: SEC-ERBA approach	2,156	1,366	173
Of which: SEC-SA approach ^B	3,270	2,676	262
Of which: 1250% deduction	—	—	—
Position, foreign exchange and commodities risks (Market risk)	15,791	17,224	1,263
Of which: standardized approach	7,521	6,844	602
Of which: internal model approach (IMA)	8,270	10,380	662
Large exposures	—	—	—
Operational risk	62,702	58,786	5,016
Of which: basic indicator approach	—	—	—
Of which: standardized approach	62,702	58,786	5,016
Of which: advanced measurement approach	—	—	—
Amounts below the thresholds for deduction	25,868	21,032	2,069
Total^{B C}	609,266	578,930	48,741

A. It includes equities under the PD/LGD approach.

B. For more detail see Pillar 3 report.

C. Total does not include amounts below the thresholds for deduction.

**RWAs by geographical distribution (phased-in CRR, phased-in IFRS 9)**

EUR million

	TOTAL	EUROPE	o/w: Spain	o/w: United Kingdom	NORTH AMERICA	o/w: US	SOUTH AMERICA	o/w: Brazil	Rest of the world
Credit risk (excluding CRR)	507,775	299,188	124,858	70,519	90,572	67,004	112,099	79,007	5,915
Of which: internal rating-based (IRB) approach ^A	222,978	175,935	77,292	52,204	17,622	8,773	25,297	21,327	4,125
Central governments and central banks	—	—	—	—	—	—	—	—	—
Institutions	11,422	6,713	1,114	1,373	2,298	1,368	1,601	644	811
Corporates – SME	123,261	81,227	42,034	16,387	15,192	7,312	23,612	20,663	3,229
Of which: Corporates - Specialized Lending	15,471	11,254	3,134	4,902	2,919	1,605	758	—	540
Of which: Corporates – Other	18,904	17,790	14,971	616	802	10	309	288	3
Retail - Secured by real estate SME	4,719	4,703	4,576	20	5	4	2	1	8
Retail - Secured by real estate non-SME	48,059	47,846	14,987	29,467	92	75	55	4	66
Retail - Qualifying revolving	4,547	4,541	1,089	2,649	1	1	3	1	2
Retail - Other SME	8,574	8,557	5,850	4	12	11	3	1	2
Retail - Other non-SME	20,818	20,771	6,064	2,304	21	2	21	14	6
Other non-credit-obligation assets	1,577	1,577	1,577	—	—	—	—	—	—
Of which: standardized approach (SA)	274,922	111,876	35,861	18,503	73,253	58,265	88,001	58,647	1,792
Central governments and central banks	26,579	11,537	10,217	5	2,543	—	12,285	11,163	215
Regional governments or local authorities	330	104	33	—	15	15	211	183	—
Public sector entities	369	53	—	—	198	198	116	—	2
Multilateral development banks	—	—	—	—	—	—	—	—	—
International organizations	—	—	—	—	—	—	—	—	—
Institutions	4,610	1,506	585	318	1,639	1,548	1,422	1,171	43
Corporates	47,920	22,911	3,115	6,288	9,970	9,022	14,650	8,252	388
Retail	98,556	35,151	3,012	6,114	31,717	25,853	30,594	24,085	1,093
Secured by mortgages on immovable property	35,103	10,804	2,152	726	10,972	7,860	13,319	3,895	7
Exposures in default	12,251	3,305	1,345	341	4,296	3,542	4,642	3,042	9
Items associated with particular high risk	1,414	101	19	38	1	1	1,312	315	—
Covered bonds	257	257	—	246	—	—	—	—	—
Claims on institutions and corporates with a short-term credit assessment	157	100	14	4	50	50	—	—	6
Collective investments undertakings (CIU)	158	158	116	—	—	—	—	—	—
Equity exposures	135	59	—	—	—	—	76	—	—
Other items	47,082	25,830	15,253	4,423	11,851	10,176	9,375	6,541	27
Of which: Equity IRB	18,120	18,120	18,120	—	—	—	—	—	—
Under the PD/LGD method	5,388	5,388	5,388	—	—	—	—	—	—
Under simple method	2,828	2,828	2,828	—	—	—	—	—	—
Equity exposures under risk weighted approach	9,903	9,903	9,903	—	—	—	—	—	—
Counterparty credit risk	13,096	7,385	6,007	600	911	632	2,570	1,795	2,230
Of which: standardized approach	9,493	6,679	5,540	440	766	547	2,047	1,386	1
Of which: internal model method (IMM)	—	—	—	—	—	—	—	—	—
Of which: exposures to a CCP	278	156	4	113	59	57	62	8	—
Of which: CVA	1,097	551	463	47	85	28	460	401	—
Of which: other CCR	2,229	—	—	—	—	—	—	—	2,229
Settlement risk	4	4	4	—	—	—	—	—	—
Securitization exposures in banking book (after cap) ^B	9,898	6,968	1,820	2,760	2,502	2,481	353	328	75
Market risk	15,791	10,477	9,998	245	1,568	1,568	3,757	1,326	—
Of which: standardized approach (SA)	7,521	4,570	4,091	245	1,568	1,568	1,394	1,326	—
Of which: internal model method (IMA)	8,270	5,907	5,907	—	—	—	2,363	—	—
Operational risk	62,702	25,781	12,694	6,790	9,072	5,168	16,365	9,193	11,484
Of which: basic indicator approach	—	—	—	—	—	—	—	—	—
Of which: standardized approach	62,702	25,781	12,694	6,790	9,072	5,168	16,365	9,193	11,484
Of which: advanced measurement approach	—	—	—	—	—	—	—	—	—
Amounts below the thresholds for deduction and other non-deducted investments (subject to 250% risk weight)	25,868	13,903	12,728	3	2,112	—	9,820	9,181	35
Total ^C	609,266	349,803	155,381	80,915	104,626	76,854	135,144	91,649	19,705

Note: Breakdown according to debtor's residency, except operational risk (management criteria) and some residual standardized approach exposures (legal basis).

A. Including IRB counterparty credit risk.

B. Does not include 1,250% deductions.

C. Total does not include amounts below the thresholds for deductions (subject to 250% risk weight).



This table presents the main changes to capital requirements by credit risk:

Credit risk capital movements ^A

EUR million

	RWAs	Capital requirements
Starting amount (31/12/2021)	500,884	40,071
Asset size	1,449	116
Model updates	16,663	1,333
Regulatory	—	—
Acquisitions and disposals	1,857	149
Foreign exchange movements	8,549	684
Other	—	—
Ending amount (31/12/2022)	529,401	42,352

A. Includes capital requirements from equity, securitizations and counterparty risk (excluding CVA and CCP).

Credit risk RWAs increased EUR 28,221 million in 2022, with a notable impact from models, mainly in Spain. The effect from exchange rate movements was +EUR 8,549 million, mainly due to the BRL's and USD's appreciation, partially offset by the GBP's depreciation. The acquisition of Pierpont Capital Holdings LLC resulted in an increase in credit risk of EUR 1,857 million. In terms of asset size, of note was business growth in South America and Digital Consumer Bank, offset by the impact from securitizations the Group carried out in the year (-EUR 13,205 million).

In short, from a qualitative point of view, Santander's solid capital ratios are consistent with its business model, balance sheet structure and risk profile.

Economic capital

Economic capital is the capital required to cover risks from our activity with a certain level of solvency. We measure it using an internal model. To calculate the required capital, we determine our solvency level based on our long-term rating target of 'A' (in line with the Kingdom of Spain); this represents a confidence level of 99.95% (above the regulatory level of 99.90%).

Our economic capital model measurements cover all significant risks incurred in our activity (concentration risk, structural interest rate risk, business risk, pensions risk, deferred tax assets (DTAs), goodwill and others that are beyond the scope of regulatory Pillar 1). It also considers diversification, which is key to determining and understanding our risk profile and solvency in view of our multinational operations and businesses.

Our total risk and related economic capital are less than the sum of the risk and capital of all individual units combined. Because our business spans several countries in a structure of separate legal entities with different customer and product segments and risk types, our earnings are less vulnerable to adverse situations for any given market, portfolio, customer type or risk. Despite increasing economic globalization, economic cycles and their impact differ by country, which was evident during the covid-19 pandemic. Groups with a global presence tend to have more stable results and are more resistant to market or portfolio crises, which translates into lower risk.

In contrast to regulatory criteria, we consider such intangible assets as DTAs and goodwill to retain value (even in a hypothetical resolution), owing to the geographic structure of our subsidiaries. Thus, we can value assets and estimate their unexpected loss and capital impact.

Economic capital is an essential internal management tool that helps us develop our strategy, assess solvency and manage portfolio and business risk. As such, it is a key part of the Supervisory Review and Evaluation Process (SREP).

Regarding Basel Pillar 2, we use our economic model for the internal capital adequacy assessment process (ICAAP). We plan business progression and capital needs under a central scenario and alternative stress scenarios to make sure we meet our solvency objectives, even in adverse scenarios.

Economic capital-derived metrics help us assess risk-return objectives, price operations based on risk, determine how economically viable projects are, and value country units and business lines to fulfil our overriding objective of maximizing shareholder value.

As a homogeneous risk measure, we can use economic capital to explain how we distribute risk throughout Santander, bringing together several activities and risk types under a single metric.

Given its relevance to internal management, Santander includes several economic capital-derived metrics from both a capital needs and a risk-return point of view, within a conservative risk appetite framework established at both Group and subsidiary level.

Required economic capital in December 2022 amounted to EUR 70,951 million. Compared to the available economic capital base of EUR 91,716 million, this implies a capital surplus of EUR 20,765 million.

Reconciliation of economic and regulatory capital

EUR million

	2022	2021
Net capital and issuance premiums	54,610	55,683
Reserves and retained profits	67,978	61,436
Valuation adjustments	(35,068)	(34,395)
Minority interests	7,426	6,736
Prudential filters	(708)	(637)
Other ^A	(2,522)	(1,184)
Base economic capital available	91,716	87,639
Deductions	(18,603)	(16,922)
Goodwill	(14,484)	(13,911)
Other intangible assets	(2,698)	(2,153)
DTAs	(1,421)	(859)
Other	237	(509)
Base regulatory (FL CET1) capital available	73,350	70,208
Base economic capital available	91,716	87,639
Economic capital required ^B	70,951	64,308
Capital surplus	20,765	23,332

A. Includes: deficit of provisions over economic expected loss, pension assets and other adjustments.

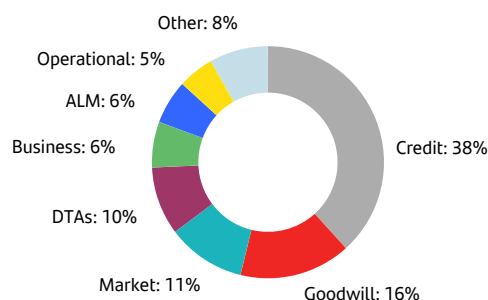
B. For a better comparison with regulatory capital, the differences in goodwill due to FX changes are included in the required economic capital. All figures according to EC 2022 methodology.

The main difference compared to regulatory CET1 is the treatment of goodwill, other intangible assets and DTAs; we consider them additional capital requirements rather than a deduction from available capital.

The charts below show the Group's economic capital needs at 31 December 2022, by region and risk type.

Distribution of economic capital needs by type of risk

%. December 2022



Our distribution of economic capital among core business areas is an indication of our business and risk diversification. Europe accounted for 44% of capital needs; North America, 20%; South America, 24%; and Digital Consumer Bank (DCB) 12%.

Outside our operating areas, the Corporate Centre mainly takes on goodwill risk and structural exchange rate risk (from maintaining stakes in foreign subsidiaries denominated in currencies other than the euro).

The benefit from diversification included in the economic capital model, including intra-risks (largely similar to geographic diversification) and inter-risk diversification was approximately 25-30%.

Distribution of Group economic capital needs by region and risk type

EUR million. December 2022

Grupo Santander. Total requirements: 70,951

Corporate Centre	Europe	North America	South America	DCB
17,978	23,503	10,760	12,665	6,045
All risks:	All risks:	All risks:	All risks:	All risks:
Goodwill 61%	Credit 46%	Credit 55%	Credit 51%	Credit 64%
Market 24%	ALM 16%	ALM 11%	DTAs 14%	Operational 9%
DTAs 13%	Market 10%	Fixed Assets 10%	Business 11%	ALM 7%
Others 1%	Others 28%	Others 24%	Others 24%	Others 20%



RoRAC and Economic Value Added

Since 1993, Santander has been using risk-adjusted return (RoRAC) methodology to:

- calculate economic capital consumption and return for business units, segments, portfolios and customers, to optimize capital allocation;
- measure units' management through budgetary monitoring of capital consumption and RoRAC; and
- analyse and set prices to make decisions on operations (approvals) and customers (monitoring).

The RoRAC methodology helps us compare the return on operations, customers, portfolios and businesses on a like-for-like basis. We can identify what is obtaining a risk-adjusted return higher than its cost of capital and thus align risk and business management to maximize economic value added (EVA), which is senior management's ultimate goal.

We regularly assess the level and progression of EVA and RoRAC across the Group. EVA is the profit generated above the cost of economic capital employed, and is calculated as follows:

$$\text{Economic Value Added} = \text{underlying consolidated profit} - (\text{average economic capital} \times \text{cost of capital})$$

We calculate profit by making the necessary adjustments to consolidated profit to eliminate factors outside the ordinary course of business and obtain each subsidiary's underlying result for the year.

For internal management purposes, we analyse the impact of items that are not covered by our economic capital model but affect reserves without being included in the income statement.

The minimum return on capital a transaction must obtain is determined by the cost of capital (i.e. the minimum compensation required by shareholders). We calculate it by adding the premium shareholders demand to invest in Santander to the risk-free return. The premium depends essentially on the degree of volatility in our share price with respect to market performance. Santander's cost of capital in 2022 was 11.2% (compared to 10.1% in 2021).

On top of reviewing the cost of capital every year, we also estimate a cost of capital for each business unit based on its features (under the philosophy that subsidiaries manage capital and liquidity autonomously) to determine whether each business is capable of creating standalone value.

If a transaction or portfolio obtains a positive return, it contributes to our profits, but only adds economic value when that return exceeds the cost of capital.

This table shows economic value added and RoRAC of the Group's main geographical segments at the end of December 2022. The figures reflect the economic value added in all the main segments:

Economic Value Added^A and RoRAC

EUR million

Main segments	2022		2021	
	RoRAC	EVA	RoRAC	EVA
Europe	16.1%	1,493	12.7%	631
North America	24.4%	1,582	34.6%	2,542
South America	24.1%	1,299	25.4%	1,323
Digital Consumer Bank	26.2%	1,043	28.1%	1,053
Total Group	14.5%	2,446	14.2%	2,969

Note: The 2021 economic capital requirements in this table have been recalculated based on the 2022 methodology to facilitate their comparison.

A. The economic value added is calculated with the cost of capital of each unit. The Group's total RoRAC includes the operating units and the Corporate Centre, reflecting the Group's economic capital and its return.

Capital planning and stress tests

Capital stress test exercises are a key tool in banks' dynamic assessments of their risks and solvency. These forward-looking reviews are based on unlikely-but-plausible macroeconomic and idiosyncratic scenarios. They require robust planning models that can translate the effects defined in the projected scenarios to elements that affect solvency.

The ultimate aim of these exercises is to assess risks and solvency thoroughly to determine capital requirements if a bank fails to meet its regulatory and internal capital objectives.

Santander has an internal capital stress and planning process to respond to various regulatory exercises and is a key tool integrated within management and strategy. They aim to ensure sufficient current and future capital, even in unlikely-but-plausible economic scenarios. We estimate results in various business environments (including severe recessions as well as expected macroeconomic environments), based on our initial situation (financial statements, capital base, risk parameters and regulatory and economic ratios) to determine our solvency ratios, usually for a three-year period.

Planning offers a comprehensive view of our capital for the analysed period and in each of the defined scenarios based on regulatory capital and economic capital metrics.



This chart describes the structure in place:

1	Macroeconomic scenario	<ul style="list-style-type: none"> • Central and recession • Idiosyncratic: based on specific risks the entity faces • Multi-year horizon • Reverse stress tests
2	Balance sheet and income statement forecasts	<ul style="list-style-type: none"> • Projection of volumes. Business strategy • Margins and funding costs • Fees and operating expenses • Market shocks and operational losses • Credit losses and provisions. PIT LGD and PD models • IFRS 9 models and migration among stages
3	Capital requirements forecasts	<ul style="list-style-type: none"> • Consistent with projected balance sheet • Regulatory and economic risk parameters (PD, LGD and EAD)
4	Solvency analysis	<ul style="list-style-type: none"> • Available capital base. Profits and dividends • Regulatory and legislative impacts • Capital and solvency ratios • Compliance with capital objectives • Regulatory and economic view
5	Action plan	<ul style="list-style-type: none"> • In the event of failure to comply with internal objectives or regulatory requirements

This structure supports the ultimate objective of capital planning, by making it an important strategic component that:

- ensures current and future solvency, even in adverse economic scenarios;
- facilitates communication with the market and supervisors;
- ensures comprehensive capital management, analyses specific effects and integrates them into strategic planning;
- enables a more efficient use of capital; and
- helps formulate capital management strategy.

Senior managers are fully involved in and closely oversee capital planning under a framework that ensures proper governance and is subject to the robust challenge, review and analysis.

In capital planning and stress analysis exercises, calculating the required provisions under stress scenarios is key, especially to cover losses on credit portfolios and is particularly important for income statement forecasts under adverse scenarios.

To calculate loan-loss provisions of the credit portfolio, we use a methodology that ensures provisions cover loan losses projected by internal expected loss models, based on exposure at default (EAD), probability of default (PD) and loss given default (LGD parameters), at all times.

In 2018, we adapted this methodology to incorporate changes brought in by the new IFRS 9 regulations, with models to calculate balances by stages (S1, S2, S3) as well as the movements between them and the loan-loss provisions in accordance with the new standards.

Our capital planning and stress analysis culminate in an analysis of solvency under various scenarios over a set period to

measure capital adequacy and ensure we meet all internal capital and regulatory requirements.

Should we fail to meet our capital objectives, we would draw up an action plan with the measures needed to attain the minimum capital desired. We analyse and quantify those measures as part of internal exercises even if we don't need to use them as we exceed the minimum capital thresholds.

Santander carries out its internal stress and capital planning transversally throughout the Group, at the consolidated and local level. Our subsidiaries use it as an internal management tool, particularly to respond to local regulatory requirements.

We have undergone eight external stress tests since the beginning of the economic crisis in 2008. All proved our strength and solvency in the most extreme and severe macroeconomic scenarios showing that, owing to our business model and geographic diversification, we would still be capable of generating a profit for shareholders while satisfying the most demanding regulatory requirements.

The ECB determines and sets Pillar 2 Guidance (P2G) according to the results of the adverse scenario in these supervisory stress tests, including the EU-level stress tests carried out by the EBA. When determining the P2G, the ECB considers the maximum impact expected on the CET1 ratio, which, for this purpose, is the difference between the lowest CET1 ratio in the adverse scenario over the projection horizon and the real CET1 ratio at the starting point.

We have also conducted internal stress tests every year since 2008 as part of our ICAAP (Basel Pillar 2). Every test has proven our capacity to confront the most difficult exercises globally and locally. We carry out these capital planning processes using tools shared throughout the Group.



Due to the special situation resulting from the covid-19 pandemic, capital planning capacities and stress tests enabled us to analyse various pandemic scenarios and ensure capital adequacy in each of them.

We incorporate an analysis of the potential impact of climate risks (transition risk and physical risk) into internal stress exercises in addition to expressly considering them in the macroeconomic scenarios definitions, in line with industry best practices and supervisory expectations.

In 2022, Santander participated in the ECB's first climate risk stress test comprising three parts: first, the supervisor assessed entities' internal capacities; second, the entities provided information on their main customers' emissions and revenue shares by activity sector to the supervisor; and third, the ECB made projections under various transition risk, heat wave risk and flood risk scenarios. The ECB published aggregate results for the industry as a whole.



Total Loss-Absorbing Capacity (TLAC) and Minimum Requirement for own funds and Eligible Liabilities (MREL)

In November 2015, the FSB published the TLAC term sheet based on the previously published principles for crisis management frameworks. It aims to ensure global systemically important banks (G-SIBs) will have the capacity to absorb losses and recapitalize as required to maintain critical functions during and immediately after resolution proceedings without compromising customer funds, public funds or financial stability.

The TLAC term sheet requires each G-SIB to have an individually set minimum TLAC level that is the greater of 18% of risk-weighted assets or 6.75% of the Basel III Tier 1 leverage ratio exposure from 1 January 2022.

Some jurisdictions have already transposed the TLAC term sheet into law (as is the case in Europe, in the US and in Mexico as of 1 January 2023); however, other jurisdictions where we operate (e.g. Brazil) have yet to do so.

In Europe, the final texts of CRR 2 and BRRD 2, which amend the resolution framework, were published in June 2019. One of the main objectives of this revision was to implement the TLAC requirement in Europe.

The CRR 2, which came into force in June 2019, dictates the 18% minimum requirement for G-SIBs as set in the TLAC term sheet. It must be made up of subordinated liabilities (with the exception of a percentage of senior debt of 3.5%).

As of 31 December 2022, the TLAC of the resolution group headed by Banco Santander, S.A. stood at 24.81% of risk-weighted assets and 8.79% of the leverage ratio exposure.

The BRRD 2 was transposed into law in Spain in 2021.

G-SIBs also have a Pillar 2 requirement in addition to the minimum CRR requirement, owing to the MREL methodology in the BRRD 2.

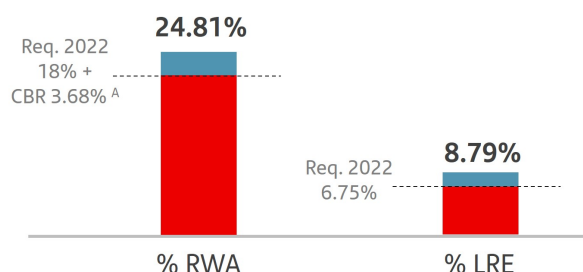
In May 2022, Banco de España formally communicated the (binding) MREL requirement for the Banco Santander, S.A. Resolution Group (sub-consolidated), which needed be met from 1 January 2022. It was set at the highest of 28.95% of the Resolution Group's RWAs¹ and 13.20% of the Resolution Group's leverage ratio exposure, based on 31 December 2020 data.

As of 31 December 2022, Banco Santander, S.A. met its MREL requirements having issued eligible instruments during the year, specifically 38.01% of RWAs and 16.32% of the leverage ratio exposure.

Of the total MREL requirement, a minimum subordination level was fixed as the highest of 9.04% of RWAs and 6.02% of the leverage ratio exposure. However, the Resolution Group's minimum subordination is determined by TLAC, not by MREL, as the TLAC subordination requirement is greater. In December 2022, the MREL subordinated figures of the Resolution Group headed by Banco Santander, S.A. were 32.36% and 13.90%, respectively.

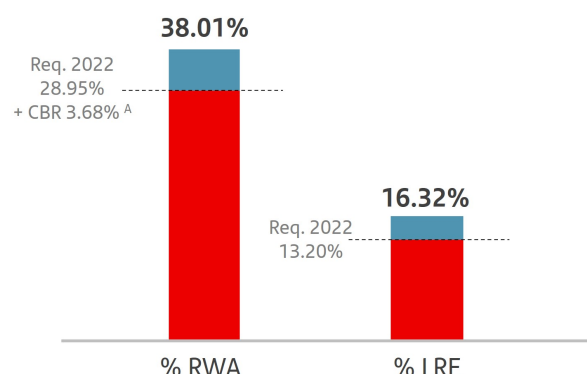
TLAC 2022

%



MREL 2022

%



A. CBR: Combined Buffer Requirement, comprising a capital conservation buffer (2.5%), a G-SII buffer (1%) and a countercyclical capital buffer (0.18%).

1. When the requirement is set in terms of RWAs, the CET1 used to cover the combined capital buffers cannot be used to comply with the MREL requirement at the same time.



3.6 Special situations and resolution

Corporate special situations and resolution framework, crisis management, recovery and resolution planning

This section summarizes the main developments in the year relating to: (i) preparing and strengthening mechanisms for a potential crisis; (ii) recovery plans; and (iii) preparing and executing initiatives to improve resolvability plans.

Corporate framework for special situations and resolution

The framework enables our units to aggregate and clearly interpret the various mechanisms for monitoring, escalating and managing both financial and non-financial events as well as governance. It helps link the action plans (e.g. contingency plans, business continuity plans, recovery plan) to be executed in each phase.

We base crisis governance on a collective decision-making model, that is organized into and operated under severity levels to facilitate flexibility and sequential decision-making. For instance, in the most severe stages of a hypothetical crisis, the 'Gold committee', composed of the Group's top executives, supported by the 'Silver forum' and other specialist 'Bronze teams', would be the leading decision-making body.

The framework aims to encourage the sharing of best practices across the Group and continuous collaboration between subsidiaries and corporate teams (including coordination in the recovery and resolution planning phases) to continue to develop our management and control model in the most effective way.

Following the Banco Santander, S.A. board of directors' ratification of the corporate special situations and resolution framework in Q2 2021, in 2022:

- All country units adhered to the framework and transposed the reference regulatory tree. Modifications were limited to local laws and regulatory requirements. We carried out several training exercises with corporate and subsidiary governance bodies to promote the necessary dissemination of the changes and collaborative discussions.
- We reinforced crisis prevention mechanisms by:
 - setting up a working group, which meets regularly to identify and react to threats early;
 - carrying out a new simulation exercise (involving local units) to be better prepared for stress situations; and
 - strengthening the mechanisms for reporting to crisis governance bodies, with a new dashboard and a tool for monitoring static and forward-looking crisis management indicators (Special Situation Tool).

- Regardless of the management of more local events, these changes introduced to the new crisis management framework proved effective in the wake of the impacts of the war in Ukraine on energy supply, supply chains, refugees and humanitarian aid:
 - We encouraged coordination with subsidiaries through crisis governance bodies (e.g. global Silver forum) or via the recurring issuance of corporate guidelines.
 - We improved our ability to respond quickly and proactively to critical events by way of the Bronze-level Event Response Group (ERG).
 - We simplified our decision-making process (e.g. approval of 2022 objectives and guidance) and escalation process between crisis management and statutory government bodies (e.g. board of directors and executive committee).
- During 2022, in crisis prevention and management, we continued to implement the new regulatory tree and fulfilled the agreed actions arising from the 'lessons learned from covid-19' exercise. We also responded effectively to global uncertainties (e.g. arising from the war in Ukraine) and local events.

Recovery plans

Context. Santander drew up its thirteenth corporate recovery plan in 2022. It sets out measures we have at our disposal to survive a very severe crisis without extraordinary public aid, in accordance with article 5.3 of the BRRD.

Its primary aim is to test the feasibility, effectiveness and credibility of the recovery measures as well as the suitability of the recovery indicators and their respective thresholds, above which decision-making will be escalated to cope with stress situations.

It sets out macroeconomic and financial crisis scenarios that could materialize in idiosyncratic, systemic and combined events that could lead the Group to trigger the plan.

The recovery plan should not be considered an instrument separate from our structural mechanisms to measure, manage and supervise risk. It includes the risk appetite framework (RAF), the risk appetite statement (RAS), the risk profile assessment (RPA), the business continuity management system (BCMS), the internal assessments of capital and liquidity (ICAAP and ILAAP) and other tools. It is also integrated into the Group's strategic plans.



Progress in 2022. In May, the ECB sent the CEO a letter indicating the end of the operational relief offered for the last two years in response to the covid-19 pandemic. The ECB asked that we include four new scenarios considering the implications of the war in Ukraine and that in the idiosyncratic scenario we include a cyber incident as a source of severe financial implications.

Like every year, the document fully covered all of the ECB's recommendations. Specifically:

- new indicators to meet the EBA's Guidelines on recovery plan indicators under Article 9 of Directive 2014/59/EU, published in November 2021;
- more extreme scenarios so that the systemic and combined scenarios break the red threshold (9% CET1);
- four stress scenarios to meet regulatory requirements: idiosyncratic, regional, global and combined (global crisis plus idiosyncratic);
- impact estimation on a larger number of indicators, mainly MREL and TLAC; and
- new recovery measures.

The key takeaways from our review of the 2022 corporate plan were:

- no material interdependencies between main subsidiaries;
- ample recovery capacity in all scenarios through available measures. Our geographic diversification model is a great benefit from a recovery standpoint;
- sufficient capacity in each subsidiary to emerge from a recovery situation on its own, which strengthens capital and liquidity within our autonomous subsidiaries model;
- sufficiently robust governance to manage financial and non-financial stresses that vary in nature and intensity; and
- amid a serious financial or solvency crisis, no subsidiary is important enough to trigger the corporate plan by causing the severest recovery indicator levels to be breached.

These factors prove our business model and geographic diversification strategy (based on autonomous subsidiaries) would remain firm in a recovery situation.

Regulation and governance. Santander's recovery plan complies with EU regulations and follows the non-binding recommendations of the Financial Stability Board (FSB) and other international bodies.

We submitted our latest plan to the Single Supervisory Mechanism in October 2022; the EBA has six months to make formal considerations.

It comprises the corporate plan (Banco Santander, S.A.) and local plans for the UK, Brazil, Mexico, the US, Germany, Argentina, Chile, Portugal, Norway and a recovery plan summary for Poland (as required). All subsidiaries (except Santander Chile and SC Germany) must draw up a local plan in compliance with local regulations and corporate requirements.

Though the board of Banco Santander, S.A. approves the corporate plan, relevant content and figures are submitted to and discussed by the Silver forum, Gold committee, risk control committee and the risk supervision, regulation and compliance committee beforehand. Local plans are approved by local bodies in coordination with the Group (as they are included in the corporate plan).

Resolution plans

Santander cooperates with the relevant authorities to prepare resolution plans and provides them with all information they request¹. The members of the Crisis Management Group (CMG) upheld their decision on our Multiple Point of Entry (MPE) strategy to be used in a hypothetical resolution.

This strategy is consistent with our legal and business structure, which is organized into twelve resolution groups that can be resolved independently without involving other parts of the organization, given the low level of interconnection.

Meetings with the Single Resolution Board (SRB) and its working priorities letters confirmed that there are no substantial impediments to Banco Santander, S.A.'s resolvability. However, this will have to be confirmed in December 2023 (when banks must have reached full resolvability). In fact, the SRB highlighted the significant progress the Group has made in recent years to improve its resolvability.

In 2022, we prepared the multi-annual work plan to achieve resolvability. Banco Santander, S.A.'s board of directors approved it in January 2023, prior to its definitive submission to the SRB and in which the following actions, among others, were defined:

1. With the exception of Santander US whose resolution plans correspond to the individual entities.



1) Ensure we establish processes and develop capabilities to measure and report liquidity needs in resolution and complete the data template to report on the liquidity situation during resolution.

In 2021, we identified key liquidity entities (KLEs) that provide liquidity to other entities in the Group, depend on the liquidity received from other entities in the Group or perform liquidity management functions for the resolution group.

We also identified the key liquidity drivers in resolution, which could trigger a substantial change or deterioration in the bank's liquidity position in resolution.

We developed a methodology to identify, process and analyse relevant data to estimate the liquidity position in resolution.

In 2022, we focused on identifying and mobilizing optimal collateral to obtain liquidity in a recovery situation.

2) Demonstrate the separability of relevant subsidiaries in the Banco Santander, S.A. resolution group.

This analysis must incorporate an assessment of potential risks to operational and business continuity.

3) In 2022, G-SIBs were required to analyse the impact of reducing the trading portfolio to its base minimum in a resolution and during the post-resolution phase, to avoid potential contagion effects in the financial system.

An operational manual or playbook detailing the governance complemented this analysis. In 2023, we expect to incorporate this analysis into our systems (Steady-State) and test its robustness on an annual basis.

4) In 2022, we carried out a comprehensive analysis on the loss transfer mechanism and simultaneous recapitalization between relevant subsidiaries with internal MREL and Banco Santander, S.A., as the entry point for the resolution group.

We complemented this analysis with a quantitative simulation and then each subsidiary prepared an individual playbook incorporating this process. In 2023, we aim to further develop this playbook and test this mechanism during the planned dry run.

5) In 2022, the resolution group drafted a preliminary version of its restructuring plan in a post-resolution phase, to ensure its viability after resolution.

This analysis consisted of a comprehensive individual assessment of the business lines, activities, business model and international footprint to outline the core bank's post-resolution objectives. In addition, the analysis included an assessment of each our recovery measures and others that complemented this analysis.

In 2023, Santander is expected to further detail an optimal mix of measures and quantify its total capacity through projections.

6) Ensure information systems can quickly provide the high-quality information required in resolution.

We enhanced and automatized our governance of information provided to the resolution authority for drawing up resolution plans, including these projects in 2022:

- automation of Santander Consumer Finance's liability data report and additional liability report;
- automation of Banco Santander, S.A.'s TLAC/MREL reports;
- automated production of the necessary data to carry out a valuation exercise in resolution;
- automated production of the dataset for bail-in (simulation);
- a dry run generating the MIS information; and
- a self-assessment of our ability to generate asset information on a selected number of portfolios for each of the Group's material entities.

In 2023, we expect to focus on enhancing automation through dry runs, testing and template development.

7) Guarantee operational continuity in resolution situations.

In 2022, we identified the essential services that support core business lines, as well as their operational assets and critical personnel. We also redrafted any service contracts that did not contain the operational continuity clause.

We continued to work on making contingency plans for market infrastructure services more operational and executive.

We addressed the development of retention and succession plans.



8) Foster a culture of resolvability.

Santander continued to involve more senior managers in resolution planning. We escalated the three-year plan, which includes the resolution work streams, to the board. We also reported on progress to such high-level committees as the Gold committee, Silver forum, and other bodies. In 2022, senior management received training and completed the first governance-level resolution simulation. The CEO was appointed as the highest resolution officer.



4. Financial information by segment

4.1 Description of segments

We base segment reporting on financial information presented to the chief operating decision maker, which excludes certain statutory results items that distort year-on-year comparisons and are not considered for management reporting. This financial information (underlying basis) is computed by adjusting reported results for the effects of certain gains and losses (capital gains, write-downs, impairment of goodwill, etc.). These gains and losses are items that management and investors ordinarily identify and consider separately to better understand the underlying trends in the business (see also [note 51.c](#) to the Santander financial statements).

Santander has aligned the information in this chapter with the underlying information used internally for management reporting and with that presented in the Group's other public documents.

Santander's executive committee has been selected to be its chief operating decision maker. The Group's operating segments reflect its organizational and managerial structures. The executive committee reviews internal reporting based on these segments to assess performance and allocate resources.

The segments are split by geographic area in which profits are earned or by type of business. We prepare the information by aggregating the figures for Santander's various geographic areas and business units, relating it to both the accounting data of the business units integrated in each segment and that provided by management information systems. The same general principles as those used in the Group are applied.

With the aim of increasing transparency and improving capital allocation to continue enhancing our profitability, on 4 April 2022, we announced that, starting and effective with the financial information for the first quarter of 2022, inclusive, we would make a change in the reportable segments.

a. Main changes in the composition of Santander's segments made in April 2022

The main changes, which have been applied to management information for all periods included in the consolidated financial statements, are the following:

1. Reallocation of certain financial costs from the Corporate Centre to the country units:
 - Further clarity in the MREL/TLAC regulation makes it possible to better allocate the cost of eligible debt issuances to the country units.
 - Other financial costs, primarily associated with the cost of funding the excess capital held by the country units above the Group's CET1 ratio, have been reassigned accordingly.
2. Downsizing of Other Europe:
 - The Corporate & Investment Banking branches of Banco Santander, S.A. in Europe and other business lines previously reported under 'Other Europe' have been now integrated into the Spain unit to reflect how the business was managed and supervised, in line with other regions.

The Group recast the corresponding information of earlier periods to 2022 considering the changes included in this section to facilitate a like-for-like comparison.

In addition to these changes, we completed the usual annual adjustment of the perimeter of the Global Customer Relationship Model between Retail Banking and Santander Corporate & Investment Banking and between Retail Banking and Wealth Management & Insurance.

The above-mentioned changes have no impact on the Group's reported consolidated financial figures.



b. Current composition of Group segments

Primary segments

This primary level of segmentation, which is based on the Group's management structure, comprises five reportable segments: four operating areas plus the Corporate Centre. The operating areas are:

Europe: which comprises all business activity carried out in the region, except that included in Digital Consumer Bank. Detailed financial information is provided on Spain, the UK, Portugal and Poland.

North America: which comprises all the business activities carried out in Mexico and the US, which includes the holding company (SHUSA) and the businesses of Santander Bank, Santander Consumer USA (SC USA), the specialized business unit Banco Santander International, Santander Investment Securities (SIS), the New York branch and Amherst Pierpont Securities (APS).

South America: includes all the financial activities carried out by Santander through its banks and subsidiary banks in the region. Detailed information is provided on Brazil, Chile, Argentina, Uruguay, Peru and Colombia.

Digital Consumer Bank: includes Santander Consumer Finance, which incorporates the entire consumer finance business in Europe, Openbank and ODS.

Secondary segments

At this secondary level, Santander is structured into Retail Banking, Santander Corporate & Investment Banking (SCIB), Wealth Management & Insurance (WM&I) and PagoNxt.

Retail Banking: this covers all customer banking businesses, including consumer finance, except those of corporate banking which are managed through SCIB, asset management, private

banking and insurance, which are managed by WM&I. The results of the hedging positions in each country are also included, conducted within the sphere of their respective assets and liabilities committees.

Santander Corporate & Investment Banking: this business reflects revenue from global corporate banking, investment banking and markets worldwide including treasuries managed globally (always after the appropriate distribution with Retail Banking customers), as well as equity business.

Wealth Management & Insurance: includes the asset management business (Santander Asset Management), the corporate unit of Private Banking and International Private Banking in Miami and Switzerland and the insurance business (Santander Insurance).

PagoNxt: this includes digital payment solutions, providing global technology solutions for our banks and new customers in the open market. It is structured in four businesses: Merchant Acquiring, International Trade, Payments and Consumer.

In addition to these operating units, both primary and secondary segments, the Group continues to maintain the area of **Corporate Centre**, that includes the centralized activities relating to equity stakes in financial companies, financial management of the structural exchange rate position, assumed within the sphere of the Group's assets and liabilities committee, as well as management of liquidity and of shareholders' equity via issuances.

As the Group's holding entity, this area manages all capital and reserves and allocations of capital and liquidity with the rest of businesses. It also incorporates goodwill impairment but not the costs related to the Group's central services (charged to the areas), except for corporate and institutional expenses related to the Group's functioning.

The businesses included in each of the primary segments in this report and the accounting principles under which their results are presented here may differ from the businesses included and accounting principles applied in the financial information separately prepared and disclosed by our subsidiaries (some of which are publicly listed) which in name or geographical description may seem to correspond to the business areas covered in this report. Accordingly, the results of operations and trends shown for our business areas in this document may differ materially from those of such subsidiaries.

As described in section [3 'Group financial performance'](#) above, the results of our business areas presented below are provided on the basis of underlying results only and generally including the impact of foreign exchange rate fluctuations. However, for a better understanding of the changes in the performance of our business segments, we also provide and discuss the year-on-year changes to our results excluding such exchange rate impacts.

The statements included in this section regarding Santander's competitiveness and that of its subsidiaries have been produced by the Group based on public information (corporate websites of competing entities and information published by national banking institutions).

4.2 Summary of the Group's main business areas' income statements

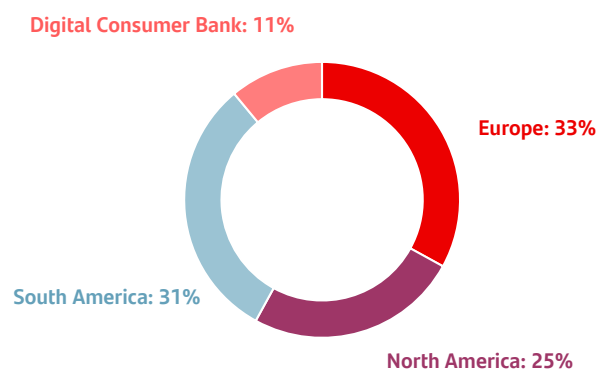
2022

Main items of the underlying income statement

EUR million

Primary segments	Net interest income	Net fee income	Total income	Net operating income	Profit before tax	Underlying profit attributable to the parent
Europe	12,565	4,493	18,030	9,507	5,482	3,810
Spain	4,539	2,818	8,233	4,236	2,079	1,560
United Kingdom	4,992	390	5,418	2,733	1,900	1,395
Portugal	747	484	1,295	793	775	534
Poland	1,976	528	2,474	1,782	789	364
Other	312	273	609	(38)	(61)	(42)
North America	9,705	1,958	12,316	6,445	3,790	2,878
US	6,140	771	7,623	4,025	2,261	1,784
Mexico	3,565	1,140	4,623	2,547	1,665	1,213
Other	0	47	70	(126)	(137)	(119)
South America	12,979	4,515	18,025	11,350	5,764	3,658
Brazil	8,901	3,296	12,910	8,730	4,055	2,544
Chile	1,772	468	2,449	1,468	1,062	677
Argentina	1,778	542	1,833	846	443	324
Other	527	210	832	306	205	112
Digital Consumer Bank	4,022	843	5,269	2,807	2,237	1,308
Corporate Centre	(652)	(19)	(1,487)	(1,858)	(2,022)	(2,049)
TOTAL GROUP	38,619	11,790	52,154	28,251	15,250	9,605
Secondary segments						
Retail Banking	34,880	7,650	42,684	24,116	11,772	7,946
Corporate & Investment Banking	3,544	1,988	7,395	4,497	4,115	2,805
Wealth Management & Insurance	825	1,291	2,608	1,566	1,526	1,118
PagoNxt	22	881	953	(71)	(141)	(215)
Corporate Centre	(652)	(19)	(1,487)	(1,858)	(2,022)	(2,049)
TOTAL GROUP	38,619	11,790	52,154	28,251	15,250	9,605

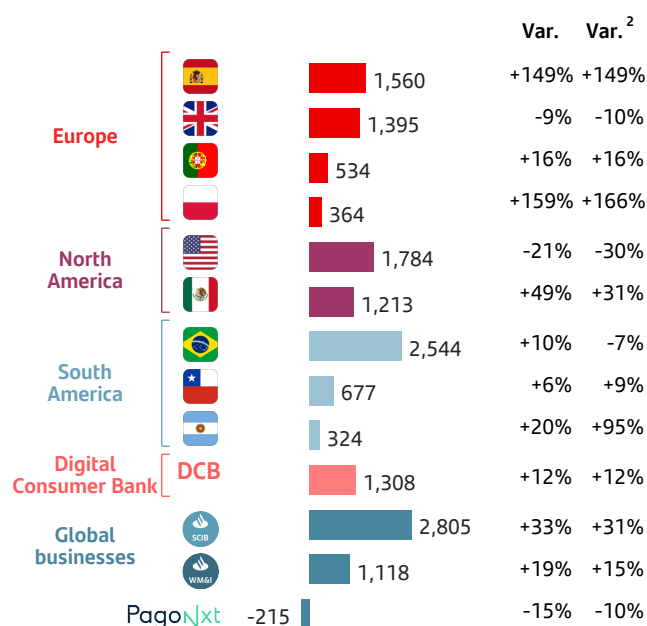
Underlying profit attributable to the parent distribution

Distribution¹ by primary segment. 2022

1. As a % of operating areas. Excluding the Corporate Centre.

Underlying profit attributable to the parent. 2022

EUR million. % change YoY



2. Changes in constant euros.

2021

Main items of the underlying income statement

EUR million

Primary segments	Net interest income	Net fee income	Total income	Net operating income	Profit before tax	Underlying profit attributable to the parent
Europe	10,574	4,344	15,934	7,615	4,034	2,750
Spain	4,166	2,789	7,748	3,696	863	627
United Kingdom	4,383	434	4,815	2,223	2,149	1,537
Portugal	722	441	1,313	750	685	462
Poland	1,020	518	1,617	955	351	140
Other	282	163	441	(9)	(15)	(16)
North America	8,072	1,644	10,853	5,886	4,531	2,960
US	5,298	782	7,277	4,080	3,546	2,252
Mexico	2,773	828	3,553	1,910	1,100	816
Other	—	34	23	(104)	(114)	(108)
South America	11,307	3,721	15,337	9,958	6,232	3,317
Brazil	7,867	2,728	10,876	7,641	4,610	2,320
Chile	1,982	394	2,455	1,513	1,156	636
Argentina	1,065	420	1,388	583	306	270
Other	393	179	618	221	160	91
Digital Consumer Bank	4,041	821	5,099	2,694	1,973	1,164
Corporate Centre	(624)	(28)	(819)	(1,165)	(1,510)	(1,535)
TOTAL GROUP	33,370	10,502	46,404	24,989	15,260	8,654

Secondary segments

Retail Banking	30,596	7,045	38,869	21,766	12,632	7,389
Corporate & Investment Banking	2,921	1,744	5,619	3,240	3,071	2,113
Wealth Management & Insurance	476	1,247	2,240	1,326	1,294	941
PagoNxt	1	493	495	(178)	(227)	(253)
Corporate Centre	(624)	(28)	(819)	(1,165)	(1,510)	(1,535)
TOTAL GROUP	33,370	10,502	46,404	24,989	15,260	8,654

4.3 Primary segments



António Simões
Regional head of Europe



Europe

Underlying attributable profit

EUR 3,810 mn

"Europe continues to drive the fundamental transformation of our business. Having laid its foundations in 2021, we accelerated our transformation towards a more common operating model in 2022"

Strategy

We remain focused on **customer experience and service quality**, and on making the structural changes needed to develop a **common operating model for Europe**

Business performance¹

Loans and advances to customers were 3% higher, with strong growth in individuals and CIB. **Customer funds grew 5%** driven mainly by **customer deposits**

Results¹

Underlying attributable profit rose 38% year-on-year underpinned by NII growth, significant efficiency gains (despite inflation) and controlled cost of risk

1. In constant euros.

Strategy

Our aim is to create a better bank in Europe, that our customers and employees will feel a close connection with and to deliver sustainable value to shareholders and society. We aim to:

- grow our business by serving our customers better, focusing on capital efficient opportunities (including SCIB and WM&I), simplifying our mass market value proposition, improving customer experience and engaging with PagoNxt;
- make headway with our omnichannel strategy by redefining customer interaction, accelerating our digital transformation and maintaining close customer relationships through our teams; and
- create a common operating model in Europe to serve our businesses through shared technology platforms and services. This should enable us to become a more agile organization with one aligned team across Europe.

Our ongoing structural changes aim to deliver higher revenue, greater efficiency and significantly better customer experience.

In 2022, we accelerated our transformation by simplifying products, launching the common "Everyday Banking" value proposition in our four core markets, enhancing our common app (which we're currently rolling out in the UK) and digital marketing capabilities, and implementing a series of shared services across the region (e.g. 2LoD Cyber and Climate Risks, Costs and FCC). We delivered:

- sustainable business growth, increasing customer loyalty and revenue per customer. We built on our connectivity, accelerated our E2E digital transformation and improved customer and employee experience;
- strong cost discipline which led to a better efficiency ratio;
- solid risk management which allowed us to improve NPL and coverage ratios; and
- greater shareholder value, with an underlying RoTE of 9.3% (up from 6.8% in 2021).

Strategy by country in 2022:

Spain

We aligned our strategy with our priorities for Europe focusing on:

- sustained customer base improvement thanks to a simple, yet comprehensive, value proposition. We took further steps to unify our proposition in Europe (i.e. same account in all markets, common model of green cards) and leveraged our digital capabilities to develop new products (Home planner, roboadvisor, Santander Activa) and services (Santander Key);
- progress with product simplification and process automation (e.g. digital confirming, 100% digital onboarding) to enhance experience on all channels and reduce the cost to serve at the same time. Our app for individuals is the core of ONE APP, which we have rolled out in Portugal and Poland and will soon fully launch in the UK. In corporate digital banking, we transformed our channels into a work tool, making it easier for companies to carry out their daily business with value-added services that help them make decisions to run efficient operations; and
- proactive, forward-looking risk management that harnesses predictive models and optimizes repayment and recovery processes.

Our work during the year led to a marked improvement in NPS. *Global Banking & Finance Review* named us the Best Digital Bank in Spain in 2022 and we picked up the prize for the Most Innovative Corporate Banking App in Spain in 2022. These awards reflect our innovation model and the focus on technological and digital solutions as part of our transformation.

United Kingdom


We continued to focus on generating greater commercial opportunities in our core business areas (Homes, Everyday Banking and Corporate & Commercial Banking), while bolstering digitalization, simplification, efficiency and sustainable growth. In 2022:


- we leveraged the region's scale, capabilities and shared resources to boost mortgage lending and use of digital channels;
- we continued transforming the business to meet changing customer needs. For example, we launched products to help our customers manage their budgets; and
- we structurally improved efficiency through cost management.

Portugal

We continued to follow our selective growth strategy that focused on service quality and profitability. In 2022:

- we continued developing the commercial and digital transformation of our business to attract more customers and continue reducing the cost to serve;
- we maintained high and stable volumes of new mortgage lending (23% market share) and growth in digital and loyal customers; and
- we were named the Best Bank in Portugal by *Global Finance* and *World Finance*, due to outstanding customer service and innovation.

 Loyal Customers	Europe	Spain	UK	Portugal	Poland
Thousands	10,964	3,083	4,566	934	2,379
YoY	+6%	+11%	3%	+9%	+6%

 Digital Customers	Europe	Spain	UK	Portugal	Poland
Thousands	17,450	5,899	6,980	1,115	3,284
YoY	+7%	+9%	+5%	+11%	+10%

 **Poland**

We focused on delivering the best customer and employee experience, digital acceleration, product and service simplification and profitable business growth. In 2022:

- we achieved our target to raise employee engagement and satisfaction in every quarter;
- we were recognized in important rankings. For example, Golden Bank considered us the Best Bank in Service Quality and second in Best in Personal Accounts and Mortgage Loans. We also ranked first for the second time in a row on the *Forbes* list of the Best Banks for SMEs;
- we were one of just six companies and the only financial institution to get the Equal Pay Certificate from the Business Center Club, a local organization of business owners; and
- we won the *Euromoney* award for CEE Best Bank for Corporate Responsibility, demonstrating that we are one of the most committed banks to ESG.

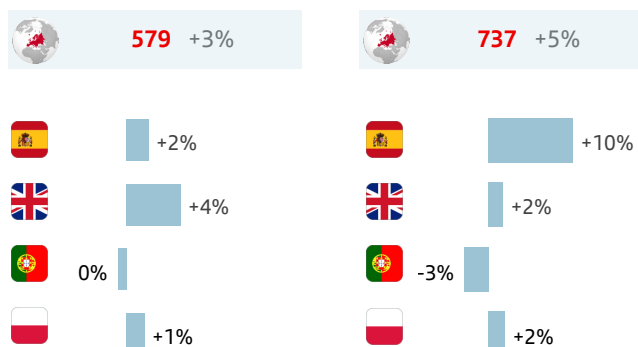
Business performance

Loans and advances to customers were flat year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros, they rose 3%. We saw growth in individuals in all countries except Poland where interest rate spikes slowed mortgage lending. Of note was the strong growth in mortgages in Spain, Portugal and the UK.

Customer deposits increased 6% compared to 2021. Minus repurchase agreements and in constant euros, they were up 9%, with strong growth in CIB, SMEs and Individuals. In Individuals, demand deposits grew in Spain and Portugal, and time deposits were up in the UK and Poland as interest rate rises began to feed through to deposit rates.

Europe. Business performance.

2022. EUR billion and YoY % change in constant euros



Gross loans and advances to customers minus reverse repos

Customer deposits minus repos + mutual funds

Mutual funds decreased 13% in constant euros, impacted by higher interest rates across the board, particularly affecting business Poland, and by market volatility. However, we observed a slight recovery during Q4 2022 in some countries.

Results

Underlying attributable profit was EUR 3,810 million (33% of the Group's total operating areas). Year-on-year it was up 39% in euros, +38% in constant euros, as follows:

- Total income grew 13% mainly driven by net interest income which rose 19%, benefitting from higher volumes and interest rates and active spread management. Net fee income increased 3% spurred by greater activity and growth in WM&I and CIB.
- Despite higher inflation, increased activity and investments in IT, our costs rose just 2% (-7% in real terms). As a result, net operating income rose 25%.
- Net loan-loss provisions increased due to the normalization of provisioning in the UK, following releases in 2021, and CHF mortgage charges in Poland but was partially offset by the positive performance in Spain and Portugal which allowed us to maintain the cost of risk stable at 0.39%.
- Other gains (losses) and provisions increased 27%, mainly due to mortgage payment holidays in Poland, as well as the settlement agreed with the FCA in the UK regarding AML controls prior to 2017.

Europe. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	18,030	15,934	+13	+13
Expenses	-8,523	-8,319	+2	+2
Net operating income	9,507	7,615	+25	+25
LLPs	-2,396	-2,293	+4	+5
PBT	5,482	4,034	+36	+35
Underlying attrib. profit	3,810	2,750	+39	+38

Detailed financial information in section [4.6 'Appendix'](#).

**Spain****Underlying attributable profit**

EUR 1,560 mn

Business performance

Despite the challenging macroeconomic environment, we increased our customer base more than 700 thousand in total recording growth in every quarter in 2022.

Loans and advances to customers rose 3% year-on-year. In gross terms, minus reverse repurchase agreements, growth was 2%.

In Individuals, we saw record mortgage origination in Q3 and sustained business dynamics in consumer finance and insurance during the year. In wholesale banking, we continued to lead the syndicated and leveraged finance market. In corporate lending, short-term financing reached record highs while demand for long-term loans fell.

Customer deposits increased 17% compared to 2021. Minus repurchase agreements, growth was 15%. Mutual funds decreased 10% due to financial market volatility. Customer funds rose 10%.

Results

Underlying attributable profit was EUR 1,560 million (13% of the Group's total operating areas), 149% higher than 2021. By line:

- Total income increased 6% propelled by growth in net interest income, on the back of higher volumes and interest rates starting to feed through in recent months. Net fee income increased slightly, driven by CIB.
- Administrative expenses and amortizations fell 1% as our operating model transformation more than offset both inflationary pressures and investment in wholesale banking. The efficiency ratio improved 3.7 percentage points to 48.6%.
- Net loan-loss provisions decreased strongly (-30%) and our NPL ratio also improved, up 145 basis points to 3.27%.
- Other gains (losses) and provisions was broadly unchanged.

Spain. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
				%
Revenue	8,233	7,748		+6
Expenses	-3,998	-4,052		-1
Net operating income	4,236	3,696		+15
LLPs	-1,618	-2,320		-30
PBT	2,079	863		+141
Underlying attrib. profit	1,560	627		+149

Detailed financial information in section [4.6 'Appendix'](#).**United Kingdom****Underlying attributable profit**

EUR 1,395 mn

Business performance

Our transformation programme continues to deliver efficiency improvements through the simplification and digitalization of key processes.

Loans and advances to customers were 4% lower year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros they grew 4% underpinned by strong mortgage growth. Net mortgage lending amounted to GBP 9.8 billion (GBP 35.5 billion gross new lending) in a robust housing market.

Customer deposits fell 5%. Minus repurchase agreements and in constant euros, both customer deposits and total customer funds increased 2%. We saw higher balances in customers' savings accounts supported by successful eSaver and ISA campaigns.

Results

Underlying attributable profit was EUR 1,395 million in 2022 (12% of the Group's total operating areas), 9% down on 2021 affected by the LLP normalization and the aforementioned settlement agreed with the FCA (EUR 127 million). In constant euros, underlying profit fell 10%. By line:

- Total income was up 12%, driven by strong net interest income growth (+13%) on the back of higher mortgage volumes and margin management in a rising interest rate environment.
- Administrative expenses and amortizations rose 3% driven by transformation spending and inflationary pressure. In real terms, costs were down 6%. Efficiency improved to 49.6% (-4.3 percentage points).
- Loan-loss provisions rose to EUR 316 million, leading to a cost of risk of 12 basis points. In 2021, we released provisions recorded in 2020.
- The negative impact from other gains (losses) and provisions increased year-on-year, due to such legal contingencies as the aforementioned settlement agreed with the FCA.

United Kingdom. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	5,418	4,815	+13	+12
Expenses	-2,685	-2,592	+4	+3
Net operating income	2,733	2,223	+23	+22
LLPs	-316	245	—	—
PBT	1,900	2,149	-12	-12
Underlying attrib. profit	1,395	1,537	-9	-10

Detailed financial information in section [4.6 'Appendix'](#).



Portugal

Underlying attributable profit
EUR 534 mn

Business performance

Our ongoing commercial and digital transformation supported our growth strategy. We improved our service quality, increased the number of loyal and digital customers and gained market share in Individuals, mainly due to high new mortgage lending.

Loans and advances to customers were flat year-on year (both net and in gross terms, minus reverse repurchase agreements).

On the other hand, customer deposits (both, including and minus repurchase agreements) fell 1%. Mutual funds decreased 17% driven by market conditions. As a result, customer funds fell 3% from the previous year.

Results

Underlying attributable profit was EUR 534 million (5% of the Group's total operating areas), up 16% year-on-year.

- Total income decreased 1%, affected by ALCO portfolio sales in 2021 but was boosted by a 10% increase in net fee income (transactional fees and mortgage lending). Net interest income rose 3%, driven, in recent months, by higher interest rates.
- Transformation initiatives enabled us to reduce administrative expenses and amortizations 11%. The efficiency ratio stood at 38.7%, among the best banks in Portugal.
- Conservative risk management in recent years, the change in portfolio mix and positive credit quality performance enabled us to maintain loan-loss provisions close to zero, improve NPL ratio to 3.0% and increase NPL coverage to 79%.
- Other gains (losses) and provisions was practically zero in the year compared to -EUR 26 million in 2021.

Portugal. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	
Revenue	1,295	1,313	-1	
Expenses	-502	-563	-11	
Net operating income	793	750	+6	
LLPs	-17	-38	-55	
PBT	775	685	+13	
Underlying attrib. profit	534	462	+16	

Detailed financial information in section [4.6 'Appendix'](#).



Poland

Underlying attributable profit
EUR 364 mn

Business performance

2022 was a challenging year for our business in Poland, as we focused on helping Ukrainian refugees from the war in Ukraine. We developed our strategic growth initiatives to improve our customer satisfaction through digitalization and simpler processes.

Loans and advances to customers were 1% down in the year. In gross terms, minus reverse repurchase agreements and in constant euros, however, they grew 1%. This was driven by increased demand from corporates and CIB. Mortgage volumes contracted 6% as rising interest rates reduced demand.

Customer deposits increased 4%, +6% minus repurchase agreements and in constant euros. There was strong growth in time deposits from Individuals and CIB. Mutual funds decreased 29% due to flows into time deposits and tough market conditions.

Results

Underlying attributable profit was EUR 364 million (3% of the Group's total operating areas). Year-on-year, profit grew 159%. In constant euros, it grew 166% as follows:

- Total revenue was 57% higher driven by NII which doubled on the back of higher volumes and rates and well controlled funding costs. Net fee income was up 5%, mainly boosted by transactional products.
- Administrative expenses and amortizations increased 7%, well below average inflation (14%).
- Loan-loss provisions grew sharply (+126%) by the recognition of CHF mortgage provisions in this line (previously recorded in other gains (losses) and provisions).
- Other gains (losses) and provisions recorded a EUR 553 million net loss due to mortgage payment holiday provisions (-EUR 327 million) and the contribution to the Borrower Support Fund.

Poland. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	2,474	1,617	+53	+57
Expenses	-692	-663	+4	+7
Net operating income	1,782	955	+87	+92
LLPs	-440	-200	+120	+126
PBT	789	351	+125	+131
Underlying attrib. profit	364	140	+159	+166

Detailed financial information in section [4.6 'Appendix'](#).



Héctor Grisi Checa
Regional head of North America¹



North America

Underlying attributable profit

EUR 2,878 mn

"Our ongoing transformation leverages our global and regional network benefits to enrich digitalization, customer experience and efficiency, while expanding the business through initiatives to enhance profitability"

Strategy

We continue **leveraging our own local individual strengths and capabilities** in Mexico and the US while **simplifying our regional business model** to generate efficiencies and profitable growth

Business performance²

Loans and advances to customers increased 9% driven by growth in Mexico and in CIB, CRE and Auto in the US. **Customer funds** rose 11%, boosted by time deposits

Results

Underlying attributable profit amounted to EUR 2,878 million, down 3% YoY (-14% in constant euros), as normalization in the US offset the positive performance in Mexico

1. From a January 2023, Grupo Santander CEO.

2. In constant euros.

Strategy

We continued to pursue joint US-Mexico initiatives to:

- create synergies and reduce overlapping in our business model, by leveraging our regional capabilities and sharing best practices to optimize expenses and improve profitability;
- boost customer attraction and retention through loyalty strategies, expand our tailored services and products for a better and more straightforward customer experience. We are building on successful businesses and improved interactions to drive customer loyalty, NPS and customer experience; and
- strengthen a common and regional approach through strong collaboration between both countries and the Group, bringing together operations know-how, digitalization, hubs, front-office, back-office and other IT functions in North America.

We have been focusing on taking and expanding sustainable finance opportunities within our businesses, in line with our global responsible banking agenda and public commitments. Here are some of our achievements and operations in 2022:

- *Euromoney Magazine* named Santander Best Bank in the World for Financial Inclusion for the second consecutive year in recognition of our inclusion programmes (Tuiio and Prospera).
- Santander US released its first Environmental, Social and Governance (ESG) Report which highlighted our commitment to a sustainable future.
- Santander US issued its first sustainable bond for USD 500 million.

- We formalized green financing for the acquisition of 50 zero-emission buses for Mexico City's public transport service.

In line with our strategy to allocate capital to the most profitable businesses, in 2022:

- SHUSA completed the acquisition of the common stock of Santander Consumer USA (SC USA);
- Santander US completed the acquisition of Amherst Pierpont Securities, improving our strategic focus and competitiveness with greater cost synergies;
- Santander US discontinued mortgage and home equity originations to focus efforts on products, services and digital capabilities that have greater growth potential;
- the Group announced plans to repurchase the outstanding shares of Santander México that it does not already own (3.76%) and delist them from the Mexican and the New York Stock Exchanges. We expect to complete this transaction in 2023 once the relevant regulatory approvals have been obtained; and
- Santander US distributed USD 4.75 billion in dividends and reallocated capital from Home lending to more accretive businesses aligned with strategic goals.



Strategy by country in 2022:



United States

We refocused our business model towards a simpler, more integrated structure. It is based on four core segments (Consumer, Commercial, CIB and Wealth Management) prioritizing businesses that benefit from the Group’s connectivity or have a distinct competitive scalable business advantage.

Our strategy for Santander US is anchored on three key pillars:

- simplification: reducing complexity and rationalizing products and services to make our operating model and governance simpler;
- transformation: driving distinctive positioning through digitalization;

Santander US announced a multi-year programme to accelerate its new consumer banking digital transformation strategy; and

- profitable growth: growing the customer base in our Auto Consumer and Commercial Real Estate businesses and our globally connected CIB and Wealth business lines.

In auto, origination channels continued to expand. We extended the Stellantis agreement to 2025, announced a new preferred finance partnership with Mitsubishi Motors North America (MMNA) and transitioned over 13,000 dealers to our newly released digital portal.

Our key accomplishments include:

- **Consumer:** we progressed towards our objective of becoming a full spectrum auto lender while achieving significant improvement in customer satisfaction and experience.
- **Commercial:** we focused on improving profitability and disciplined capital allocation while supporting our well-established CRE/Multifamily franchise.
- **CIB:** we completed the APS acquisition to create a competitive structuring and distribution platform across multiple asset classes.
- **WM:** we integrated Crédit Agricole Indosuez in Miami and achieved a 35% return on investment one year after completing the transaction.



Mexico

Multichannel innovation and digital channel promotion enabled us to strengthen our value proposition with new products and services. We made headway with our customer attraction and loyalty strategy through commercial agreements, customer referrals and more customers who get their salary paid directly into a Santander account.

In cards, we continued to promote the LikeU credit card, with 822 thousand cards issued at year end. We continued to improve authorization and security procedures for better customer experience and fraud prevention. We also launched Cash Back Baby, the first loyalty programme that gives money back to customers for using their card at many retail outlets.

In mortgages, we launched products that fit our customers’ needs based on the nature of their income and financial situation. In addition, our digital platform, Hipoteca Online, processed 97% of the mortgages formalized, with a more agile process.

In auto lending, we teamed up with Caranty to launch Caranty Credit, a digital car-buying and selling platform which is the only financing scheme in Mexico for private purchases of second hand vehicles directly from another individual. We also launched Mazda First, a new financial programme to help young people buy their first car.

In SMEs, we attracted new customers through commercial agreements in strategic sectors (restaurants and pharmacies). We strengthened our merchant acquiring business by offering state-of-the-art terminals (G-Mini, G-Advance, G-Smart and G-Store) that enable face-to-face sales and remote payment collection through payment links. Getnet has grown quickly. In 2020, we had a 14% market share (by number of transactions). By the end of 2022, our market share had grown to around 20% and is currently second in terms of payments volumes and transactions.

Finally, 65% of Tuiio customers noted an improvement in their lives, both personally and financially.

		North America	United States	Mexico
	Loyal customers			
	Thousands	4,693	365	4,328
	YoY	+10%	-3%	+11%

		North America	United States	Mexico
	Digital customers			
	Thousands	7,239	1,037	6,029
	YoY	+7%	0%	+9%



Business performance

Loans and advances to customers grew 25% year-on-year, partly favoured by the dollar appreciation. In gross terms, minus reverse repurchase agreements and in constant euros, they rose 9% boosted by consumer lending, credit cards, mortgages and auto loans in Mexico and auto lending, CIB and CRE in the US.

Customer deposits grew significantly compared to 2021 (+38%). Minus repurchase agreements and in constant euros, they grew 14%. This was driven by flows into interest-bearing deposits, as rates were higher across the region. Growth was concentrated in corporates in the US, but mainly in Individuals in Mexico as a result of our mix change strategy to control funding costs.

Mutual funds were flat in constant euros, due to the impact of higher rates and market volatility, partially offset by our efforts to grow our asset management business, especially in Mexico.

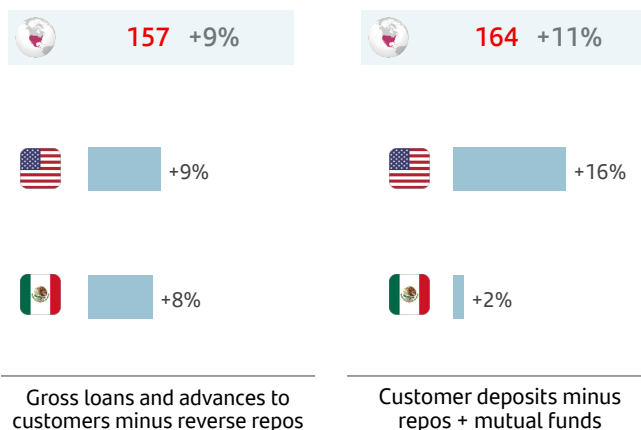
Results

Underlying attributable profit in 2022 was EUR 2,878 million (25% of the Group's total operating areas). Year-on-year, underlying attributable profit decreased 3%. However, profit fell 14% in constant euros, by line:

- Total income slightly increased (+1%), as net interest income and net fee income growth was largely offset by lower leasing revenue. NII rose 7% supported by higher interest rates and strong loan growth. Net fee income increased 6% driven by credit cards and insurance in Mexico. On the other hand, lease income decreased significantly in the US as higher used car prices increased the proportion of vehicles repurchased by dealers at lease end.
- Administrative expenses and amortizations rose 5%, well below inflation. Costs were higher in Mexico as we launched Getnet, investments in digitalization and faced higher-than-expected inflation. The US remained flat amid high inflation (8%).
- Net loan-loss provisions rose 85% reflecting the normalization of the cost of risk following US releases in 2021. Loan-loss provisions in Mexico decreased 12%, improving its cost of risk by 48 bps. In both countries, the loan-loss provision performance was better than expected at the beginning of the year.
- Other gains (losses) and provisions were less negative in 2022 mainly due to the early amortization of buildings and integration costs in the US in 2021.

North America. Business performance

EUR billion and YoY % change in constant euros. 2022



North America. Underlying income statement

EUR million and % change

	/ 2021			
	2022	2021	%	% excl. FX
Revenue	12,316	10,853	+13	+1
Expenses	-5,871	-4,967	+18	+5
Net operating income	6,445	5,886	+9	-3
LLPs	-2,538	-1,210	+110	+85
PBT	3,790	4,531	-16	-26
Underlying attrib. profit	2,878	2,960	-3	-14

Detailed financial information in section [4.6 'Appendix'](#).



United States

Underlying attributable profit

EUR 1,784 mn

Business performance

We focused on delivering strong and profitable growth while diversifying our business mix across the US. We significantly improved customer satisfaction and experience in consumer and mobile banking, and improved the profitability of our Commercial segment.

Loans and advances to customers increased 26% year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros, they grew 9% year-on-year driven by Auto, CIB and CRE.

Customer deposits soared 49% year-on-year. Minus repurchase agreements and in constant euros, they grew 19%. Deposit costs were stable for much of 2022 but started to increase in Q4.

Mutual funds decreased 3% as higher rates drove funds to interest-bearing deposits and the negative performance in equity markets affected valuations.

Results

Underlying attributable profit remained high in the year at EUR 1,784 million (15% of the Group's total operating areas), though fell 21% year-on-year affected by releases in 2021. In constant euros, underlying profit fell 30%:

- Total income decreased 7% driven by home lending exit and by lower activity in capital markets, gains on lease disposition and fees from new Safety Net initiative. On the other hand, net interest income increased 3% due to the positive impact from higher loan balances and interest rates, partially offset by the increase in wholesale funding costs.
- Administrative expenses and amortizations were flat as investments in CIB and Wealth Management were offset by savings from transformation initiatives. In real terms, costs decreased 8%.
- Net loan-loss provisions increased due to the already mentioned normalization. Nonetheless, the cost of risk (1.35%) remained well below pre-pandemic levels.
- Other gains (losses) and provisions dropped to nearly zero, as there were no major items recorded.

United States. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	7,623	7,277	+5	-7
Expenses	-3,599	-3,197	+13	0
Net operating income	4,025	4,080	-1	-12
LLPs	-1,744	-419	+316	+270
PBT	2,261	3,546	-36	-43
Underlying attrib. profit	1,784	2,252	-21	-30

Detailed financial information in section [4.6 'Appendix'](#).



Mexico

Underlying attributable profit

EUR 1,213 mn

Business performance

We strengthened our value-added products to increase customer loyalty. We developed different mortgage products, where we have high market share, maintained the momentum of the LikeU credit card and signed new agreements in auto.

Loans and advances to customers increased 21% year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros, they climbed 8%, driven by loans to individuals (auto +43%, cards +21% and mortgages +10%). Lending to corporates and institutions rose 6% but fell 8% in SMEs.

Customer deposits grew 14% year-on-year. Minus repurchase agreements and in constant euros, they rose by 1%, driven by deposits from individuals, reflecting customer acquisition campaigns to control liability costs, and the success of our customer loyalty strategy. Mutual funds were up 3% in constant euros.

Results

Underlying attributable profit in 2022 was EUR 1,213 million (10% of the Group's total operating areas), 49% higher year-on-year. In constant euros, it increased 31%. By line:

- Total income rose 15%, boosted by net fee income (+21%) and net interest income (+13%, as a result of higher volumes and interest rates).
- Administrative expenses and amortizations increased 11%, affected by inflation at 8% and its effect on wages and investments in digitalization and technology.
- Net loan-loss provisions were down 12%, owing to the solid portfolio performance. The NPL ratio was 2.32% (-41 bps), cost of risk stood at 1.95% (-48 bps) and total coverage ratio was 107%.
- Other gains (losses) and provisions recorded a EUR 94 million loss compared to -EUR 22 million in 2021, due to higher provisions for legal and tax contingencies in 2022.

Mexico. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	4,623	3,553	+30	+15
Expenses	-2,076	-1,643	+26	+11
Net operating income	2,547	1,910	+33	+17
LLPs	-788	-791	—	-12
PBT	1,665	1,100	+51	+33
Underlying attrib. profit	1,213	816	+49	+31

Detailed financial information in section [4.6 'Appendix'](#).



Carlos Rey

Regional head of South America



South America

Underlying attributable profit

EUR 3,658 mn

"Our focus remains on boosting profitability through greater connection between countries. By delivering profitable growth, we reaffirm our commitment to society, sustainability and shareholders"

Strategy

We continued with our strategy to strengthen **regional connectivity**, share best practices among countries and capture **new business opportunities** while maintaining high **profitability**

1. In constant euros.

Strategy

South America offers great growth potential, with opportunities for increasing banking penetration and financial inclusion. We continued to focus on widening our customer base and boosting digitalization, with new and innovative technology and solutions. Our strategy remained focused on generating synergies across business units:

- In **consumer finance**, we export positive experiences between our countries, such as a new and used vehicle management platform in Brazil and the consolidation of Cockpit in several countries. We expanded our digital strategy for consumer credit and used auto financing in Peru and Argentina. We remained well positioned in consumer credit in Uruguay. In Brazil, new auto business averaged more than BRL 2.4 billion per month and insurance sales were strong in Chile, through such digital platforms as Autocompara and Klare.
- In **payment methods**, we made progress with in our e-commerce strategies and in immediate domestic and international transfers. We consolidated Getnet, our successful acquiring model from Brazil, in other countries in the region. In Chile, Getnet is already one of our most known and popular brands and in Argentina, we are the second largest payment processing company. In Uruguay, we launched Getnet for SMEs, gaining a stronger foothold in the payments market.

Business performance¹

Year-on-year **growth in loans** and **deposits**, supported by innovative products and services. We continued to roll out **ESG** initiatives in the region

Results¹

Underlying attributable profit rose 10% year-on-year (+1% in constant euros) driven by higher customer revenue and a lower tax burden

- We continued to make headway in **joint initiatives between CIB and corporates** to deepen relations with multinational clients helping boost loyalty and customer capture in every country. In Peru, we offered more sophisticated products on the back of global and regional expertise. In Colombia, we remained part of the most important development-related transactions in the country. In Chile and Argentina, we continued to offer comprehensive solutions for our customers.
- We promoted **inclusive and sustainable businesses** through our ESG agenda in different niches, such as our micro-credit programme Prospera in Brazil (with 885,000 active customers), Colombia (in 425 municipalities) and Uruguay (more than 10,000 entrepreneurs). In Peru, we also promoted micro-credits through Surgir, with almost 63,000 customers (95% are women). In Uruguay, we continued to grant carbon-neutral loans for vehicle purchase. In Argentina, we launched lower interest rate loans for purchasing electric cars. In Brazil and Chile, we made progress with our solar energy loan proposition. In Chile, we remained leaders in Green Finance, and, in Brazil, we partnered with other companies to create Biomax, a company focused on the restoration, conservation and preservation of Brazilian biomes.

Our customer service enhancement initiatives and our expanded product and service proposition earned us a place in the top 3 in NPS in four markets, plus substantial customer growth in the region.

Main initiatives by country in 2022:

Brazil

Our strategy to become the best consumer credit company in Brazil rests on four pillars:

- customer focus: we strengthened our products and services to improve customer experience and satisfaction;
- more integrated and accessible sales channels: for example, in the physical channel, we continued to expand to strategic businesses; we had 541 million monthly hits on digital channels; and there were 10.3 million queries per month in the remote channel;
- innovation and capital: we focused on exploring new markets and innovative services through investment platforms, insurance and services for SMEs and large corporates. We continued to transform our investment platform, introducing a new advisory model with 592 advisors; and
- a horizontal culture that promotes empowerment, diversity and meritocracy, and prioritizes sustainable businesses that support the transition to a low-carbon economy.

Chile

Our strategy remained based on digital banking and better customer service. We increased loyal and digital customers, driven by Santander Life and Superdigital.

- In payment methods, we continued to develop our e-commerce and domestic and international transfer businesses. Consumer credit now accounts for 12% of total new business volumes.
- We continued to offer our corporate customers integrated financing, cash management and treasury solutions, which resulted in significantly higher revenue and profit in these segments.
- We launched the WorkCafé Startup, a new initiative to support startups with development and expansion.

- In ESG, we continued to lead the way in Green Finance. During the year we built six solar plants to increase the bank's renewable energy use.

Argentina

We remained focused on improving our customers experience, which enabled us to rank first in NPS for individual customer satisfaction.

- We made progress in digitalization with our open financial services platform. Our banking app remained the best rated among banks on iOS and Android.
- We strengthened Getnet's value proposition and held on to second place in payment processing in Argentina.
- We boosted consumer credit, ending the year with more than 1,000 member companies, 45,500 customers and 2,100 points of sale. We are leaders in auto lending with a 16% market share.
- In ESG, we supported the municipality of Córdoba in the first issuance of a green bond by a city and signed an agreement with Coradir for the purchase of electric vehicles.

Uruguay

We reaffirmed our leadership among privately-owned banks in Uruguay. Our business model allowed us to keep growing loyal customers. Consumer credit continued to expand, as we maintained our market leading position with a 30% share in new lending.

We made progress with digitalization, with the consolidation of SOY Santander, a fully-digital loyalty proposition for individuals, which already represents 40% of total card sales. We also launched F1RST, a new solution focused on innovation and security.

In addition, we were the best bank in Uruguay in the Great Place to Work (GPTW) ranking.

Loyal customers	South America	Brazil	Chile	Argentina	Other South America
Thousands	11,473	8,743	855	1,671	204
YoY	+8%	+9%	+3%	+5%	+21%

Digital customers	South America	Brazil	Chile	Argentina	Other South America
Thousands	25,897	20,405	1,982	2,867	643
YoY	+9%	+11%	-2%	+5%	+2%

Peru

We focused on global companies and the corporate segment, offering more sophisticated products. Our global and regional experience enabled us to develop new businesses (such as joint offers between SCIB and companies) and launch new products.

We are among the top three investment banks and, we have been leaders in mergers and acquisitions by volume of transactions for the last three years. We help distribute derivative instruments to reduce our customers' financial risk. In addition, our specialized auto finance company achieved a 32% market share.

Our NeoAuto platform, a digital marketplace for new and used auto financing, continued to expand. It had 1.7 million visits and more than 720,000 different users. We continued to digitalize our services and processes, with 90% of transactions processed digitally by our office banking and Nexus platforms.

Colombia

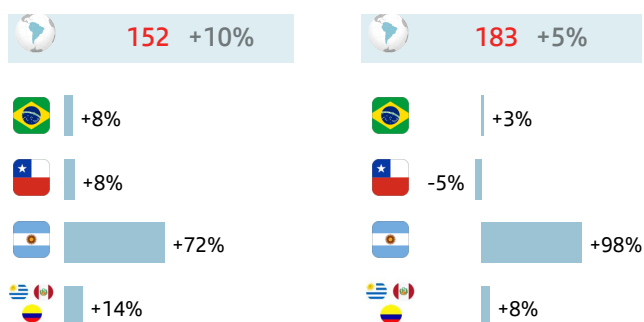
We continued to offer sustainable and inclusive financial solutions, and remained involved in the most important development-related transactions in Colombia, aided by joint CIB and corporate propositions.

In consumer finance, we strengthened our position in lending for new and used vehicles, with a 67% increase year-on-year.

In ESG, we increased our presence with Prospera, a fully-digital operation that processes payments in up to 24 hours. We continued to promote lending to entrepreneurs, with a significant percentage going to women, agricultural activities and charities.

South America. Business performance

EUR billion and YoY % change in constant euros. 2022



Gross loans and advances to customers minus reverse repos

Customer deposits minus repos + mutual funds

Business performance

Loans and advances to customers climbed 17% year-on-year. Minus reverse repurchase agreements and in constant euros, gross loans were 10% higher, with increases in all countries.

Customer deposits rose 14% year-on-year. Minus repurchase agreements and in constant euros, they rose 5%, backed by time deposits (+13% year-on-year). Mutual funds were up 7% (in constant euros).

Results

Underlying attributable profit was EUR 3,658 million (31% of the Group's total operating areas), 10% higher year-on-year. In constant euros, it was up 1%, as follows:

- In total income, net interest income was 6% higher, net fee income increased 11% and gains on financial transactions also rose, with significant increases in all countries.
- Administrative expenses and amortizations increased 18%, heavily impacted by inflation. In real terms, costs decreased 1% owing to management efforts.
- Net loan-loss provisions rose by 37%, increasing across the region. The cost of risk was 3.32% (2.60% in December 2021).
- Greater loss in other income and provisions, mainly due to Argentina, partly offset by improved performance in Brazil.

South America. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	18,025	15,337	+18	+8
Expenses	-6,675	-5,380	+24	+18
Net operating income	11,350	9,958	+14	+2
LLPs	-5,041	-3,251	+55	+37
PBT	5,764	6,232	-8	-17
Underlying attrib. profit	3,658	3,317	+10	+1

Detailed financial information in section [4.6 'Appendix'](#).



Brazil

Underlying attributable profit
EUR 2,544 mn

Business performance

In Brazil, we remained focused on promoting a customer orientated culture with integrated channels and constant innovation.

In insurance, premiums amounted to BRL 10.8 billion (increasing 28% in two years). We remained market leaders in auto lending to individuals, with a 23% market share. 2022 was our best year in corporate business to date and we achieved record customer acquisition in SMEs. In wholesale, we maintained our strong position in FX, infrastructure, agro and Cash Management.

Loans and advances to customers increased 18% year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros, they rose 8%, underscored by corporates (+10%) and individuals (+8%).

Customer deposits increased 21% year-on-year. Minus repurchase agreements and in constant euros, they grew 4% driven by time deposits (+10%). As mutual funds remained stable, customer funds rose 3% in constant euros.

Results

Underlying attributable profit was EUR 2,544 million (22% of the Group's total operating areas), 10% higher year-on-year. In constant euros, it was 7% lower. By line:

- Total income rose 1% boosted by gains on financial transactions and net fee income. Net interest income decreased 4% as higher volumes failed to offset negative sensitivity to higher interest rates.
- Administrative expenses and amortizations increased 10%, heavily affected by inflation (only +1% in real terms). The efficiency ratio remained excellent at 32.4%.
- Net loan-loss provisions rose 38%, due to the retail portfolio and a single name in CIB in the fourth quarter. This brought the cost of risk to 4.79% and the NPL ratio to 7.57%. Coverage stood at 80%.
- The negative impact of other gains (losses) and provisions decreased due lower civil and labour provisions in 2022.

Brazil. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	12,910	10,876	+19	+1
Expenses	-4,180	-3,236	+29	+10
Net operating income	8,730	7,641	+14	-3
LLPs	-4,417	-2,715	+63	+38
PBT	4,055	4,610	-12	-25
Underlying attrib. profit	2,544	2,320	+10	-7

Detailed financial information in section [4.6 'Appendix'](#).



Chile

Underlying attributable profit
EUR 677 mn

Business performance

In 2022, we continued to expand Santander Life (which greatly surpassed one million customers) and Superdigital (with 397,000 customers). We maintained the best NPS in Chile.

We launched the Santander Life current account for SMEs and micro-entrepreneurs, integrated with Getnet. It was also a good year for our Corporate and CIB segments, owing to the integrated financing, cash management and treasury solutions we offered our customers.

We also received numerous awards, such as Best Bank in Chile in 2022 by *Euromoney* and *Latin Finance* and the Sustainable Finance Award from *Global Finance*.

Loans and advances to customers rose 14% year-on-year in euros. Minus reverse repurchase agreements and in constant euros, gross loans and advances to customers rose 8% boosted by mortgages, corporates and institutions and CIB.

Customer deposits decreased 2% year-on-year. Minus repurchase agreements and in constant euros they fell 8%, due to a 21% fall in demand deposits. Time deposits increased 14% and mutual funds rose 3% in constant euros. Total customer funds fell 5% in constant euros.

Results

Underlying attributable profit was EUR 677 million (6% of the Group's total operating areas), up 6% year-on-year. In constant euros it rose 9%. By line:

- Total income rose 2% driven by the double-digit rise in net fee income (greater loyal customers and transactionality) and gains on financial transactions. Net interest income fell 9%, as the increase in volumes failed to offset the negative sensitivity to higher interest rates.
- Administrative expenses and amortizations rose 6% (well below inflation) and the efficiency ratio was 40.1%.
- Net loan-loss provisions increased 19%, while the cost of risk was practically stable. NPL ratio stood at 4.99% and coverage at 56%.
- Other gains (losses) and provisions totalled -EUR 8 million, 50% less loss year-on-year.

Chile. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	2,449	2,455	0	+2
Expenses	-981	-942	+4	+6
Net operating income	1,468	1,513	-3	-1
LLPs	-399	-341	+17	+19
PBT	1,062	1,156	-8	-6
Underlying attrib. profit	677	636	+6	+9

Detailed financial information in section [4.6 'Appendix'](#).

**Argentina****Underlying attributable profit**

EUR 324 mn

Business performance

Both volumes and the income statement were affected by very steep inflation (around 70%).

We remained leaders in transactional business, with a 12% market share in demand deposits and 16% in fees. We ranked second among privately-owned bank in loans.

Loans and advances to customers rose 8%. Minus reverse repurchase agreements and in constant euros, gross loans and advances to customers were 72% higher driven by consumer credit, SMEs and CIB.

Customer deposits increased 15% year-on-year. Minus repurchase agreements and in constant euros, deposits grew 87%. Demand and time deposits increased 76% and 112%, respectively, and mutual funds rose 136%. Customer funds rose 98% in constant euros.

Results

Underlying attributable profit was EUR 324 million (3% of the Group's total operating areas). Year-on-year, underlying attributable profit was 20% higher. In constant euros, it rose 95%:

- Total income grew 115% underpinned by 171% net interest income growth and 110% higher net fee income, driven by transactional, mutual fund and insurance fees. Gains on financial transactions were 141% higher. This good performance of the main revenue lines more than offset the greater negative effect from the hyperinflation adjustment.
- Administrative expenses and amortizations increased below revenue. The efficiency ratio stood at 53.9% (-4.2 pp) and net operating income rose 136%.
- Net loan-loss provisions rose 53% from extraordinarily low levels in 2021 (following covid-19-related provisioning in 2020). Cost of risk was 2.91%, 10 bps lower than in December 2021.
- Other gains (losses) and provisions increased their loss due to charges relating to downsizing.

Argentina. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	1,833	1,388	+32	+115
Expenses	-987	-805	+23	+99
Net operating income	846	583	+45	+136
LLPs	-132	-140	-6	+53
PBT	443	306	+45	+136
Underlying attrib. profit	324	270	+20	+95

Detailed financial information in section [4.6 'Appendix'](#).**Uruguay****Underlying attributable profit**

EUR 138 mn

Business performance

We reaffirmed our position as the country's leading financial group, in terms of efficiency and profitability. We continued to transform our distribution model and apply new ways of working.

We strengthened our retail commercial proposition, with successful such products as Soy Santander or auto financing. We continued promoting Getnet as an integral solution for SMEs and businesses.

Loans and advances to customers increased 37% year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros, they rose 14%.

Customer deposits were 10% higher year-on-year. In constant euros and minus repurchase agreements, they fell 8% driven by demand deposits (-11%). Growth in mutual funds led to an 8% increase in customer funds in constant euros.

Results

Underlying attributable profit was EUR 138 million (1% of the Group's total operating areas). Year-on-year, it rose 25%. In constant euros, it increased 5% as follows:

- Total income increased 11% boosted by net interest income (+16%, driven by higher interest rates) and gains on financial transactions, which more than offset lower net fee income.
- Administrative expenses and amortizations rose 1%, compared with 9% average inflation. The efficiency ratio stood at 42.9% (+4.5 pp year-on-year) and net operating income rose 21%.
- Net loan-loss provisions increased, after the low levels recorded in 2021. Cost of risk remained low (1.51%) and the NPL ratio stood at 2.39%.

Uruguay. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	453	342	+33	+11
Expenses	-194	-162	+20	+1
Net operating income	259	180	+44	+21
LLPs	-56	-32	+73	+45
PBT	201	145	+39	+16
Underlying attrib. profit	138	110	+25	+5

Detailed financial information in section [4.6 'Appendix'](#).

**Peru**

Underlying attributable profit
EUR 73 mn

Business performance

Loans and advances to customers rose 16% year-on-year (+5% in gross terms, minus reverse repurchase agreements and in constant euros).

Customer deposits decreased 7% (-16% minus repurchase agreements and in constant euros), with falls in both demand and time deposits.

Results

Underlying attributable profit of EUR 73 million in 2022 was 18% higher year-on-year. In constant euros, it rose 4%:

- Total income was up 20%, boosted by net interest income and gains on financial transactions, which offset the drop in net fee income.
- Administrative expenses and amortizations were 44% higher, mainly driven by the launch of new businesses. The efficiency ratio stood at 35.9% and net operating income increased 10%.
- Net loan-loss provisions increased, but cost of risk remained low at 0.68%.

**Colombia**

Underlying attributable profit
EUR 27 mn

Business performance

Loans and advances to customers rose 20% year-on-year. In gross terms, minus reverse repurchase agreements and in constant euros they rose 35%.

Customer deposits were up 17%, +30% minus repurchase agreements and in constant euros, mainly driven by 54% growth in time deposits.

Results

Underlying attributable profit of EUR 27 million was 13% higher year-on-year. In constant euros, it increased 14%. By line:

- Total income grew 35% driven by the good performance in the main revenue lines and in CIB, corporates and Prospera and Consumer businesses. The latter two accounted for 16% of the country's total revenue.
- Administrative expenses and amortizations were 51% higher. The efficiency ratio stood at 56.3% and net operating income was 18% higher.
- Net loan-loss provisions rose 25% and cost of risk remained low at 0.37%.

Other South America. Underlying income statement

EUR million and % change

	Net operating income				Underlying attrib. profit			
	2022	2021	/ 2021		2022	2021	/ 2021	
			%	% excl. FX			%	% excl. FX
Peru	131	104	+26	+10	73	62	+18	+4
Colombia	49	42	+18	+18	27	24	+13	+14



Sebastian J. Gunningham
Chair of Santander Consumer Finance and
VP of Openbank

Digital Consumer Bank

Underlying attributable profit
EUR 1,308 mn

“DCB is the European consumer finance leader in scale and profitability as it leverages SCF’s auto and non-auto consumer finance footprint and Openbank’s technology stack”

Strategy

Our focus is on **transformation for future growth** and offsetting market headwinds with a simpler organizational structure, delivering through digital platforms and launching new channels, platforms and products

Business performance¹

We continued to **reinforce our auto leadership** via strategic alliances, leasing and subscription and made significant market share gains (**new business +7%** year-on-year in a shrinking market). The rest of the consumer portfolio also showed a **strong increase in new consumer lending**

Results¹

Underlying attributable profit stood at EUR 1,308 million (**+12%** year-on-year), driven by **total income** growth (+3% year-on-year) and solid cost of risk and efficiency performance

1. In constant euros.

Strategy

Digital Consumer Bank (DCB) is the leading consumer finance bank in Europe, created through the combination of Santander Consumer Finance's (SCF) scale and leadership in consumer finance in Europe and Openbank’s retail banking and digital capabilities.

SCF is Europe's consumer finance leader, present in 18 countries (16 in Europe, plus China and Canada). It works through more than 130,000 associated points of sale (mainly auto dealers and retail merchants). In addition, it is developing pan-European initiatives to boost direct business across its footprint.

Openbank is Europe's largest fully-digital bank. It offers current accounts, cards, loans, mortgages, a state-of-the-art roboadvisor service and open platform brokerage. It is currently active in Spain, the Netherlands, Germany and Portugal, and is working on expansion across Europe and the Americas.

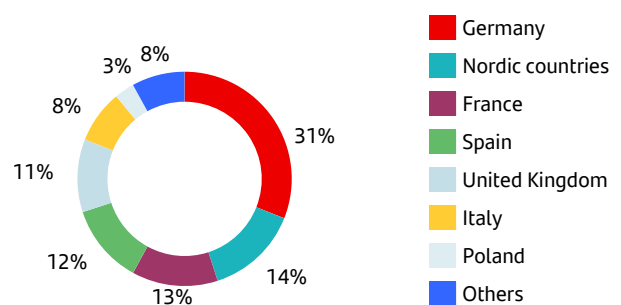
DCB aims to generate synergies between both businesses:

- SCF is dedicated to helping its customers and partners (OEMs, car dealers and retailers) enhance their sales capacity by financing their products and developing advanced technologies to give them a competitive edge. It is Europe's top mobility financier and provider.

- Openbank continues to work on boosting customer loyalty and engagement by applying its technological developments and business philosophy, while maintaining its ability to swiftly launch new initiatives.

Loans and advances to customers by geographic area

December 2022





Jose Luis de Mora

Co-CEO of DCB



"We are focused on becoming the best-in-class mobility financier and provider in Europe by leveraging our OEM relationships and new digital capabilities, agreements and auto platforms"

In 2022, DCB continued to expand its reach, with new products, services, platforms and by signing new agreements with retail distributors and manufacturers. In the year, management's main priorities were to:

- Secure leadership in global digital consumer lending focusing on growth and transformation in these three areas:
- 1. **Auto:** continue our journey to transform the business and build a world-class digital proposition in mobility and capture today's market growth opportunity in used cars to reinforce our already strong franchise. Our transformational priorities include these initiatives:
 - a. In leasing, our solutions and commercial focus increased the number of new leasing contracts by >20% year-on-year. We continued to develop a proprietary digital leasing platform for Europe with the ambition of disrupting the market. We launched a new platform in Italy and expect to expand more into Europe in 2023-24.
 - b. In subscription, where we are already a leader, we continue to expand Wabi, our end-consumer subscription platform (live in Spain, Norway and Germany, with launches planned in Italy and France for 2023). In June, SCF launched Uility, its new platform for vehicle subscription-based solutions for companies.
 - c. We are creating one pan-European digital front that connects all our partners: OEMs, digital dealers and 3rd party marketplaces. We expect the digital dealers and auto marketplaces we've been successfully attracting to translate into nearly EUR 1 billion in new loans from digital partners in 2023.
 - d. We are also developing our own digital channel with leading proprietary marketplaces and car advising value-added services. Plus, we strengthened our business in Spain (Coches.com) and are ramping up business in the UK (YourredCar.co.uk), Germany (Autobörse.de) and Portugal (Carmine.pt).
 - e. We further expanded transformational OEM relationships. For example, in 2022 we renewed and extended our Stellantis partnership, in a deal due to be completed in H1 2023 (following the required authorizations). We also entered into a long-term global partnership with Piaggio Group, Europe's leader in scooters. In November, we acquired MCE Bank Germany establishing a partnership with Emil Frey, Europe's largest auto importer, gaining its captive finance for Mitsubishi, Isuzu, Great Wall and ORA brands for the German market. We continue to develop new agreements with OEMs entering the European market with strong EV propositions (e.g. GWM, BYD) and other sizeable on-going negotiations. DCB prioritized strategic deals to capture pan-European importers.

f. We continued our pursuit of further market share gains in used and new cars while also addressing new segments (light delivery EV-Vans and leisure) and entering and accelerating growth in high-potential markets.

g. We adapted our operating model to gain efficiency moving from self-contained banks to European hubs to increase competitiveness and enable scale benefits.

We had a loan book of EUR 98 billion as of 2022.

2. **Consumer (Non-Auto):** gain market share in consumer lending and develop buy now, pay later (BNPL) 2.0 to strengthen our top 3 position in Europe. Zinia, our BNPL initiative, continued to achieve outstanding results with more than 4.2 million contracts since its launch and around 44,000 retail merchants connected.

The TIMF in joint venture is a strategic alliance with the leading Italian Telco, a new vertical for DCB. It has had more than 1.5 million contracts since launch as well as more than 5,800 active points of sale.

Our loan book was EUR 21 billion as of 2022.

3. **Retail:** continue improving digital capabilities to increase loyalty among our 3.9 million Openbank and SC Germany Retail customers and boost digital banking activity.
 - Increase profit by leveraging strategic operations (e.g. Stellantis), leasing and subscription launch (in Auto) and BNPL development (in Non-Auto);
 - Drive tech transformation projects to seize on the fast-growing transition to online, support digital customer base expansion and provide our partners with digital tools to achieve a single digital connection in Europe while maintaining high profitability and one of the best efficiency ratios in the sector.

We continue to promote ESG and the transition to a greener economy by doing business sustainably. We supported our customers' green transitions by providing EUR 4.8 billion in green finance in the year for electric vehicles (>150k electric vehicles financed, gaining market share), electric chargers, solar panels, green heating systems, bikes and others.

We were also recognized as a Top Employer or Great Place to Work (GPTW) in eight countries.

Ezequiel Szafir

Co-CEO of DCB



“Openbank's new tech stack and product building capabilities deployed in Zinia's BNPL activity will allow us to deliver on our merchant and customer targets to exceed our customers' expectations”

Business performance

2022 was a difficult year as we faced consecutive crises that drove supply chain disruptions (covid-19, chips shortage and the war in Ukraine) among other geopolitical tensions. High inflation in Europe and energy scarcity dented consumer confidence, reducing disposable income and affecting consumption decisions.

Still, we managed to increase new lending 10% year-on-year. Our leadership position and strategic alliances enabled us to increase market share in car financing in most of our countries. Our new business volumes in new and used cars were up 7% year-on-year while car transactions in 2022 in Europe fell high-single digits in our footprint.

The stock of loans and advances to customers increased 8% year on-year. In gross terms, minus reverse repurchase agreements and in constant euros they rose 9% year-on-year to EUR 125 billion. We will continue to closely monitor our portfolios to prevent the impact of any deterioration in our activity.

Customer deposits increased 6% and 7% minus repurchase agreements and in constant euros. Mutual funds increased 23% in constant euros. Our recourse to wholesale funding markets remained strong and diversified. We are actively repricing our new business to offset higher funding costs from rising interest rates.

Results

Underlying attributable profit was EUR 1,308 million (11% of the Group's total operating areas).

Interest rate rises pressured margins in consumer finance monoliners, at a time when Auto and Consumer Industries

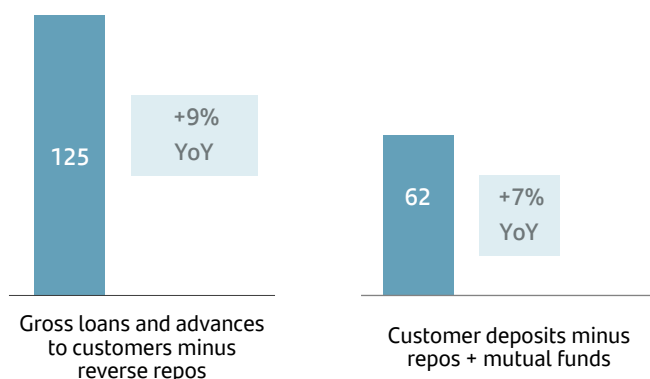
are transforming towards more sustainable mobility and consumption. At the end of the year, DCB faced negative impacts from regulatory claims in Poland and the TLTRO remuneration adjustment.

Compared to 2021, underlying profit increased 12%. In constant euros, it also rose 12% as follows:

- Total income was up 3% supported by increased leasing activity and net fee income (volumes growth). NII was slightly down due to higher funding costs (steep rate rises) and TLTRO changes, partially mitigated by new business repricing initiatives.
- Administrative expenses and amortizations increased 2%, affected by inflation, strategic and transformation investments and business growth. In real terms costs fell 6%. Net operating income rose 4% and the efficiency ratio improved 0.4 percentage points to 46.7%.
- Credit quality performance remained strong. Net loan-loss provisions increased just 3%, supported by portfolio sales. Cost of risk was steady at 0.45%, very low for consumer lending business, and the NPL ratio improved to 2.06%. Coverage remained high, exceeding 90%.
- Other gains (losses) and provisions came in less negative despite headwinds from regulatory charges in Poland (mortgage payment holidays) and insurance regulation in Germany.
- The largest contribution to underlying attributable profit came from Germany (EUR 433 million), the Nordic countries (EUR 273 million), the UK (EUR 227 million), France (EUR 160 million) and Spain (EUR 131 million).

Digital Consumer Bank. Activity

EUR billion and % change in constant euros. 2022



Digital Consumer Bank. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	5,269	5,099	+3	+3
Expenses	-2,462	-2,405	+2	+2
Net operating income	2,807	2,694	+4	+4
LLPs	-544	-527	+3	+3
PBT	2,237	1,973	+13	+13
Underlying attrib. profit	1,308	1,164	+12	+12

Detailed financial information in section [4.6 'Appendix'](#).



4.4 CORPORATE CENTRE



Corporate Centre

Underlying attributable profit

-EUR 2,049 mn

2022 HIGHLIGHTS

- The Corporate Centre continued with its role supporting the Group.
- The Corporate Centre's objective is to define and coordinate the Group's strategy and aid the operating units by contributing value and carrying out the corporate oversight and control function. It also carries out functions related to financial and capital management.
- Underlying profit was impacted by lower gains on financial transactions due to the exchange rate differences from the hedging of results of our core country units, partly offset by the improvement in provisions.

Strategy and functions

The Corporate Centre adds value to the Group by:

- strengthening the Group's governance with global control frameworks and supervision;
- fostering the exchange of best practices in cost management, that enable us to be one of the most efficient banks; and
- helping launch global business projects that leverage our global footprint to develop solutions for all business units, generating economies of scale.

It also coordinates our relationships with regulators in the EU and performs the following financial and capital management functions:

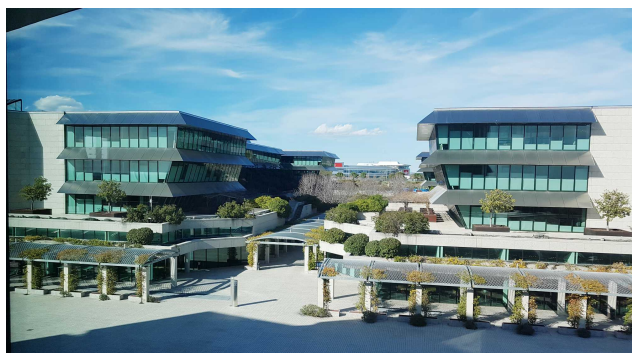
- **Financial management:**
 - Structural management of liquidity risks from funding the Group's recurring activity and financial stakes.

- This activity is carried out by the diversification of funding sources (issuances and other), always maintaining an adequate profile in volumes, maturities and costs. The price of these transactions with other Group units is the market rate that includes all liquidity items (which the Group supports by immobilizing funds during the term of the transaction) and regulatory requirements (TLAC/MREL).

- Interest rate risk is also actively managed in order to dampen the impact of interest rate changes on net interest income, conducted via high credit quality, very liquid and low capital consumption derivatives.

- Strategic management of exposure to exchange rates in equity and dynamic on the countervalue of the units' next twelve months results in euros. Net investments in equity are currently hedged, EUR 19,778 million (mainly in Brazil, Chile, Mexico, the UK and Poland) with different FX instruments (spot or forwards).

- **Management of total capital and reserves:** efficient allocation of capital to each of the Group's entities in order to maximize shareholder return.



Global Headquarters. Boadilla del Monte.



Global Headquarters. Boadilla del Monte.



Results

The underlying attributable loss of EUR 2,049 million was 33% greater than in 2021 (-EUR 1,535 million):

- Net interest income decreased, impacted by the rising interest rates.
- Gains on financial transactions were lower (EUR 583 million less than in 2021) dampened by negative foreign currency hedging results, which partially offset the favourable FX impacts in the countries' results.
- Administrative expenses and amortizations increased 7% year-on-year, due to the general upturn in inflation in 2022. Excluding this impact, they decreased 1%.
- Net loan-loss provisions were considerably down.
- The net negative impact of other gains (losses) and provisions (which include provisions, intangible asset impairments, cost of the state guarantee on deferred tax assets, pensions, litigation, one-off provisions, etc.) decreased from -EUR 190 million in 2021 to -EUR 173 million in 2022.



Global Headquarters in Boadilla del Monte.

Corporate Centre

EUR million			
Underlying income statement	2022	2021	%
Net interest income	(652)	(624)	5
Net fee income	(19)	(28)	(31)
Gains (losses) on financial transactions ^A	(724)	(140)	417
Other operating income	(92)	(28)	231
Total income	(1,487)	(819)	81
Administrative expenses and amortizations	(372)	(346)	7
Net operating income	(1,858)	(1,165)	60
Net loan-loss provisions	9	(155)	—
Other gains (losses) and provisions	(173)	(190)	(9)
Profit before tax	(2,022)	(1,510)	34
Tax on profit	(27)	(24)	12
Profit from continuing operations	(2,049)	(1,534)	34
Net profit from discontinued operations	—	—	—
Consolidated profit	(2,049)	(1,534)	34
Non-controlling interests	0	(1)	(95)
Underlying profit attributable to the parent	(2,049)	(1,535)	33

Balance sheet

Loans and advances to customers	5,785	6,787	(15)
Cash, central banks and credit institutions	123,230	88,918	39
Debt instruments	8,588	1,555	452
Other financial assets	273	2,203	(88)
Other asset accounts	124,343	116,007	7
Total assets	262,217	215,470	22
Customer deposits	895	1,042	(14)
Central banks and credit institutions	71,226	53,061	34
Marketable debt securities	98,733	74,302	33
Other financial liabilities	308	431	(29)
Other liabilities accounts	7,489	7,113	5
Total liabilities	178,650	135,950	31
Total equity	83,567	79,520	5

Memorandum items:

Gross loans and advances to customers ^B	5,779	6,813	(15)
Customer funds	895	1,042	(14)
Customer deposits ^C	895	1,042	(14)
Mutual funds	—	—	—

Operating means

Number of employees	1,899	1,724	10
---------------------	-------	-------	----

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

4.5 Secondary segments



Smart Red branch, Spain

Retail Banking

Underlying attributable profit
EUR 7,946 mn

"We remained committed to our digital transformation and multi-channel strategy, with a clear focus on customers and their satisfaction"

Strategy

We continued to strengthen our **commitment to customers and society, boosting digitalization and offering new products and services** that meet their needs

1. In constant euros.

Business performance¹

Year-on-year **growth in loans and advances to customers** (driven by North America and South America) and in **customer deposits**, due to the increase in time deposits

Results

Underlying attributable profit up 8% in euros (-1% in constant euros) to EUR 7,946 million, due to strong customer revenue

Strategy

One of the main pillars of the Group's business model is a clear focus on customers to strengthen the relationships we establish with them and to contribute to our purpose of helping people and businesses prosper.

We intensified our transformation strategy, focusing on multichannel and digitalization of processes and businesses. Our goal is to take advantage of digitalization while being mindful of the importance of continuing to meet our customers' needs through our physical channels.

We believe in a hybrid model that, while we prioritize service on digital channels, it complements branch services, particularly for more complex transactions or those requiring more personalized attention from our professionals. We have 9,019 branches.

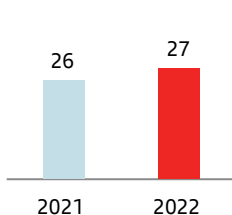
This personalized support adapted to our customers' needs, also forms part of our aim to continuously enhance customer care and service.

Our strategy helped us rank in the top 3 in NPS for customer satisfaction in eight markets.

Loyal customers

Millions

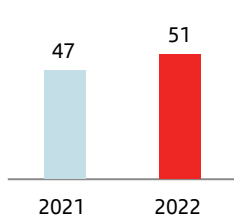
+8%



Digital customers

Millions

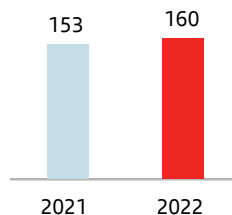
+8%



Total customers

Millions

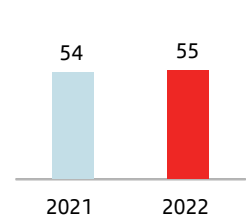
+5%



Digital sales

% of total sales

+1 pp





Our digitalization efforts, together with continuous improvement of our customer service and service quality, led us to increase our customer base by 7 million to 160 million. Likewise, loyal customers grew 8% year-on-year to 27 million and digital customers reached 51 million having grown 8% year-on-year. Digital sales accounted for 55% of total sales and digital transactions 80% of total transactions.

Such a substantial increase in customers, loyalty and digitalization is the result of numerous commercial initiatives, with specialized products and services for each segment:

- **Individuals:** strong mortgage growth in our European markets especially in the UK and Spain. In Portugal, we saw high new mortgage lending growth. There was double-digit growth in new mortgage lending, driven by process simplification and commercial offers. In Mexico, we developed various mortgage products and maintained the momentum of the LikeU credit card.
- **Auto finance:** Digital Consumer Bank continued to strengthen its market position, with various strategic agreements. In the US, auto loans performed well during the year. In Mexico, we increased our auto market share and already exceed 15%. In South America, we consolidated the Cockpit platform in several of our countries, which originated in Brazil. In Peru, we continued to expand the NeoAuto platform, a digital marketplace for financing new and used vehicles.
- **SMEs and Corporates:** we continued to provide new services and products to our customers. In Poland, we continued our strategic Agile programmes. In Chile, we launched the Santander Life current account for SMEs and micro-entrepreneurs. In Brazil, we had a record year in corporate and SME customer acquisition.

Business performance

Loans and advances to customers increased 4% year-on-year. Minus reverse repurchase agreements and in constant euros, gross loans rose 5%, boosted by North and South America.

Customer deposits were 3% higher compared to 2021. Minus repurchase agreements and in constant euros, they also increased 3%, driven by growth in time deposits (+31%), as demand deposits decreased 2%.

Results

Underlying attributable profit was EUR 7,946 million (68% of the Group's operating areas).

Compared to 2021, underlying attributable profit was up 8%. In constant euros, it decreased 1%:

- Total income increased 3% on the back of net interest income (+7%) and net fee income (+3%). On the other hand, gains on financial transactions dropped 51% and other revenue also decreased impacted by lower leasing revenue.
- Administrative expenses and amortizations increased (+4%, well below inflation). Net operating income grew 3% and efficiency stood at 43.5%.
- Loan-loss provisions rose 33% mainly due to the normalization in North America and the provisions related to loan portfolio growth in South America.
- The other gains (losses) and provisions line was slightly more negative than in 2021 mainly due to regulatory charges in 2022 (mortgage payment holiday provisions and the aforementioned settlement agreed with the FCA in the UK).

Retail Banking. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	42,684	38,869	+10	+3
Expenses	-18,568	-17,103	+9	+4
Net operating income	24,116	21,766	+11	+3
LLPs	-10,210	-7,081	+44	+33
PBT	11,772	12,632	-7	-15
Underlying attrib. profit	7,946	7,389	+8	-1

Detailed financial information in section [4.6 'Appendix'](#).



José M. Linares

Global head of Santander CIB

Santander Corporate & Investment Banking

Underlying attributable profit

EUR 2,805 mn

"The customer-centric business transformation we started five years ago continues to pay off. In a year characterized by economic and geopolitical challenges, more clients are relying on SCIB as their strategic partner in the transformation and financing of their businesses"

Strategy

Expanding our **content and products** to become our **clients' strategic advisors**, while **accelerating digitalization**

Business performance

Business growth in 2022 in **SCIB's main economies**, despite a challenging macroeconomic and geopolitical environment

Results

Underlying attributable profit reached EUR 2,805 million, driven by higher revenue. Efficiency was among best-in-class and **RoRWA** was **2.72%**

Strategy

SCIB continued to make headway with its strategy to transform its business and strengthen its position as our clients' strategic advisor of choice, by boosting specialized high value-added products and services. We remain focused on sustainable development and digital transformation.

The goal of our transformation is to become a leading investment bank by:

- continuing to accelerate business in the US, focusing on the integration of the broker-dealer Amherst Pierpont Securities (APS) as a first step towards achieving our growth aspirations;
- strengthening customer support in Europe, with a pan-European platform; and
- consolidating our regional leadership in most countries and products in Latin America.

Some of the key highlights in 2022 include:

- we continued to invest in talent, naming a new Global Markets head and a new head of SCIB Brazil;
- we acquired 80% of WayCarbon Soluções Ambientais e Projetos de Carbono (leading ESG consulting firm in Brazil), expanding SCIB's product portfolio in voluntary carbon markets and reforestation and conservation programmes;

- we reached a strategic agreement with the EIT InnoEnergy fund to accelerate energy transition by developing its start-up portfolio; and
- we entered into a new partnership with SAP to accelerate the digitalization of transactional banking services and offer innovative, high-value-added solutions.

SCIB held leading positions in several rankings:

- In Project Finance and Export & Agency Finance: top 3 globally, in Europe and in Latin America (only in Project Finance) by transaction volumes, promoting renewable energies (top 3 in Green Global), a key part of our ESG strategy.
- In Debt Capital Markets (DCM): leader in Spain and top 3 by volume of debt placed in Latin America (top 3 in Mexico, Chile and Argentina).
- In Equity Capital Markets (ECM): top 3 in Europe and leader in the Spanish and Mexican markets.

SCIB also received numerous awards in several categories, including from *Global Finance* and *Euromoney*:



Ranking 2022

Award/ranking	Source	Area
Best Investment Bank Spain	<i>Euromoney</i>	Global
Market Leader Corporate Banking Spain, Portugal and Chile	<i>Euromoney</i>	Global
Outstanding Leadership in Transition/Sustainability Linked Loans	<i>Global Finance</i>	GDF
Outstanding Leadership in Sustainable Infrastructure Finance	<i>Global Finance</i>	GDF
Best Bank for Sustainable Finance Chile	<i>Global Finance</i>	GDF
Best Bank for Sustainable Finance Poland	<i>Global Finance</i>	GDF
Best Debt Bank in Latin America	<i>Global Finance</i>	GDF
Issuer of the Year	<i>SCI</i>	GDF
Best Iberian Broker	<i>Institutional Investor</i>	Markets
Risk Solutions House of the Year	<i>Risk Magazine</i>	Markets
Structured Finance Deal of the Year – Metro de Panama's USD 2 billion ECA-covered notes issuance facility	<i>LatinFinance</i>	CF
Private Equity Deal of the Year – KKR's acquisition of Telefónica fibre assets in Chile and Colombia	<i>LatinFinance</i>	CF
Bank of the Year Southern Cone 2022 Project & Infrastructure Finance Awards	<i>LatinFinance</i>	GDF
Best Trade Financier in Latin America	<i>BAFT</i>	GTB
Best Supply Chain Finance Bank	<i>GTR</i>	GTB
Best ESG SCF Global Deal	<i>Supply Chain Finance Community Awards</i>	GTB

Business performance

In a challenging macroeconomic and geopolitical environment, our priority has been to support our clients with innovative and high-value-added solutions. In this context, revenue grew 32% year-on-year to EUR 7,395 million. In constant euros, revenue rose 27%, backed by growth across core businesses, notably Global Transactional Banking, Global Debt Finance and Global Markets:

- **Global Markets:** revenue was 25% higher year-on-year. The business successfully overcame a period of volatility in a difficult macroeconomic environment due to high levels of inflation, central bank policy and the protracted war in Ukraine.

In Europe and Asia, market disruption and diligent risk management created opportunities, particularly in FX, equity derivatives and equity finance. The team continued to innovate and launched the first ESG-linked derivatives framework during the year.

In Latin America, there was solid demand for interest rate and currency hedging products in all countries and a significant increase in sales volumes. In Argentina, Brazil and Chile, we were in the top 3, while in Peru and Colombia, we climbed into the top 5 in currency and rates.

We had excellent results in US markets, boosted by gains in fixed income, currency and commodities, rates and security finance, as well as significant growth in customer flows (especially with financial sponsors).

- **Global Debt Financing (GDF):** significant revenue growth (+9%). Inflation, interest rates, liquidity shortage and a possible recession put pressure on primary issuances. Despite a sharp global decline in debt issuance, DCM maintained (or gained) market share in key markets, supported by EU debt issuance, KNP and Duke Energy green bonds, and the Lloyds AT1 bond.

In Structured Finance, Santander continued to lead global rankings, especially regarding the renewable energy sector (leaders globally, in Europe and in Latin America). GDF participated in such major deals as Origis Energy Debt Raise, Project Gauss (1,600 MW of wind farms in Spain and Portugal), Great Pathfinder and Provence Grand Large, the first floating wind farm in France.

Growth continued in our newer business lines, such as securitizations (+37%) and Leveraged Finance (+49%).

- **Global Transactional Banking (GTB):** Total income was 50% higher than in 2021. Cash Management transactionality and liability income increased significantly during the year, driven by greater economic activity across most of SCIB's footprint and the higher interest rates in Europe, the US and Latin America.

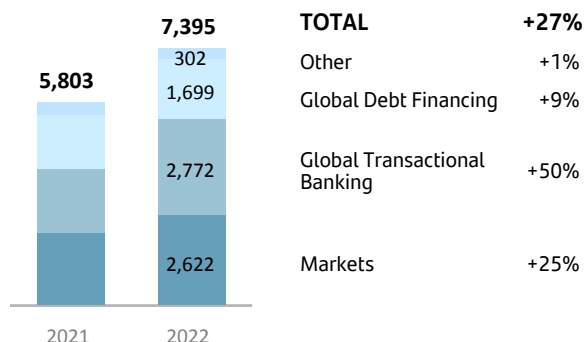
Trade & Working Capital Solutions (T&WC) focused on providing our clients with means to mitigate the impact of commodity price increases, optimize working capital and inventories, strengthen supply chains, reduce trade transaction risks and achieve ESG objectives. T&WCS more than tripled its ESG operating income year-on-year with significant transactions, especially in sustainable confirming. It also continued to develop new capabilities and products such as inventory finance.

In Export Finance, SCIB maintained market leadership. We were number 1 in the global ECA finance ranking (according to Dealogic). The ESG team's work, particularly in the renewables sector, led to numerous transactions during the year, including Iberdrola's Green Shopping Line for a value of EUR 1 billion.



Total income breakdown

Constant EUR million



- In **Corporate Finance (CF)**, M&A growth has been undermined by the slowdown in Equity Capital Markets activity of the global markets. In this context, we participated in the Porsche IPO.

In Infrastructure, Santander leads the League Tables in Europe and Latin America. Santander advised Platinum Equity on the sale of Socamex, a Spanish water company acquired by Quaero Capital.

In the telecommunications, media and technology (TMT) sector, there was significant activity in fibre and towers during the year, with the M&As of MásMóvil, Ardian and Onnet valued at more than EUR 2 billion.

In Energy, Santander established itself as a renewable energy financing leader. We participated in such important deals as the offshore wind farms of Hornsea One and Wiking and the solar photovoltaic project with Ardian.

In Consumer Retail Healthcare (CRH), Santander continued to grow its franchise through the most significant transactions in the sector, including the merger of Dufry with Autogrill for EUR 5.3 billion, or Gelnx's sale to Darlin Ingredients for USD 1.2 billion.

Collaboration revenue and revenue from multinational clients outside their home country increased 34% year-on-year and stood at around EUR 5.1 billion, of which EUR 3.4 billion came from SCIB (+33% year-on-year) and the rest was distributed among the different commercial banking markets.

Results

Underlying attributable profit increased 33% to EUR 2,805 million (24% of the Group's total operating areas). In constant euros, growth was 31%. RoRWA was 2.72% (2.23% in 2021). By line:

- Total income was 27% higher, driven by net interest income (+18%), net fee income (+9%) and gains on financial transactions (+139%).
- Administrative expenses and amortizations rose 17% year-on-year, due to investment in products and franchises under development, while our efficiency ratio (39%) was better than in 2021 (-3.2 pp) and well below the sector.
- Loan-loss provisions increased 63% compared to 2021 due to the normalization of provisioning and a single name in Brazil.

SCIB. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	7,395	5,619	+32	+27
Expenses	-2,898	-2,379	+22	+17
Net operating income	4,497	3,240	+39	+35
LLPs	-251	-151	+66	+63
PBT	4,115	3,071	+34	+30
Underlying attrib. profit	2,805	2,113	+33	+31

Detailed financial information in sect



Víctor Matarranz

Global head of Wealth Management & Insurance

Wealth Management & Insurance

Underlying attributable profit

EUR 1,118 mn

"In 2022, despite a complex market we continued to grow at double-digits and progressed with our strategic plan, developing value-added products focused on our clients' needs"

Strategy

We aim to become **the best Wealth Manager in Europe and the Americas**, committed to offering the best service and products, acting **responsibly** and developing **sustainable products**

Business performance¹

Total **assets under management** fell 3% to **EUR 401 billion**, less than falls in the market during the year

Results¹

Total **contribution to profit** in 2022 **grew 18%** (minus 2021 non-recurring results to **EUR 2,728 million**, as a result of good activity levels in a challenging market

1. In constant euros.

Strategy

In 2022, we continued to work to become the best responsible wealth manager in Europe and the Americas. We performed very well, contributing to the Group's profit growth despite difficult market conditions.

- In **Private Banking**, we continued to leverage our scale, to benefit clients with our global platform, while fostering collaboration across markets and segments. We managed EUR 51 billion from customers in countries outside their local markets. Santander is leading the large investment flow between Latin America, Europe and the US.

We continued to update our value proposition, widening our product range in line with market trends. We had a particular focus on alternative products (more than EUR 2.9 billion), collateralized lending, investment banking and socially responsible products (ESG). We also further improved our discretionary advisory service, which accounted for 9.5% of total assets under management (AuMs).

We launched six funds during the year. Most recently in Q4, we launched EB Capital Preferred Futures (first private market fund marketed to our customers in Brazil) and the Laurion Private Credit Fund.

Our real estate investment service is capturing a large part of the flow between Latin America, Europe and the US. It reached a total volume of EUR 321 million in transactions in the year.

Our socially responsible investment (SRI) products, classified according to Article 8 or 9 under the SFDR or similar criteria applicable in Latin America, reached EUR 25 billion.

This year we received these awards:



- In **Santander Asset Management (SAM)**, market volatility affected asset valuations and investment flows in general. Nevertheless, we continued to enhance our local and global product propositions.

The arrival of our new SAM CEO led to organizational changes and a redesign of our strategy in order to put clients at the centre of our activities and remain a leading provider of investment solutions.

We achieved great results in Latin America, maintaining or gaining market share (and reaching number 1 in Argentina) and developing a strategic plan in Brazil, in collaboration with Santander Brasil.



We showed resilience in Europe. After a very difficult start to the year, we managed to regain market share in Spain in Q4 by launching Objetivo range (subscriptions of more than EUR 2.7 billion) and improved our aggregate performance to end the year in the second quartile.

We made further headway with our ESG strategy. We offer 72 ESG products globally and our assets under management stood at EUR 37.5 billion. In November, we launched the Santander Prosperity fund along with RED (an NGO founded to fight AIDS with the help of the world's best brands). The fund will contribute 15% of its management fee to this purpose.

Our robust range of alternative products includes six strategies and 15 vehicles already launched. With it, we reached EUR 2.5 billion committed globally, including Direct Lending, Funds of Funds, Real Estate, Infrastructure and Renewable Energy, Trade Finance and VC Climate Tech strategies.

- In **Insurance**, we maintained a healthy growth rate in premiums, mainly in our Non-Related and Savings businesses. The credit-related business was slightly affected by the lower demand for credit in general but especially in Brazil.

Protection insurance sales were strong in Europe, as a result of optimized client communications and new products (e.g. credit policies for companies in Spain, auto comparison tool in Poland). Our new savings value proposition in Spain was particularly successful, enhancing the range of unit-linked, guaranteed interest and annuities products. The new products enable us to diversify our offering and provide our customers with innovative alternative to traditional savings solutions.

In the Americas, diversification of the non-credit insurance business continued strongly. New sales grew in the double digits owing to our strategy to strengthen services with more customer value and promote commercial dynamics for sustained growth on all channels. We launched a new Life and Accident Insurance offering in Brazil and a new unit-linked product offering in Mexico for the Select segment, which build on the growth potential of the savings business.

Motor vehicle insurance business grew 8% year-on-year. Our Autocompara platform, in Argentina, Brazil, Chile, Mexico and Uruguay, reached 1.4 million active policies.

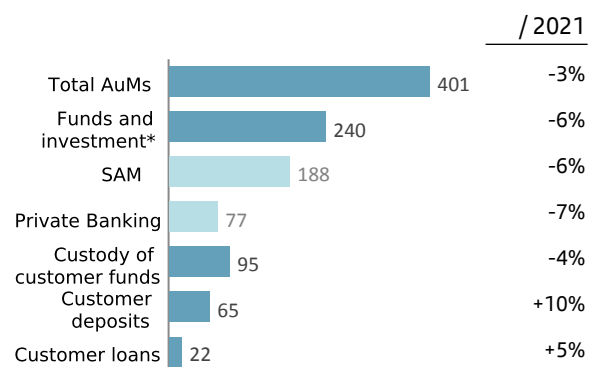
Our digital strategy continued to drive growth in policy sales through digital channels, now representing 20% of the total.

Business performance

Total assets under management amounted to EUR 401 billion, 3% lower year-on-year, dampened by market performance, particularly in Europe, but managed to absorb much of the market downturn.

Business performance: SAM and Private Banking

EUR billion and % change in constant euros. December 2022



Note: Total assets marketed and/or managed in 2022 and 2021.

(*) Total adjusted private banking customer funds managed by SAM.

- **Private Banking** client assets and liabilities reached EUR 259 billion, 1% lower than in 2021, because of custody valuation. Net new money amounted to EUR 11.7 billion (4.5% of total volume). Net profit was EUR 690 million, up 40% year-on-year, primarily backed by total income. Threshold Private Banking clients increased 8% to 114,000 clients.
- **SAM's** total AuMs decreased 6% year-on-year to EUR 188 billion. Net sales recorded outflows of EUR 4.1 billion (2.2% of total AuMs), but with different underlying dynamics: in Latin America, total net sales were EUR 0.7 billion, and in Europe net sales were -EUR 2.2 billion, more heavily affected by the war in Ukraine. SAM's contribution to the Group's profit (including ceded fee income) was EUR 580 million, remaining stable year-on-year.
- In **Insurance**, gross written premiums amounted to EUR 11.7 billion (up 24% year-on-year). Protection premiums grew 7% despite declining demand in Latin America. Total fee income rose 7% (+10% excluding the impact from insurance portfolio buybacks in 2021), and net fee income from protection insurance was 9% higher. Total contribution to profit stood at EUR 1,458 million, +3% year-on-year (+18%, minus insurance earn-out one-offs and insurance portfolio buybacks).

Results

Underlying attributable profit was EUR 1,118 million in 2022, up 19% year-on-year. In constant euros, it was 15% higher (+36% excluding insurance one-offs in 2021):

- Total income increased 12% as a result of improved margins and net fee income.
- Total fee income generated, including ceded to the commercial network, amounted to EUR 3,689 million (31% of the Group's total fee income), a 3% increase year-on-year, despite the market impact on volumes.
- Administrative expenses and amortizations were 8% higher year-on-year, due to the investment carried out and the higher costs from increased commercial activity.
- As a result, net operating income increased 15% and the efficiency ratio improved 0.9 pp.

Total contribution to profit

EUR million and % change in constant euros



The total contribution to the Group (including net profit and total fees generated net of tax) was EUR 2,728 million, 10% higher than in 2021 in constant euros (+18%, minus insurance one-offs in 2021).

WM&I. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	2,608	2,240	+16	+12
Expenses	-1,041	-914	+14	+8
Net operating income	1,566	1,326	+18	+15
LLPs	-14	-38	-63	-64
PBT	1,526	1,294	+18	+15
Underlying attrib. profit	1,118	941	+19	+15

Detailed financial information in section [4.6 Appendix](#).



Javier San Félix
CEO of PagoNxt

PagoNxt

Underlying attributable profit

-EUR 215 mn

"In our second year since inception, we continued with our strategy to bring innovative payments technology, better user experience and efficiency. I'm thrilled to see more and more customers trusting in PagoNxt's solutions and expertise, while we make progress laying the groundwork for further growth in the coming years"

Strategy

Scale up our global platform of **innovative payments and integrated value-added solutions** serving the payment needs for Grupo Santander and for open market customers worldwide

Business performance¹

PagoNxt continued to expand, achieving **significant growth in 2022**. Getnet's Total Payments Volume globally was 27% higher than 2021 and active merchants grew to 1.32 million

Results

Revenue exceeded our growth target by reaching **EUR 953 million in 2022, +93%** (+72% in constant euros) versus 2021, fuelled by an increase in payments processed and active customers

1. In constant euros.

Strategy

PagoNxt aims at global leadership in payments, through a distinct, holistic and customer-centric value proposition. We are a one-of-a-kind paytech business that provides customers with a wide range of innovative payments and integrated value-added services.

We focus on several strategic and high-growth business segments:

Merchants: to provide global and integrated acquiring, processing and value-added solutions for physical and e-commerce merchants.

Getnet

International Trade: to deliver specialized cross-border trading solutions (payments, FX, cash management, trade finance) for businesses, in a large and global market yet to be fully digitalized.

Ebury One Trade

Payments: to provide wholesale account-to-account payment processing and instant connectivity to schemes in multiple regions in a highly scalable model.

Payments Hub

PagoNxt's technology platform and specialist teams serve Grupo Santander's payments needs and cater to open market opportunities beyond Santander's business with in-depth solutions for millions of businesses and people.

PagoNxt runs an efficient global operating model, that covers three core regions (Europe, South America and North America) with bank-grade security and compliance embedded in our customer products.

PagoNxt's strategy sets out to:

- scale up our global, cloud-native, secure and efficient platform, which is interconnected, in real-time, flexible, highly scalable, fully cloud and API-based to ensure access to our features through a single integration. We process and generate insights to help our customers and their businesses harness the full power of data to make decisions;
- accelerate commercial growth by continuing to strengthen our commerce and trade ecosystem, offerings and distribution on Santander's commercial platforms, especially for SMEs; and
- maximize the open market opportunity through direct commercialization and distribution partnerships (with integrated software vendors and others), increasing our market penetration in Europe, South America and North America and extending our footprint to additional strategic countries.



Business performance

Getnet, our stronghold business, continued expanding its reach across Latin America and Europe. Latin American countries with full acquiring propositions include Brazil, Mexico, Argentina, Chile and Uruguay, and our pan-European acquirer has active customers in 12 countries. Getnet was the 3rd largest Merchant Acquirer in Latin America and the 19th largest Merchant Acquirer Worldwide (per Nilson reports in September and October 2022 respectively, based on number of transactions).

In 2022, Getnet's Total Payments Volume (TPV) reached EUR 165 billion, +27% year-on-year (in constant euros), and active merchants grew to 1.32 million. Our merchant platform added innovative value-added services, deployed new global e-commerce capabilities and further developed specialized vertical solutions which it shares across countries. Highlights by market were:

- Getnet Brazil's TPV increased 16%, boosted by e-commerce. Our strategy in Brazil is also focused on driving profitable growth through our pre-payments products, value-added services and greater SME penetration. We are pursuing opportunities across all sales channels and enhancing open market sales through direct sales and digital channels.
- Getnet Europe, our pan-European acquirer, grew significantly in the year. TPV increased 39% and active merchants rose 33% year-on-year, mainly driven by the Spanish market and by the transfer of the former Santander Portugal acquiring business to Getnet Europe in November. We enhanced platform capabilities, with new payment methods, a vertical solution for airlines and a stronger value-added proposition for SMEs. We continued to develop our open market strategy and we are now operating in 12 countries.
- Getnet Mexico continued strongly, with increases of 35% in TPV and 12% in active merchants year-on-year, driven by higher average tickets in our merchant base and the strong performance of our open market distribution channels, which include several partnerships with financial institutions, integrated software vendors (ISVs) and payment ecosystems. We launched several innovative value-added services in Mexico.
- We are ramping up Getnet commercial activity in other Latin American countries. In 2022, we launched our acquiring businesses in Argentina and Uruguay and accelerated penetration in the Chilean market.

Ebury showed strong performance in its B2B offerings for the open market, driven by FX services. Active customers increased by 16% year-on-year.

Our One Trade platform made headway in its objective to become the international services (payments, FX, trade finance) platform for the Group, replacing the local systems with a single, common and interconnected technology solution. In 2022, it expanded into nine of our countries, replacing some of the previous services and deploying such new digital capabilities as instant payments to Europe or Brazil. One Trade was granted an Electronic Money Institution licence to operate in open markets in the EU.

PagoNxt continued to accelerate its roadmap to be Santander's wholesale payments processing provider, centralizing all types of payments (except cards). In 2022, payments services

included Santander in Spain, Portugal and Santander Corporate and Investment Banking. The Payments Hub platform increased the number of currencies it processes to more than 30, with five clearing schemes.

On the consumer side, Superdigital continued to expand its consumer offering across Latin America. We rolled out our global platform in Argentina, Colombia and Peru, and we are gradually integrating our customer base in Brazil. We upgraded it to provide simpler and faster customer onboarding and higher efficiency with its global operating model.

Results

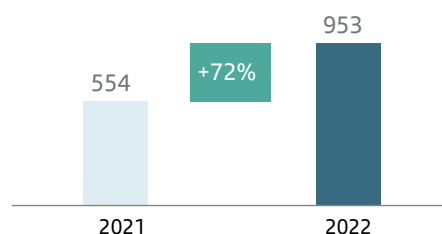
In 2022, underlying attributable loss decreased year-on-year to -EUR 215 million, from -EUR 253 million.

Total income was EUR 953 million, a 93% increase year-on-year (+72% in constant euros), backed by rising regional business activity and volumes, especially in our Merchant and Trade businesses (Getnet and Ebury).

PagoNxt outperformed its 50% revenue growth target for 2022.

PagoNxt. Revenue performance

Constant EUR million



In 2022, administrative expenses and amortizations reflected the ongoing investment plans to develop and implement global technology.

PagoNxt. Underlying income statement

EUR million and % change

	2022	2021	/ 2021	
			%	% excl. FX
Revenue	953	495	+93	+72
Expenses	-1,024	-673	+52	+45
Net operating income	-71	-178	-60	-54
LLPs	-44	-10	+336	+273
PBT	-141	-227	-38	-32
Underlying attrib. profit	-215	-253	-15	-10

Detailed financial information in section [4.6 'Appendix'](#).

4.6 Appendix

Primary segments

EUR million

Underlying income statement	Europe				Spain		
	2022	2021	%	% excl. FX	2022	2021	%
Net interest income	12,565	10,574	18.8	18.5	4,539	4,166	9.0
Net fee income	4,493	4,344	3.4	3.3	2,818	2,789	1.0
Gains (losses) on financial transactions ^A	821	756	8.6	8.1	612	526	16.4
Other operating income	151	261	(42.1)	(41.9)	265	268	(1.3)
Total income	18,030	15,934	13.2	12.9	8,233	7,748	6.3
Administrative expenses and amortizations	(8,523)	(8,319)	2.5	2.1	(3,998)	(4,052)	(1.3)
Net operating income	9,507	7,615	24.8	24.8	4,236	3,696	14.6
Net loan-loss provisions	(2,396)	(2,293)	4.5	4.8	(1,618)	(2,320)	(30.3)
Other gains (losses) and provisions	(1,629)	(1,288)	26.4	27.0	(539)	(514)	4.9
Profit before tax	5,482	4,034	35.9	35.3	2,079	863	140.9
Tax on profit	(1,492)	(1,213)	23.0	22.6	(518)	(236)	119.4
Profit from continuing operations	3,989	2,820	41.5	40.8	1,560	627	149.0
Net profit from discontinued operations	—	—	—	—	—	—	—
Consolidated profit	3,989	2,820	41.5	40.8	1,560	627	149.0
Non-controlling interests	(179)	(71)	154.0	160.6	—	—	—
Underlying profit attributable to the parent	3,810	2,750	38.6	37.8	1,560	627	148.9
Balance sheet							
Loans and advances to customers	591,280	590,610	0.1	2.5	256,397	248,211	3.3
Cash, central banks and credit institutions	216,310	219,155	(1.3)	0.4	129,113	130,773	(1.3)
Debt instruments	76,319	67,068	13.8	15.0	42,008	30,043	39.8
Other financial assets	47,737	37,250	28.2	28.1	43,555	34,553	26.1
Other asset accounts	26,564	29,793	(10.8)	(10.0)	17,995	18,677	(3.7)
Total assets	958,209	943,875	1.5	3.5	489,067	462,256	5.8
Customer deposits	659,554	619,486	6.5	8.8	341,701	292,251	16.9
Central banks and credit institutions	112,254	156,258	(28.2)	(27.3)	43,110	83,229	(48.2)
Marketable debt securities	71,731	73,629	(2.6)	0.4	23,674	28,582	(17.2)
Other financial liabilities	60,010	38,706	55.0	55.4	52,876	33,994	55.5
Other liabilities accounts	11,621	10,929	6.3	7.9	7,314	5,198	40.7
Total liabilities	915,169	899,007	1.8	3.8	468,674	443,254	5.7
Total equity	43,040	44,868	(4.1)	(2.3)	20,394	19,002	7.3
Memorandum items:							
Gross loans and advances to customers ^B	579,476	575,983	0.6	2.9	249,821	245,386	1.8
Customer funds	736,589	711,799	3.5	5.4	406,965	370,927	9.7
Customer deposits ^C	643,309	603,739	6.6	8.8	334,570	290,633	15.1
Mutual funds	93,280	108,060	(13.7)	(13.2)	72,395	80,295	(9.8)
Ratios (%), operating means and customers							
Underlying RoTE	9.28	6.81	2.47		7.89	3.40	4.49
Efficiency ratio	47.3	52.2	(4.9)		48.6	52.3	(3.7)
NPL ratio	2.37	3.12	(0.74)		3.27	4.72	(1.45)
Total coverage ratio	51.8	49.4	2.4		51.0	51.4	(0.4)
Number of employees	65,581	63,048	4.0		26,839	26,015	3.2
Number of branches	3,148	3,242	(2.9)		1,913	1,951	(1.9)
Number of loyal customers (thousands)	10,964	10,334	6.1		3,083	2,772	11.2
Number of digital customers (thousands)	17,450	16,238	7.5		5,899	5,412	9.0

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	United Kingdom				Portugal		
	2022	2021	%	% excl. FX	2022	2021	%
Underlying income statement							
Net interest income	4,992	4,383	13.9	13.0	747	722	3.4
Net fee income	390	434	(10.1)	(10.8)	484	441	9.8
Gains (losses) on financial transactions ^A	31	(8)	—	—	56	142	(60.6)
Other operating income	6	6	(2.0)	(2.8)	8	8	2.7
Total income	5,418	4,815	12.5	11.6	1,295	1,313	(1.3)
Administrative expenses and amortizations	(2,685)	(2,592)	3.6	2.8	(502)	(563)	(10.9)
Net operating income	2,733	2,223	22.9	21.9	793	750	5.8
Net loan-loss provisions	(316)	245	—	—	(17)	(38)	(55.0)
Other gains (losses) and provisions	(517)	(319)	62.0	60.7	(1)	(26)	(97.0)
Profit before tax	1,900	2,149	(11.6)	(12.3)	775	685	13.1
Tax on profit	(505)	(612)	(17.5)	(18.2)	(240)	(223)	7.8
Profit from continuing operations	1,395	1,537	(9.2)	(10.0)	536	463	15.7
Net profit from discontinued operations	—	—	—	—	—	—	—
Consolidated profit	1,395	1,537	(9.2)	(10.0)	536	463	15.7
Non-controlling interests	—	—	—	—	(2)	(1)	22.0
Underlying profit attributable to the parent	1,395	1,537	(9.2)	(10.0)	534	462	15.7
Balance sheet							
Loans and advances to customers	251,892	261,414	(3.6)	1.7	39,126	39,280	(0.4)
Cash, central banks and credit institutions	65,962	72,499	(9.0)	(4.0)	9,634	9,692	(0.6)
Debt instruments	7,294	7,832	(6.9)	(1.7)	7,887	8,489	(7.1)
Other financial assets	601	389	54.8	63.4	1,095	1,586	(30.9)
Other asset accounts	3,292	5,667	(41.9)	(38.7)	1,481	1,209	22.5
Total assets	329,042	347,801	(5.4)	(0.1)	59,223	60,257	(1.7)
Customer deposits	230,829	242,739	(4.9)	0.4	41,899	42,371	(1.1)
Central banks and credit institutions	37,022	44,119	(16.1)	(11.4)	9,182	9,430	(2.6)
Marketable debt securities	44,088	40,796	8.1	14.1	3,288	2,633	24.9
Other financial liabilities	3,549	2,558	38.7	46.4	448	236	90.0
Other liabilities accounts	1,553	2,442	(36.4)	(32.9)	1,074	1,344	(20.1)
Total liabilities	317,041	332,654	(4.7)	0.6	55,890	56,014	(0.2)
Total equity	12,001	15,147	(20.8)	(16.4)	3,333	4,244	(21.4)
Memorandum items:							
Gross loans and advances to customers ^B	244,840	247,775	(1.2)	4.3	40,066	40,262	(0.5)
Customer funds	228,993	237,780	(3.7)	1.7	45,521	46,711	(2.5)
Customer deposits ^C	221,884	228,790	(3.0)	2.4	41,899	42,371	(1.1)
Mutual funds	7,109	8,991	(20.9)	(16.5)	3,623	4,340	(16.5)
Ratios (%), operating means and customers							
Underlying RoTE	10.70	11.47	(0.78)		15.03	11.39	3.64
Efficiency ratio	49.6	53.8	(4.3)		38.7	42.9	(4.1)
NPL ratio	1.21	1.43	(0.23)		2.99	3.44	(0.45)
Total coverage ratio	33.8	25.8	8.0		79.3	71.7	7.7
Number of employees	21,185	20,259	4.6		4,952	5,069	(2.3)
Number of branches	449	450	(0.2)		383	393	(2.5)
Number of loyal customers (thousands)	4,566	4,455	2.5		934	860	8.6
Number of digital customers (thousands)	6,980	6,635	5.2		1,115	1,000	11.5

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

Underlying income statement	Poland				Other Europe			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Net interest income	1,976	1,020	93.7	98.7	312	282	10.3	4.5
Net fee income	528	518	2.0	4.6	273	163	67.6	54.1
Gains (losses) on financial transactions ^A	93	77	20.6	23.8	29	19	53.7	18.1
Other operating income	(123)	2	—	—	(5)	(23)	(79.4)	(80.3)
Total income	2,474	1,617	53.0	57.0	609	441	37.9	27.8
Administrative expenses and amortizations	(692)	(663)	4.5	7.2	(646)	(450)	43.6	36.4
Net operating income	1,782	955	86.7	91.6	(38)	(9)	329.9	—
Net loan-loss provisions	(440)	(200)	120.1	125.8	(6)	19	—	—
Other gains (losses) and provisions	(553)	(404)	37.0	40.6	(18)	(25)	(27.7)	(32.7)
Profit before tax	789	351	125.0	130.9	(61)	(15)	322.3	—
Tax on profit	(247)	(141)	74.9	79.5	18	(1)	—	—
Profit from continuing operations	542	210	158.8	165.5	(43)	(16)	176.9	375.4
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	542	210	158.8	165.5	(43)	(16)	176.9	375.4
Non-controlling interests	(179)	(69)	157.9	164.6	1	—	—	—
Underlying profit attributable to the parent	364	140	159.2	165.9	(42)	(16)	164.2	346.4

Balance sheet

Loans and advances to customers	29,659	29,817	(0.5)	1.4	14,206	11,889	19.5	13.0
Cash, central banks and credit institutions	8,898	2,968	199.8	205.5	2,703	3,224	(16.2)	(20.4)
Debt instruments	11,865	15,082	(21.3)	(19.8)	7,265	5,620	29.3	29.3
Other financial assets	628	503	24.8	27.2	1,857	219	748.8	582.5
Other asset accounts	1,616	1,419	13.9	16.0	2,180	2,821	(22.7)	(24.4)
Total assets	52,665	49,788	5.8	7.8	28,211	23,773	18.7	14.0
Customer deposits	39,299	37,919	3.6	5.6	5,827	4,204	38.6	31.5
Central banks and credit institutions	4,969	3,332	49.1	51.9	17,971	16,148	11.3	7.4
Marketable debt securities	681	1,618	(57.9)	(57.1)	—	—	—	—
Other financial liabilities	1,179	692	70.3	73.6	1,958	1,226	59.8	52.5
Other liabilities accounts	1,378	1,529	(9.8)	(8.1)	302	417	(27.6)	(27.9)
Total liabilities	47,506	45,091	5.4	7.4	26,058	21,995	18.5	13.9
Total equity	5,159	4,697	9.8	11.9	2,153	1,778	21.1	15.2
Memorandum items:								
Gross loans and advances to customers ^B	30,524	30,657	(0.4)	1.5	14,226	11,903	19.5	13.0
Customer funds	42,370	42,325	0.1	2.0	12,740	14,055	(9.4)	(10.8)
Customer deposits ^C	39,299	37,919	3.6	5.6	5,658	4,026	40.5	33.1
Mutual funds	3,071	4,406	(30.3)	(29.0)	7,082	10,029	(29.4)	(29.4)

Ratios (%), operating means and customers

Underlying RoTE	11.93	4.38	7.55
Efficiency ratio	28.0	41.0	(13.0)
NPL ratio	3.80	3.61	0.19
Total coverage ratio	74.0	73.9	—
Number of employees	10,532	10,250	2.8
Number of branches	395	440	(10.2)
Number of loyal customers (thousands)	2,379	2,245	6.0
Number of digital customers (thousands)	3,284	2,998	9.6

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	North America				United States			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Underlying income statement								
Net interest income	9,705	8,072	20.2	6.6	6,140	5,298	15.9	3.0
Net fee income	1,958	1,644	19.1	5.7	771	782	(1.4)	(12.3)
Gains (losses) on financial transactions ^A	204	224	(9.0)	(19.3)	164	152	8.3	(3.7)
Other operating income	449	914	(50.9)	(56.3)	548	1,044	(47.5)	(53.3)
Total income	12,316	10,853	13.5	0.6	7,623	7,277	4.8	(6.8)
Administrative expenses and amortizations	(5,871)	(4,967)	18.2	5.1	(3,599)	(3,197)	12.6	0.1
Net operating income	6,445	5,886	9.5	(3.1)	4,025	4,080	(1.4)	(12.3)
Net loan-loss provisions	(2,538)	(1,210)	109.8	85.5	(1,744)	(419)	316.4	270.3
Other gains (losses) and provisions	(118)	(145)	(18.9)	(27.4)	(20)	(116)	(83.0)	(84.9)
Profit before tax	3,790	4,531	(16.4)	(26.0)	2,261	3,546	(36.2)	(43.3)
Tax on profit	(869)	(1,016)	(14.5)	(24.2)	(478)	(800)	(40.3)	(46.9)
Profit from continuing operations	2,921	3,515	(16.9)	(26.5)	1,784	2,746	(35.0)	(42.2)
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	2,921	3,515	(16.9)	(26.5)	1,784	2,746	(35.0)	(42.2)
Non-controlling interests	(43)	(556)	(92.2)	(93.1)	—	(494)	(100.0)	(100.0)
Underlying profit attributable to the parent	2,878	2,960	(2.8)	(14.1)	1,784	2,252	(20.8)	(29.6)
Balance sheet								
Loans and advances to customers	171,519	137,428	24.8	16.3	130,390	103,548	25.9	18.7
Cash, central banks and credit institutions	35,607	34,857	2.2	(5.1)	20,000	24,033	(16.8)	(21.5)
Debt instruments	44,060	38,500	14.4	4.9	21,637	16,341	32.4	24.8
Other financial assets	14,668	12,555	16.8	6.7	5,241	4,258	23.1	16.0
Other asset accounts	22,741	21,394	6.3	(0.5)	17,837	17,638	1.1	(4.7)
Total assets	288,595	244,734	17.9	9.5	195,106	165,819	17.7	10.9
Customer deposits	168,748	121,989	38.3	28.4	124,209	83,159	49.4	40.8
Central banks and credit institutions	25,294	35,152	(28.0)	(33.4)	8,572	21,926	(60.9)	(63.1)
Marketable debt securities	41,063	38,061	7.9	0.9	32,685	31,482	3.8	(2.1)
Other financial liabilities	20,883	14,652	42.5	29.8	8,346	4,038	106.7	94.9
Other liabilities accounts	6,943	6,194	12.1	4.0	4,116	4,140	(0.6)	(6.3)
Total liabilities	262,931	216,048	21.7	12.9	177,929	144,745	22.9	15.9
Total equity	25,664	28,686	(10.5)	(16.6)	17,177	21,074	(18.5)	(23.2)
Memorandum items:								
Gross loans and advances to customers ^B	156,521	134,090	16.7	8.7	115,248	99,731	15.6	8.9
Customer funds	164,414	137,206	19.8	11.2	112,856	91,865	22.8	15.8
Customer deposits ^C	135,955	111,004	22.5	13.8	98,346	77,775	26.4	19.2
Mutual funds	28,459	26,202	8.6	0.1	14,510	14,090	3.0	(2.9)
Ratios (%), operating means and customers								
Underlying RoTE	11.06	12.73	(1.67)		9.40	13.21	(3.81)	
Efficiency ratio	47.7	45.8	1.9		47.2	43.9	3.3	
NPL ratio	3.03	2.42	0.61		3.25	2.33	0.93	
Total coverage ratio	93.3	134.9	(41.6)		90.3	150.3	(60.0)	
Number of employees	44,518	43,595	2.1		14,610	15,674	(6.8)	
Number of branches	1,854	1,859	(0.3)		485	488	(0.6)	
Number of loyal customers (thousands)	4,693	4,273	9.8		365	378	(3.4)	
Number of digital customers (thousands)	7,239	6,774	6.9		1,037	1,036	0.1	

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	Mexico				Other North America			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Underlying income statement								
Net interest income	3,565	2,773	28.6	13.3	—	—	(43.5)	(43.5)
Net fee income	1,140	828	37.7	21.3	47	34	40.5	40.5
Gains (losses) on financial transactions ^A	39	72	(45.6)	(52.0)	—	—	—	—
Other operating income	(122)	(120)	1.4	(10.6)	22	(11)	—	—
Total income	4,623	3,553	30.1	14.7	70	23	201.4	201.4
Administrative expenses and amortizations	(2,076)	(1,643)	26.4	11.4	(196)	(127)	54.4	54.4
Net operating income	2,547	1,910	33.3	17.5	(126)	(104)	21.6	21.6
Net loan-loss provisions	(788)	(791)	(0.3)	(12.2)	(6)	—	—	—
Other gains (losses) and provisions	(94)	(19)	386.4	328.6	(5)	(10)	(55.7)	(55.7)
Profit before tax	1,665	1,100	51.3	33.3	(137)	(114)	19.6	19.6
Tax on profit	(407)	(223)	82.9	61.2	17	7	153.1	153.1
Profit from continuing operations	1,257	878	43.3	26.3	(120)	(108)	11.5	11.5
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	1,257	878	43.3	26.3	(120)	(108)	11.5	11.5
Non-controlling interests	(44)	(61)	(27.6)	(36.2)	1	—	—	—
Underlying profit attributable to the parent	1,213	816	48.6	31.0	(119)	(108)	10.1	10.1
Balance sheet								
Loans and advances to customers	41,080	33,860	21.3	9.0	48	20	142.5	142.5
Cash, central banks and credit institutions	15,254	10,593	44.0	29.4	354	231	53.1	53.1
Debt instruments	22,423	22,159	1.2	(9.1)	—	—	—	—
Other financial assets	9,257	8,297	11.6	0.3	170	—	—	—
Other asset accounts	4,622	3,474	33.0	19.6	282	282	(0.1)	(0.1)
Total assets	92,636	78,383	18.2	6.2	853	533	60.1	60.1
Customer deposits	44,309	38,820	14.1	2.6	230	11	—	—
Central banks and credit institutions	16,592	13,201	25.7	12.9	130	25	413.7	413.7
Marketable debt securities	8,378	6,579	27.3	14.4	—	—	—	—
Other financial liabilities	12,374	10,559	17.2	5.3	163	54	199.2	199.2
Other liabilities accounts	2,764	2,022	36.7	22.8	64	32	96.8	96.8
Total liabilities	84,416	71,180	18.6	6.6	587	123	377.3	377.3
Total equity	8,220	7,203	14.1	2.6	266	410	(35.1)	(35.1)
Memorandum items:								
Gross loans and advances to customers ^B	41,218	34,339	20.0	7.9	55	20	174.6	174.6
Customer funds	51,328	45,330	13.2	1.8	230	11	—	—
Customer deposits ^C	37,379	33,218	12.5	1.1	230	11	—	—
Mutual funds	13,949	12,112	15.2	3.5	—	—	—	—
Ratios (%), operating means and customers								
Underlying RoTE	16.92	13.63	3.30					
Efficiency ratio	44.9	46.2	(1.3)					
NPL ratio	2.32	2.73	(0.41)					
Total coverage ratio	106.6	95.0	11.6					
Number of employees	28,834	27,266	5.8					
Number of branches	1,369	1,371	(0.1)					
Number of loyal customers (thousands)	4,328	3,895	11.1					
Number of digital customers (thousands)	6,029	5,544	8.8					

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	South America				Brazil			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Underlying income statement								
Net interest income	12,979	11,307	14.8	5.6	8,901	7,867	13.1	(3.7)
Net fee income	4,515	3,721	21.4	11.5	3,296	2,728	20.8	2.8
Gains (losses) on financial transactions ^A	1,291	716	80.4	76.9	736	376	96.0	66.7
Other operating income	(761)	(407)	87.0	130.7	(23)	(95)	(75.8)	(79.4)
Total income	18,025	15,337	17.5	7.6	12,910	10,876	18.7	1.0
Administrative expenses and amortizations	(6,675)	(5,380)	24.1	18.0	(4,180)	(3,236)	29.2	9.9
Net operating income	11,350	9,958	14.0	2.3	8,730	7,641	14.3	(2.8)
Net loan-loss provisions	(5,041)	(3,251)	55.1	37.2	(4,417)	(2,715)	62.7	38.4
Other gains (losses) and provisions	(544)	(474)	14.8	14.0	(259)	(316)	(18.1)	(30.4)
Profit before tax	5,764	6,232	(7.5)	(16.9)	4,055	4,610	(12.0)	(25.2)
Tax on profit	(1,549)	(2,359)	(34.3)	(42.8)	(1,232)	(2,027)	(39.2)	(48.3)
Profit from continuing operations	4,215	3,873	8.8	(0.4)	2,822	2,583	9.3	(7.0)
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	4,215	3,873	8.8	(0.4)	2,822	2,583	9.3	(7.0)
Non-controlling interests	(557)	(556)	0.1	(6.5)	(278)	(263)	5.7	(10.1)
Underlying profit attributable to the parent	3,658	3,317	10.3	0.6	2,544	2,320	9.7	(6.7)
Balance sheet								
Loans and advances to customers	144,812	123,920	16.9	8.4	86,202	73,085	17.9	5.5
Cash, central banks and credit institutions	52,358	43,134	21.4	15.9	40,858	28,400	43.9	28.6
Debt instruments	57,106	51,451	11.0	1.5	37,387	37,078	0.8	(9.8)
Other financial assets	19,854	23,809	(16.6)	(23.0)	5,682	10,129	(43.9)	(49.8)
Other asset accounts	18,795	15,491	21.3	13.2	14,037	10,755	30.5	16.7
Total assets	292,925	257,805	13.6	5.6	184,165	159,446	15.5	3.3
Customer deposits	137,661	120,500	14.2	7.0	89,957	74,475	20.8	8.0
Central banks and credit institutions	42,921	44,314	(3.1)	(10.8)	23,477	27,670	(15.2)	(24.1)
Marketable debt securities	35,063	23,461	49.5	36.9	23,997	13,737	74.7	56.2
Other financial liabilities	41,445	40,490	2.4	(5.7)	25,719	25,503	0.8	(9.8)
Other liabilities accounts	11,327	8,610	31.6	22.3	5,477	5,283	3.7	(7.3)
Total liabilities	268,417	237,375	13.1	5.0	168,627	146,667	15.0	2.8
Total equity	24,508	20,430	20.0	12.3	15,539	12,779	21.6	8.7
Memorandum items:								
Gross loans and advances to customers ^B	152,435	128,916	18.2	9.7	92,194	76,569	20.4	7.7
Customer funds	182,541	162,212	12.5	5.2	120,911	105,095	15.0	2.9
Customer deposits ^C	123,307	110,875	11.2	4.6	75,767	64,890	16.8	4.4
Mutual funds	59,234	51,337	15.4	6.6	45,144	40,205	12.3	0.4
Ratios (%), operating means and customers								
Underlying RoTE	18.77	20.22	(1.45)		19.23	21.44	(2.22)	
Efficiency ratio	37.0	35.1	2.0		32.4	29.7	2.6	
NPL ratio	6.20	4.50	1.70		7.57	4.88	2.69	
Total coverage ratio	76.0	98.3	(22.4)		79.5	111.2	(31.7)	
Number of employees	78,271	74,970	4.4		55,993	52,871	5.9	
Number of branches	3,653	3,819	(4.3)		2,847	2,964	(3.9)	
Number of loyal customers (thousands)	11,473	10,630	7.9		8,743	8,037	8.8	
Number of digital customers (thousands)	25,897	23,727	9.1		20,405	18,351	11.2	

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	Chile				Argentina			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Underlying income statement								
Net interest income	1,772	1,982	(10.6)	(8.7)	1,778	1,065	67.0	171.5
Net fee income	468	394	18.8	21.3	542	420	28.9	109.6
Gains (losses) on financial transactions ^A	242	131	84.9	88.9	218	147	48.4	141.3
Other operating income	(33)	(52)	(36.4)	(35.0)	(705)	(245)	188.2	368.7
Total income	2,449	2,455	(0.3)	1.9	1,833	1,388	32.1	114.8
Administrative expenses and amortizations	(981)	(942)	4.1	6.4	(987)	(805)	22.6	99.4
Net operating income	1,468	1,513	(3.0)	(0.9)	846	583	45.2	136.1
Net loan-loss provisions	(399)	(341)	16.9	19.5	(132)	(140)	(5.9)	53.0
Other gains (losses) and provisions	(8)	(16)	(50.4)	(49.3)	(270)	(136)	98.7	223.0
Profit before tax	1,062	1,156	(8.2)	(6.2)	443	306	44.9	135.6
Tax on profit	(105)	(230)	(54.1)	(53.1)	(118)	(34)	247.7	465.4
Profit from continuing operations	956	927	3.2	5.4	325	272	19.5	94.4
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	956	927	3.2	5.4	325	272	19.5	94.4
Non-controlling interests	(279)	(291)	(4.1)	(2.0)	(1)	(2)	(50.1)	(18.9)
Underlying profit attributable to the parent	677	636	6.5	8.8	324	270	20.0	95.1
Balance sheet								
Loans and advances to customers	43,336	37,849	14.5	7.9	5,586	5,173	8.0	75.6
Cash, central banks and credit institutions	6,344	6,773	(6.3)	(11.7)	3,021	5,243	(42.4)	(6.3)
Debt instruments	11,977	10,955	9.3	3.1	5,317	1,358	291.7	536.9
Other financial assets	13,898	13,469	3.2	(2.7)	74	92	(19.3)	31.2
Other asset accounts	2,869	2,942	(2.5)	(8.1)	1,017	966	5.2	71.1
Total assets	78,425	71,987	8.9	2.7	15,015	12,832	17.0	90.3
Customer deposits	29,042	29,525	(1.6)	(7.3)	10,547	9,170	15.0	87.0
Central banks and credit institutions	13,906	12,109	14.8	8.3	1,080	649	66.5	170.7
Marketable debt securities	10,415	9,264	12.4	6.0	153	204	(24.8)	22.3
Other financial liabilities	14,650	13,841	5.8	(0.2)	811	1,013	(19.9)	30.2
Other liabilities accounts	4,832	2,543	90.0	79.1	514	443	16.0	88.6
Total liabilities	72,845	67,283	8.3	2.1	13,105	11,479	14.2	85.6
Total equity	5,580	4,704	18.6	11.8	1,910	1,353	41.1	129.5
Memorandum items:								
Gross loans and advances to customers ^B	44,588	38,930	14.5	8.0	5,781	5,454	6.0	72.4
Customer funds	38,014	37,847	0.4	(5.3)	14,499	11,891	21.9	98.3
Customer deposits ^C	28,889	29,484	(2.0)	(7.6)	10,547	9,170	15.0	87.0
Mutual funds	9,126	8,363	9.1	2.9	3,952	2,721	45.2	136.2
Ratios (%), operating means and customers								
Underlying RoTE	19.47	19.25	0.22		26.23	27.15	(0.92)	
Efficiency ratio	40.1	38.4	1.7		53.9	58.0	(4.2)	
NPL ratio	4.99	4.43	0.55		2.08	3.61	(1.53)	
Total coverage ratio	56.3	63.3	(7.0)		180.4	153.8	26.6	
Number of employees	9,773	10,574	(7.6)		8,251	8,620	(4.3)	
Number of branches	283	326	(13.2)		375	411	(8.8)	
Number of loyal customers (thousands)	855	832	2.8		1,671	1,593	4.9	
Number of digital customers (thousands)	1,982	2,017	(1.8)		2,867	2,730	5.0	

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Primary segments

EUR million

	Other South America				Digital Consumer Bank			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Underlying income statement								
Net interest income	527	393	34.4	17.1	4,022	4,041	(0.5)	(0.5)
Net fee income	210	179	17.4	4.5	843	821	2.7	2.8
Gains (losses) on financial transactions ^A	95	62	52.2	35.4	60	8	618.8	621.1
Other operating income	1	(15)	—	—	344	228	50.8	47.7
Total income	832	618	34.7	18.2	5,269	5,099	3.3	3.2
Administrative expenses and amortizations	(527)	(397)	32.8	21.4	(2,462)	(2,405)	2.4	2.4
Net operating income	306	221	38.1	13.1	2,807	2,694	4.2	3.9
Net loan-loss provisions	(94)	(55)	71.0	48.7	(544)	(527)	3.2	3.1
Other gains (losses) and provisions	(7)	(7)	13.2	5.0	(27)	(194)	(86.1)	(86.0)
Profit before tax	205	160	27.8	2.2	2,237	1,973	13.4	12.8
Tax on profit	(94)	(69)	35.7	17.6	(549)	(464)	18.5	18.0
Profit from continuing operations	111	91	21.9	(8.0)	1,687	1,510	11.8	11.2
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	111	91	21.9	(8.0)	1,687	1,510	11.8	11.2
Non-controlling interests	1	—	—	—	(379)	(346)	9.6	9.6
Underlying profit attributable to the parent	112	91	23.6	(6.8)	1,308	1,164	12.4	11.7
Balance sheet								
Loans and advances to customers	9,689	7,813	24.0	14.6	122,608	113,936	7.6	9.0
Cash, central banks and credit institutions	2,135	2,718	(21.4)	(29.3)	12,311	21,804	(43.5)	(43.0)
Debt instruments	2,425	2,061	17.6	2.8	7,644	5,280	44.8	46.3
Other financial assets	200	119	67.8	60.1	190	47	303.6	310.6
Other asset accounts	872	828	5.3	1.0	8,262	6,937	19.1	20.6
Total assets	15,320	13,539	13.2	3.4	151,016	148,005	2.0	3.3
Customer deposits	8,116	7,331	10.7	(3.1)	58,544	55,327	5.8	6.7
Central banks and credit institutions	4,457	3,886	14.7	13.7	39,169	37,600	4.2	6.3
Marketable debt securities	498	255	94.9	67.4	33,749	36,710	(8.1)	(7.4)
Other financial liabilities	265	134	97.8	87.7	1,820	1,397	30.3	31.8
Other liabilities accounts	504	340	48.1	32.6	4,704	4,565	3.1	3.8
Total liabilities	13,840	11,946	15.8	5.6	137,986	135,598	1.8	2.9
Total equity	1,480	1,593	(7.1)	(13.6)	13,029	12,407	5.0	6.9
Memorandum items:								
Gross loans and advances to customers ^B	9,872	7,963	24.0	14.5	124,976	116,580	7.2	8.5
Customer funds	9,117	7,378	23.6	8.2	61,625	57,824	6.6	7.4
Customer deposits ^C	8,105	7,331	10.6	(3.2)	58,544	55,327	5.8	6.7
Mutual funds	1,011	48	—	—	3,081	2,497	23.4	23.4
Ratios (%), operating means and customers								
Underlying RoTE			13.65	12.41	1.25			
Efficiency ratio			46.7	47.2	(0.4)			
NPL ratio			2.06	2.13	(0.07)			
Total coverage ratio			92.8	107.8	(15.0)			
Number of employees			16,193	15,840	2.2			
Number of branches			364	309	17.8			
Number of total customers (thousands)			19,746	19,438	1.6			

A. Includes exchange differences.

B. Minus reverse repurchase agreements.

C. Minus repurchase agreements.

Secondary segments

EUR million

Underlying income statement	Retail Banking				Corporate & Investment Banking			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Net interest income	34,880	30,596	14.0	7.2	3,544	2,921	21.3	17.6
Net fee income	7,650	7,045	8.6	3.3	1,988	1,744	14.0	9.4
Gains (losses) on financial transactions ^A	435	840	(48.2)	(50.8)	1,833	766	139.2	139.3
Other operating income	(280)	390	—	—	31	188	(83.7)	(85.1)
Total income	42,684	38,869	9.8	3.2	7,395	5,619	31.6	27.4
Administrative expenses and amortizations	(18,568)	(17,103)	8.6	4.0	(2,898)	(2,379)	21.8	17.3
Net operating income	24,116	21,766	10.8	2.5	4,497	3,240	38.8	35.0
Net loan-loss provisions	(10,210)	(7,081)	44.2	33.4	(251)	(151)	66.0	63.0
Other gains (losses) and provisions	(2,135)	(2,052)	4.0	3.2	(131)	(17)	654.6	855.4
Profit before tax	11,772	12,632	(6.8)	(14.7)	4,115	3,071	34.0	30.1
Tax on profit	(2,931)	(3,898)	(24.8)	(32.0)	(1,119)	(821)	36.3	27.8
Profit from continuing operations	8,841	8,734	1.2	(6.9)	2,996	2,250	33.2	31.0
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	8,841	8,734	1.2	(6.9)	2,996	2,250	33.2	31.0
Non-controlling interests	(895)	(1,345)	(33.5)	(37.9)	(192)	(137)	39.8	30.6
Underlying profit attributable to the parent	7,946	7,389	7.5	(1.3)	2,805	2,113	32.7	31.0

A. Includes exchange differences.

Secondary segments

EUR million

Underlying income statement	Wealth Management & Insurance				PagoNxt			
	2022	2021	%	% excl. FX	2022	2021	%	% excl. FX
Net interest income	825	476	73.2	67.7	22	1	0.0	0.0
Net fee income	1,291	1,247	3.5	(0.8)	881	493	78.6	59.7
Gains (losses) on financial transactions ^A	123	100	22.6	19.3	(14)	(1)	887.4	836.3
Other operating income	369	416	(11.3)	(14.2)	64	2	—	—
Total income	2,608	2,240	16.4	12.1	953	495	92.7	72.0
Administrative expenses and amortizations	(1,041)	(914)	13.9	8.2	(1,024)	(673)	52.2	44.5
Net operating income	1,566	1,326	18.1	14.8	(71)	(178)	(60.4)	(54.2)
Net loan-loss provisions	(14)	(38)	(62.9)	(63.8)	(44)	(10)	336.5	272.8
Other gains (losses) and provisions	(26)	6	—	—	(26)	(38)	(33.3)	(35.0)
Profit before tax	1,526	1,294	17.9	14.6	(141)	(227)	(38.0)	(31.6)
Tax on profit	(347)	(309)	12.4	9.9	(63)	(24)	158.3	95.0
Profit from continuing operations	1,179	985	19.7	16.0	(203)	(251)	(19.0)	(14.5)
Net profit from discontinued operations	—	—	—	—	—	—	—	—
Consolidated profit	1,179	985	19.7	16.0	(203)	(251)	(19.0)	(14.5)
Non-controlling interests	(60)	(44)	36.7	32.0	(12)	(2)	570.2	540.5
Underlying profit attributable to the parent	1,118	941	18.8	15.3	(215)	(253)	(15.0)	(10.3)

A. Includes exchange differences.



5. Research, development and innovation (R&D&I)

Research, development and innovation activity

Innovation and technological development are crucial to Santander's strategy. We focus on operational excellence and customer experience to meet the challenges that stem from digitalization.

The information we gather on new technology platforms helps us better understand the customer journey and design a more accurate digital profile which boosts confidence and increases customer loyalty.

In addition to competition from other banks, we must be mindful of new entrants to the financial system that use new technology to stand out from the crowd and gain a competitive advantage.

Developing a sound strategic technology plan must provide:

- greater capacity to adapt to customers' needs (customized products and services, full availability and excellent, secure service on all channels);
- enhanced processes for Santander's professionals to ensure greater reliability and productivity; and
- proper risk management that provides teams with the means to spot and assess all business, operational, reputational, regulatory and compliance risks.

As a global systemically important bank, Santander and its subsidiaries face increasing regulatory demands that impact system models and underlying technology, which require considerable investments to guarantee compliance and legal certainty.

As in previous years, the European Commission's 2022 EU Industrial R&D Investment Scoreboard (based on 2021 data) recognized our technological effort. We were the best Spanish company and the second best bank globally in R&D investment.

The equivalent investment in R&D&I to that considered in the ranking was EUR 1,325 million. See [note 18](#) to the consolidated financial statements.

Technology strategy

To aid the Group's strategy to become the best open digital platform for financial services, our technology must boost efficiency and minimize risk through optimization, growth and value creation.

Our IT strategy ensures that our technology supports future business growth and is based on simplification, reusable components and composable architecture. It is consistent with the Group's strategic initiatives and global business and operating models.

To ensure our technology strategy is consistent in all Group entities, the Santander Architecture Review Board (SARB) holds monthly meetings that bring together units' chief technology officers (CTOs) to actively make key architecture decisions. It oversees the analysis of potential assets, migration to the cloud and the review of data lake reference architectures.

Consequently, Santander Common Architecture is flexible for the Group and enables the use of a global front- and back-end technology stack. It guides technological development and integration with such new digital capabilities as agile methodologies, the public and private Cloud, core systems development, and advanced technological skills (API - application programming interface-, artificial intelligence, robotics, blockchain, etc.) and data.

To implement our technology strategy, we use internal regulation, the Group's commitment and experience in working with our entities and a governance model that defines projects and initiatives to shape the strategy across our footprint.

The development of our technology and operations (T&O) model will help us cultivate new business, with a particular focus on global products and digital services. Some 6,000 Santander Global Technology & Operations (SGTO) professionals in Spain, the UK, Portugal, Poland, the US, Mexico, Brazil and Chile are gradually incorporating the global product portfolio agreed by the Group's entities, our global businesses and the T&O division. They guarantee not only the quality of digital services and products, but also their security.

SGTO has reaffirmed its commitment to R&D&I with technology that enables us to transform and modernize complex systems, such as core banking, to help businesses prosper by supporting their digital transformations.



Technological infrastructure

Santander has a network of high-quality data centres (CPDs) interconnected by a redundant communications system. They are spread across strategic markets to support and develop our operations. They combine traditional IT systems with the capabilities of a private, on-premise cloud, which, thanks to its swift adoption, enables us to integrate management of the business areas' technology, accelerate digitalization and achieve significant cost savings.

Santander has migrated more than 90% of its technology infrastructure to the cloud and expects to complete migration in 2023. Our cloud strategy enables us to enhance processes, innovate quickly and improve service quality. Our local Cloud Centres of Excellence (CCoEs), coordinated by Global CCoE, guarantee consistent and rigorous Cloud adoption across our entities. This minimizes risk in accordance with our Public Cloud policy. Migration will also contribute towards Santander's responsible banking goals as we expect it to reduce the energy our technology infrastructure consumes by 70%.

Cybersecurity

Cybersecurity is one of Santander's main priorities. It is crucial to support our purpose of helping people and businesses prosper, and to offer customers excellent digital services.

The cybersecurity services and capabilities we created under our three-year Security Transformation Plan (completed in 2020) have become business as usual (BAU) operations in line with the Group's Cybersecurity Framework.

We must continuously adapt cyber defences against more sophisticated threats and attack techniques. In 2021, we established key strategic cybersecurity pillars and initiatives to develop our cyber defences and avert new threats with cutting-edge technology.

In 2022, Santander took preventive measures to strengthen defence capabilities in a complex geopolitical backdrop. In particular, we developed control frameworks for Ransomware and Distribution Denial of Service (DDoS) threats, which dominated the external cyber threat landscape. We also adopted measures to make supply chains more secure, prevent data exfiltration and build up internal controls.

Internal and external auditors periodically review our information systems. The Group proactively identifies IT assets, systems and information (even those of third parties) and assesses their risk and protection levels to detect and remedy any potential weaknesses by using vulnerability scanning, penetration testing and red team simulations of real cyberattacks.

Santander takes part in coordinated cyber exercises with public and private organizations. In September, Santander and FS-ISAC organized a Capture the Flag (CTF) competition among 35 teams - including two from Santander - from 28 organizations and financial institutions around the world.

In addition to regular testing and reviews, independent third party certification authorities review and certify our critical cybersecurity services. Certifications received include the International Organization for Standardization (ISO) 27001 and the Statement on Standards for Attestation Engagements (SSAE) 18.

Investing in specialized cybersecurity companies to drive technology and innovation is fundamental to our mission to generate value and trust in society and help create a more secure ecosystem. In 2022, Santander and Forgepoint Capital, a leading venture capital firm specializing in cybersecurity, announced a strategic alliance to drive investment and innovation in cybersecurity in Europe and Latin America.

For more details on the cybersecurity initiatives we ran in 2022, see the ['Acting responsibly towards customers'](#) section of the 'Responsible banking' chapter. For details on the measurement, monitoring and control of cybersecurity-related risks, and their respective mitigation plans, see section [6.2 'Operational risk management'](#) of the 'Risk management and compliance' chapter.

Digitalization and fintech ecosystem

We created PagoNxt in 2020 to make headway in our digital transformation, in addition to the technological strategy, infrastructure development and cybersecurity initiatives. Building on Santander's large-scale distribution and proven open-market capabilities, PagoNxt enables us to accelerate business for merchants and enhance their ecosystem with a Cloud-native, data-driven global payments platform that connects customers and businesses. For more details on PagoNxt see section [4 'Financial information by segment'](#) in this chapter.

Moreover, Santander combined Santander Consumer Finance's scale and leadership in Europe with Openbank's platform. Openbank's technology (digital banking API, with a Banking-as-a-Service model) and data management capabilities drive growth by offering new services and operational enhancements.

For more details on our digital and innovative products and services for individuals and corporates, as well as references to cybersecurity policies, see section [3.4 'Acting responsibly towards customers'](#) in the 'Responsible banking' chapter.



6. Significant events since year end

On 28 December 2022 the Law establishing a new temporary levy on credit institutions and financial credit institutions was published in Spain (see [note 27](#) to the consolidated financial statements). On 1 January 2023, an estimated amount of EUR 225 million has been accounted for in accordance with IFRS Interpretations Committee (IFRIC) 21 due to this new levy.

In accordance with the agreement reached by the April 2022 general shareholders' meeting, on 1 February 2023 the board of directors approved a capital reduction, subject to regulatory authorization from the ECB, of EUR 170,203,286 through the redemption of 340,406,572 shares, representing 2.03% of the capital acquired in the First 2022 Share Buyback Programme.



7. Trend information 2023

This directors' report contains prospective information on the directors' plans, forecasts and estimates, based on what they consider to be reasonable assumptions. Readers of this report should take into account that such prospective information must not be considered a guarantee of our future performance. As the plans, forecasts and estimates are subject to numerous risks and uncertainties our future performance may not match initial expectations. These risks and uncertainties are described in the '[Risk management and compliance](#)' chapter of this report and in [note 53](#) of the consolidated financial statements.

→ **Macroeconomic environment**

Despite considerable factors of uncertainty in 2023 economic outlooks (such as geopolitics, in particular its impact on the supply of energy in Europe, and the restoration of global supply chains), our base scenario assumes inflation will begin to decelerate gradually in 2023 as a result of more restrictive central bank monetary policies and the easing of geopolitical tensions and global supply chain bottlenecks.

The expected economic cooling should slow down economic growth. This could result in a mild recession in some countries. We do not expect the slowdown to affect unemployment significantly. Until inflation shows clear signs of slowing down, we believe that central banks will continue to trend towards tighter monetary policy, and that interest rates in 2023 will remain around current levels. The only exception could be in Latin America, where some countries could start to cut rates in the second half of the year.

Our **macroeconomic forecast for 2023** by country/region is as follows:

Eurozone

A high inflationary environment that is eroding household purchasing power, monetary policy that still needs tightening, and the war in Ukraine (which seems unlikely to be resolved in the near future) are shaping 2023. However, concerns regarding the security of energy supply have subsided and global supply chain functioning has improved. As a result, although we expect slower economic growth in 2023 than in 2022, the outlook is better than it was a few months ago. The euro area's GDP is expected to grow modestly, around 1%. Inflation should fall but is likely to remain far from the ECB's 2% target. We therefore expect tighter monetary policy with higher official interest rates and measures to reduce the ECB's balance sheet.

Fiscal policy could turn slightly expansive as governments are extending some measures implemented in 2022 to offset the impact of higher energy prices. Consistency between monetary and fiscal policy will be a challenge. Eurozone tax reforms (suspended due to the pandemic) are underway, but won't take effect until 2024.

Geopolitics will be particularly important in the eurozone. Economic growth might be affected by the war in Ukraine and the EU's response to energy security and defence challenges.

Spain

We expect growth to slow down in 2023 due to lower household consumption as real incomes are squeezed. Energy price uncertainty and tighter financial conditions may delay some investment. We expect inflation to decrease, though we believe core inflation will take longer to do so. The unemployment rate may increase due to economic slowdown at the beginning of the year, but we expect it to be transitory.

UK

The economy is expected to be in recession in 2023. Though household and business support measures should avoid a deep recession, we expect consumption to fall as high inflation reduces disposable income. We also believe investment will fall considering outlooks of slumping demand. Inflation should fall from Q1, but remain above the Bank of England's target. We expect interest rates to remain around 4% during the year.

Portugal

The 2023 growth outlook depends on how much the more restrictive monetary policy impacts activity. Higher interest rates will affect domestic demand and reduce consumption; but the impact of this will depend on the labour market (we expect the unemployment rate to remain around its natural rate of 7%-8%) and the use of accumulated savings. Investment is expected to moderate as a result of higher interest rates and worse demand outlook. However, investment in energy transition could mitigate some of this effect. Inflation should begin to moderate, though wage pressures are expected to keep inflation above 2%.

Poland

The expected recession in 2023 is likely to be less severe than initially predicted, could reach its lowest point in Q1 2023. The subsequent recovery should lead to slightly positive growth in the year. Consumption is expected to be the most resilient component of demand while investment may fall. However, net exports is expected to contribute positively to GDP growth. We expect inflation to peak during the first quarter and then fall afterwards, although remaining above 10%. The Monetary Policy Council agreed to delay the inflation target, and it seems it will not raise rates above 6.75%.

US

US economic forecasts indicate 1% growth in 2023 affected by lower disposable income and higher interest rates. However, households and companies are in a solid position to stave off further downturn. We expect the Federal Reserve (Fed) will continue to raise interest rates in the next few months but then keep them stable for the rest of the year. Lower demand should



drive inflation down; but we expect inflation to end the year above the Fed's target.

Mexico

We expect an economic slowdown, driven by weaker external demand (particularly from the US) and the impact of monetary policy tightening in the last two years. We believe the central bank's credibility and Mexico's strong macro basis will bring overall and medium-term inflation back within target and lead the central bank to stop raising interest rates. We expect a marginal increase in early 2023 but for rates to then remain stable until year end.

Brazil

We expect a slowdown driven by lower global economic growth and tighter credit conditions in 2021 and 2022. We expect uncertainty around Brazil's new government to clear up over the year. Strong monetary policy, which we believe will not raise rates further, should continue to lower inflation.

Chile

The economy is expected to continue the readjustment that began in 2022. GDP growth forecasts are negative due to rising interest rates in recent years and fiscal reform. We believe inflation will fall and the central bank will begin to cut rates, paving the way for a return to economic growth in 2024.

Argentina

Economic growth is expected to decline in 2023 amid weak global conditions and soaring domestic inflation. Compliance with the International Monetary Fund's economic stabilization programme will be key to keep refinancing debt maturities. Presidential elections could lead to some volatility.

→ Financial markets

The 2023 outlook suggests falling consumption and investment (due to inflation), higher interest rates and lower confidence will cause global economic activity to slowdown. Inflation should fall back slightly which could lead to central banks ending monetary policy tightening early in the year. We believe this could gradually boost financial markets over the year; but uncertainty still runs high.

There may be further upside risk to debt yields in early 2023; but we expect them to begin to fall in the second half of the year as the market prices in future rate cuts starting in 2024. We expect quantitative tightening (QT) in peripheral Europe will be gradual and the ECB will continue its Transmission Protection Instrument (TPI), which should cover medium-term spreads.

With the interest rate ceiling, equities should recover some value but not a great deal, as interest rates remain high and the economy continues to cool down.

In foreign exchange, we believe the euro's depreciation against the US dollar peaked in 2022. But we expect the euro to remain weak in the short term and then moderately strengthen.

In developing markets, all eyes remain on China which has moved away from zero-covid policies and is taking steps to resolve the housing crisis. Elsewhere, especially in Latin America, we expect cyclical slowdowns, high interest rates and low global liquidity to sustain this challenging environment.

We believe a risk to our central scenario is inflation falling less than forecasted. This could put pressure on central banks' terminal interest rates. We remain cautious; if this risk materializes, it could lead to financial market vulnerability in 2023.

We expect that the banking sector will be hit by the impact of slower economic growth and tighter credit conditions on customers' ability to pay in the private sector and on balance sheet growth.

Higher interest rates will be accompanied by the withdrawal of liquidity support measures. Consequently, entities will have to adjust to higher wholesale funding costs and lower loan and deposit growth, affected by economic slowdown.

Risks are skewed to the downside. They may come from non-bank financial players and include potentially disorderly asset price adjustments and market liquidity disruptions. However, most entities still have enough capital to cope.

Aside from the economic environment, banks must digitalize faster while recognizing and managing climate change risks.



→ Financial regulation

We expect the 2022 regulatory agenda to carry over into 2023, especially regarding prudential, sustainability and digital pillars, while retail issues will gain focus.

Prudential

The most notable debate will be about the Basel III reform being adopted in Europe. The trade off between the effect it will have on the banks and how much Europe will deviate from Basel will be a central issue. The Basel Committee published its final standards on financial institutions' treatment of crypto-asset exposures, which the EU and other jurisdictions are expected to begin to adopt.

Resolution

The European Banking Authority (EBA) is expected to begin its third revision of the Banking Recovery and Resolution Directive (BRRD). One of its aims is to improve the application of the framework and make it more suited to medium- and small-sized banks. The first Deposit Guarantee Schemes Directive (DGSD) revision is expected and should drive negotiations on the creation of a common European deposit guarantee fund.

Sustainability

The European Commission (EC) will work towards completing a green taxonomy and setting the four remaining environmental objectives relating to the transition to a circular economy, the sustainable use and protection of water and marine resources, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems. We expect progress with defining reporting standards in the EU (through the European Financial Reporting Advisory Group) and abroad (through the new International Sustainability Standards Board).

In 2023, the debate on green bonds and due diligence proposals will continue but an agreement could be reached. We expect the EBA to present its conclusions on the integration of climate and environmental risks into the prudential framework in 2023, in addition to making progress with EIOPA and ESMA in analysing greenwashing by European financial institutions.

Digital

EU negotiations on future regulation on the development, marketing and use of artificial intelligence (AI) will continue throughout 2023, with a focus on high-risk AI systems. The rules on enforcing the Digital Markets Act and on notification by potential gatekeepers will also continue to be developed.

We expect important discussions about data, which will play a central role in digital transformation. The draft Data Act addresses the sharing and re-use of internet of things (IoT) product data, the possibility of receiving compensation for data shared with third parties and the effective exchange of Cloud data processing service providers. The European Commission plans to publish its bill on Open Finance and data sharing in the financial sector to supplement the Payment Services Directive (PSD2).

Payments is an essential pillar in the digital world. The EC published a draft instant payments bill at the end of 2022 and it will be debated in 2023. It is also expected to publish its revision of the PSD2 directive. The ECB's debate on the digital euro will continue and, 2023 will be a key year, as it decides whether to initiate a so-called "digital euro realization phase" as a pilot programme to issue a digital euro in the future. In addition, the EC will present a legislative proposal on the digital euro, to establish a legal framework in preparation for its possible launch.

Internationally, the Financial Stability Board will publish proposed common rules on crypto-assets and specific rules for stablecoins.

Retail banking

Initiatives are under way to improve consumer protection and adapt standards to the digital environment. With regard to legislative actions, we expect the approval of the proposal to revise the consumer credit directive, the beginning of the mortgage credit directive review and a strategy plan for retail investor participation in markets. It aims to encourage investment beyond savings.



These are the main management priorities for 2023 in our core regions and segments:



Europe

Our strategy in Europe is to stay focused on customer experience, service quality and delivering a common operating model. Our top priorities for 2023 are:

- sustainable top-line growth by being customer-centric, achieving best-in-class customer satisfaction in all countries through simpler, enhanced propositions and end-to-end delivery channel transformation, and building on our scale (e.g. growing our global businesses and improving connectivity);
- strong discipline to keep cost growth below inflation and improve efficiency, with a more common operating model (e.g. shared services and platforms);
- continued low cost of risk through risk management;
- active capital management focused on capital deductions and reducing portfolios with low returns;
- green finance leadership for retail and corporates; and
- attract and retain the best talent and continue improving employee engagement to be a reference in the sector.



Our strategy remains customer-centric. To attract and engage more customers, we will focus on:

- improving customer experience to be market leaders in NPS with new products and a greater connectivity with other countries;
- building on our global and regional scale to grow our high value-added businesses;
- achieving operational excellence through simple and digital end-to-end processes which allow us to structurally reduce our cost to serve;
- developing our customer relationship model to offer a unique omnichannel experience and better customer service more efficiently; and
- continuing active and forward looking cost of risk management.



In the UK, our foundations are solid and we are well positioned to deliver strong financial results and RoTE. We aim to achieve our targets through:

- growth through customer loyalty and outstanding customer experience;
- simplification and digitalization of the business for improved efficiency and returns;
- engagement, motivation and development of a talented and diverse team; and
- being a responsible and sustainable business.



Our market position and progress allow us to focus on:

- continued commercial and digital transformation and better customer experience;
- focused business growth in the segments with the highest return on capital;
- continued leadership as the most efficient and profitable bank; and
- risk policy execution to keep our credit quality high and our capital position robust.



Our main objective is to deliver strong growth in a country with high potential to grow and increase profitability. We will focus on:

- better customer and employee experience;
- simpler processes, products and infrastructure to create a self-service bank;
- digital transformation to allow customers to bank remotely; and
- a new green financing offer to help our customers go green.



North America

In North America, we continue to build on our local individual strengths and capabilities in Mexico and the US while also capitalizing on the Group's scale and connectivity to:

- transform into a digital bank with branches in Mexico. In the US, continue to deliver high customer satisfaction and scale digital to our personal loans and deposits platforms;
- simplify our regional business model to reduce overlapping, increase efficiency and create a joint value proposition for better service and customer experience;
- identify business- and customer-oriented initiatives with a continued focus on positioning ourselves as a market leader with value-added products;
- improve cross-border coordination and cooperation while managing local operations according to their specific market strategies;
- capitalize on ESG capabilities to support global clients achieve energy transition and wider green goals; and
- continue consolidating regional IT under a single leadership, seeking a faster time to market by improving technology and infrastructure, talent, quality and processes.



Our strategy stands on four pillars: simplification, transformation, network collaboration and profitable growth. We have several initiatives in each of our business lines which focus on delivering quality services to our customer and accretive profitability for our shareholders.

- **Simplification:** rationalize businesses and products with limited scale and profitability (e.g. Home Loans), reducing the number of legacy depository products and exiting non-core commercial portfolios.
- **Transformation:** leverage Group digital and data capabilities to modernize our depository platform to drive scalability, lower cost to serve and support a "digital-first" omnichannel platform with a national deposit growth model.
- **Network collaboration:** leverage the Group's connectivity to drive top-line growth (Auto, CIB, and Wealth) and achieve scale synergies (Technology & Operations).
- **Profitable growth:** deploy capital to support core growth businesses while maintaining focus on capital efficiency.



Our aim is to become the best bank for our customers. We will focus on:

- advancing our technological transformation to improve our digital channels;
- continuously simplifying our products, processes and operations to transform our service model, building on technology and data to improve customer experience;
- growing our customer base and increasing loyalty through integrated digital products and offerings, new service models and development of a mass-market value proposition;
- remaining the market leader with value-added products for corporates and by building on existing relations to attract more customers, particularly individuals; and
- maintaining profitable growth trends.



South America

The Group's priorities in South America are:

- strengthening connectivity between countries, capturing new business opportunities and sharing best practices regionally;
- maintaining profitable growth through higher loyalty and customer attraction;
- expanding our joint Corporate and CIB offerings;
- strengthening our payments businesses leveraging our global platforms; and
- promoting inclusion and sustainability.



Santander Brasil will focus on:

- continuing to develop the best integrated distribution platform in the market in order to strengthen connectivity between businesses and capture opportunities more swiftly;
- increasing and capitalizing on our customer base, primarily through greater loyalty, to drive growth;
- simplifying products and processes and boosting operational efficiency and customer experience;
- keeping credit quality under control by continually anticipating trends and enhancing risk models; and
- focusing on profitability and adapting to new demands through innovation.



In Argentina, our strategy is to:

- expand our customer base through our multi-channel approach, especially digital channels;
- develop our financial platform and increase collaboration between businesses;
- increase market share in personal lending, agro loans and consumer credit;
- strive for operational excellence to provide a unique customer experience; and
- position ourselves as a leading bank in sustainable finance and financial inclusion.



- In Peru, we aim to expand our global, corporate and retail customer bases through Consumer and Surgir and to drive greater loyalty and satisfaction. We will focus on expanding and increasing profitability our vehicle finance businesses and strengthen our microfinance business.



Santander Chile will focus on:

- staying #1 in NPS by continually improving customer service;
- continuing to consolidate our leadership position in transactional services and loans for our corporate customers;
- transforming our business to provide a platform to help customers grow their businesses, for example through Workcafé Startup and Community or Getnet;
- continuing to strengthen our mass market position, with Life and Superdigital; and
- driving our ESG strategy, increasing green finance and financially empowering our customers.



In Uruguay, our priorities for 2023 are to:

- increase volumes growth, market share and customer activity;
- improve efficiency and maintain high profitability;
- continue broadening our product offering with new businesses and a transformed technology model; and
- accelerate our commercial transformation to a simpler, more customer-centric digital model.



- In Colombia, we will focus on profitable products in corporates and CIB, consolidating our consumer finance entity with a new mix of new and used vehicles and promoting our Prospera microcredit business.



Digital Consumer Bank



Our priorities for 2023 are to:

- increase our leadership in global digital consumer lending by building on SCF's footprint as Europe's #1 consumer finance company and on Openbank's technology and low cost of funding;
- focus on profitable growth and transformation; and
- enhance our ESG and green finance proposition in auto lending and consumer credit.

- To increase our leadership, we will:

- **Auto:** continue progressing with strategic initiatives to build a world-class digital offering in mobility; aid OEMs' transformation journeys with online lending, leasing, renting and subscription offerings; and provide our partners with innovative finance and sale solutions on dealer websites and in auto marketplaces.
- **Consumer (non-auto):** gain market share through specialization and with tech platforms that build on our leadership in Europe in buy now, pay later (BNPL) services, checkout lending, credit cards and direct loans.
- **Digital Bank:** continue increasing loyalty among our Openbank and SC Germany Retail customers and boosting digital banking.

- In green finance, our focus is on financing the acquisition of non-polluting vehicles, solar panels, bikes, heating systems and energy efficient solutions.

- To enhance growth, we will focus on:

- developing our operational model to defend our best-in-class efficiency with:
 - a) a simpler legal and operational structure;
 - b) single IT platforms;
 - c) an operational back-office centre of excellence; and
 - d) an optimized sales distribution network.
- reducing sensitivity to rising interest rates with greater deposit acquisition and faster loan re-pricing; and
- progressing in transformational projects: new Stellantis partnership, acquisition of Mitsubishi Bank Germany and capturing opportunities with OEMs and digital players in auto. In consumer, full transition to Zinia tech stack and branding, execute pan-European agreements, leapfrog growth through integrators and sign flagship deals with major global tech companies.



SECONDARY SEGMENTS



Our ambition in 2023 is to continue transforming our business and become strategic advisers to our customers by:

- accelerating profitable growth, diversifying our customer base, enhancing advisory offering and content, broadening and improving our market product capabilities and accelerating capital rotation;
- **US:** increasing our size with a strategy based on our areas of expertise and knowledge to elevate our business;
- **Europe:** turning CIB into a regional leader (top 5-10) in all products; and
- **Latin America:** strengthening our leadership and moving from a multi-country to a pan-regional focus to become the main CIB player in most countries and products.

PagoNxt

PagoNxt's plan for 2023 includes these objectives:

- continuing to increase our revenue, driven by greater payment volumes processed, customer base across all our businesses and usage of our value-added services;
- accelerating open market activity via partnerships and direct marketing. Getnet will continue to enter into distribution agreements with integrated software vendors and local/regional banks beyond Santander, and our Trade businesses will continue to pursue direct marketing;
- consolidating our Getnet franchise, growing Santander's merchant acquiring business through collaboration with the Group in Europe, North America and South America and with SCIB, with a focus on launching in all our European markets;

As a multi-regional provider with an increasingly global presence, we will continue to share innovation between regions, expand our products and value-added services, and tailor our solutions to merchants' local needs; and

- scaling our global platform: Getnet will accelerate product development capabilities by converging interoperable tech assets. The One Trade and Payments Hub platforms will continue to expand across the Group in a software-as-a-service (SaaS) model, following our plan to migrate all payments (except cards), FX and trade finance services to a global platform.



In 2023, key management aims and initiatives are:

In Private Banking:

- increasing our teams' connectivity to enhance our leading platform in Europe, the US and Latin America;
- creating a more sophisticated value proposition to enable a 360° client view and broaden our product range;
- launching an initiative centred on Offshore Mass Affluent customer segment to serve them from the US; and
- implementing a global top talent management initiative to enhance service to our clients.

In Santander Asset Management:

- partnering our retail network to become investment Centre of Excellence in Private Banking, improving our service model and offering tailored solutions;
- leveraging our expertise, reputation and global distribution capabilities and creating an independent company to accelerate growth and decision-making to become a relevant player in Alternatives Products;
- boosting sales in the institutional segment by increasing our market share of third-party AuMs and maximizing collaboration opportunities across the Group;
- enabling digital investment platforms in all countries; and
- completing our ESG methodology implementation, strengthening our product and service offerings, incorporating ESG standards in investment processes, increasing our engagement and voting activities, and delivering on public commitments.

In Insurance:

- enhancing our distribution model and consolidating our protection value proposition for individuals and SMEs and our life-savings proposition for both accumulation (e.g. unit-linked) and decumulation (e.g. annuities) products;
- improving customer experience and portfolio lifetime through innovative programmes;
- using data analytics to optimize digital journeys and pay claims faster, where we already have examples of same-day payments;
- boosting our motor platforms: Autocompara and Santander Auto; and
- building on our joint venture partners' strengths to guarantee the best product offering for our customers across all countries.



8. Alternative performance measures (APMs)

In addition to the financial information prepared under IFRS, this consolidated directors' report contains financial measures that constitute alternative performance measures (APMs) to comply with the guidelines on alternative performance measures issued by the European Securities and Markets Authority on 5 October 2015 and non-IFRS measures.

The financial measures contained in this consolidated directors' report that qualify as APMs and non-IFRS measures have been calculated using our financial information but are not defined or detailed in the applicable financial information framework or under IFRS and therefore have neither been audited nor reviewed by our auditors.

We use these APMs and non-IFRS measures when planning, monitoring and evaluating our performance. We consider these APMs and non-IFRS financial measures to be useful metrics for management and investors to facilitate operating performance comparisons from period to period. While we believe that these APMs and non-IFRS financial measures are useful in evaluating our business, this information should be considered as supplemental in nature and is not meant as a substitute of IFRS measures. In addition, the way in which Santander defines and calculates these APMs and non-IFRS measures may differ from

the calculations used by other companies with similar measures and, therefore, may not be comparable.

The APMs and non-IFRS measures we use in this document can be categorized as follows:

Underlying results

In addition to IFRS results measures, we present some results measures which are non-IFRS measures and which we refer to as underlying measures. These underlying measures allow, in our view, a better year-on-year comparability as they exclude items outside the ordinary course of business which are grouped in the non-IFRS line net capital gains and provisions and are further detailed at the end of section [3.2 'Results'](#) of this chapter.

In addition, the results by business areas in section [4 'Financial information by segment'](#) are presented only on an underlying basis in accordance with IFRS 8. The use of this information by the Group's governance bodies and reconciled on an aggregate basis to our IFRS consolidated results can be found in [note 51.c](#) to our consolidated financial statements.



Profitability and efficiency ratios

The purpose of the profitability and efficiency ratios is to measure the ratio of profit to equity, to tangible equity, to assets and to risk-weighted assets, while the efficiency ratio measures how much general administrative expenses (personnel and other) and amortization costs are needed to generate revenue.

The goodwill adjustments have been removed from the RoTE numerator as, since they are not considered in the denominator, we believe this calculation is more correct.

Ratio	Formula	Relevance of the metric
RoE (Return on Equity)	$\frac{\text{Profit attributable to the parent}}{\text{Average stockholders' equity}^A \text{ (excl. minority interests)}}$	This ratio measures the return that shareholders obtain on the funds invested in the bank and as such measures the bank's ability to pay shareholders.
Underlying RoE	$\frac{\text{Underlying profit attributable to the parent}}{\text{Average stockholders' equity}^A \text{ (excl. minority interests)}}$	This ratio measures the return that shareholders obtain on the funds invested in the bank excluding results from operations outside the ordinary course of business.
RoTE (Return on Tangible Equity)	$\frac{\text{Profit attributable to the parent}^B}{\text{Average stockholders' equity}^A \text{ (excl. minority interests) - intangible assets}}$	This is used to evaluate the profitability of the company as a percentage of its tangible equity. It is measured as the return that shareholders receive as a percentage of the funds invested in the bank less intangible assets.
Underlying RoTE	$\frac{\text{Underlying profit attributable to the parent}}{\text{Average stockholders' equity}^A \text{ (excl. minority interests) - intangible assets}}$	This very common indicator measures the profitability of the tangible equity of a company arising from underlying activities, i.e. excluding results from operations outside the ordinary course of business.
RoA (Return on Assets)	$\frac{\text{Consolidated profit}}{\text{Average total assets}}$	This metric measures the profitability of a company as a percentage of its total assets. It is an indicator that reflects the efficiency of the bank's total assets in generating profit over a given period.
Underlying RoA	$\frac{\text{Underlying consolidated profit}}{\text{Average total assets}}$	This metric measures the profitability of a company as a percentage of its total assets excluding results from operations outside the ordinary course of business. It is an indicator that reflects the efficiency of the bank's total assets in generating underlying profit over a given period.
RoRWA (Return on Risk-Weighted Assets)	$\frac{\text{Consolidated profit}}{\text{Average risk-weighted assets}}$	The return adjusted for risk is a derivative of the RoA metric. The difference is that RoRWA measures profit in relation to the Group's risk-weighted assets.
Underlying RoRWA	$\frac{\text{Underlying consolidated profit}}{\text{Average risk-weighted assets}}$	This relates the underlying consolidated profit (excluding results from operations outside the ordinary course of business) to the Group's risk-weighted assets.
RoRAC (Return on Risk-Adjusted Capital)	$\frac{\text{Underlying consolidated profit}}{\text{Average economic capital}}$	This is the return on economic capital required internally (necessary to support all risks inherent in our activity).
Economic Value Added	$\text{Underlying consolidated profit} - (\text{average economic capital} \times \text{cost of capital})$	Economic value added is the profit generated in excess of the cost of economic capital employed. This measures risk-adjusted returns in absolute terms, complementing the RoRAC approach.
Efficiency (Cost-to-income)	$\frac{\text{Operating expenses}^C}{\text{Total income}}$	One of the most commonly used indicators when comparing productivity of different financial entities. It measures the amount of resources used to generate the bank's operating income.

A. Stockholders' equity = Capital and Reserves + Accumulated other comprehensive income + Profit attributable to the parent + Dividends.

B. Excluding the adjustment to the valuation of goodwill.

C. Operating expenses = Administrative expenses + amortizations.



Profitability and efficiency ^{A B} (EUR million and %)	2022	2021	2020
RoE	10.67%	9.66%	-9.80%
Profit attributable to the parent	9,605	8,124	-8,771
Average stockholders' equity (excluding minority interests)	89,986	84,133	89,459
Underlying RoE	10.67%	10.29%	5.68%
Profit attributable to the parent	9,605	8,124	-8,771
(-) Net capital gains and provisions	—	-530	-13,852
Underlying profit attributable to the parent	9,605	8,654	5,081
Average stockholders' equity (excluding minority interests)	89,986	84,133	89,459
RoTE	13.37%	11.96%	1.95%
Profit attributable to the parent	9,605	8,124	-8,771
(-) Goodwill impairment	—	-6	-10,100
Profit attributable to the parent (excluding goodwill impairment)	9,605	8,130	1,329
Average stockholders' equity (excluding minority interests)	89,986	84,133	89,459
(-) Average intangible assets	18,164	16,169	21,153
Average stockholders' equity (excl. minority interests) - intangible assets	71,822	67,964	68,306
Underlying RoTE	13.37%	12.73%	7.44%
Profit attributable to the parent	9,605	8,124	-8,771
(-) Net capital gains and provisions	—	-530	-13,852
Underlying profit attributable to the parent	9,605	8,654	5,081
Average stockholders' equity (excl. minority interests) - intangible assets	71,822	67,964	68,306
RoA	0.63%	0.62%	-0.50%
Consolidated profit	10,764	9,653	-7,708
Average total assets	1,720,273	1,563,899	1,537,552
Underlying RoA	0.63%	0.65%	0.40%
Consolidated profit	10,764	9,653	-7,708
(-) Net capital gains and provisions	—	-530	-13,866
Underlying consolidated profit	10,764	10,183	6,158
Average total assets	1,720,273	1,563,899	1,537,552
RoRWA	1.77%	1.69%	-1.33%
Consolidated profit	10,764	9,653	-7,708
Average risk-weighted assets	606,952	572,136	578,517
Underlying RoRWA	1.77%	1.78%	1.06%
Consolidated profit	10,764	9,653	-7,708
(-) Net capital gains and provisions	—	-530	-13,866
Underlying consolidated profit	10,764	10,183	6,158
Average risk-weighted assets	606,952	572,136	578,517
RoRAC^C	14.50%	14.22%	8.68%
Consolidated profit	10,764	9,653	-7,708
(-) Net capital gains and provisions	—	-530	-13,866
Underlying consolidated profit	10,764	10,183	6,158
Average economic capital	74,215	71,602	70,922
Economic value added^C	2,446	2,969	-2,353
Underlying consolidated profit	10,764	10,183	6,158
(-) Average economic capital x cost of capital	-8,317	-7,215	-8,511
Average economic capital	74,215	71,602	70,922
Cost of capital	—	10.08 %	12.00 %
Efficiency ratio	45.8%	46.2%	47.0%
Underlying operating expenses	23,903	21,415	20,967
Operating expenses	23,903	21,415	21,130
Net capital gains and provisions impact in operating expenses ^D	—	—	-163
Underlying total income	52,154	46,404	44,600
Total income	52,117	46,404	44,279
Net capital gains and provisions impact in total income ^D	37	—	321

A. Averages included in the RoE, RoTE, RoA and RoRWA denominators are calculated using 13 months (from December to December).

B. The risk-weighted assets included in the denominator of the RoRWA metric are calculated in line with the criteria laid out in the CRR (Capital Requirements Regulation).

C. The 2021 and 2020 economic capital requirements have been recalculated based on the 2022 methodology to facilitate their comparison.

D. Following the adjustments in [note 51.c](#) to the consolidated financial statements.

Efficiency ratio by business area (EUR million and %)

	2022			2021		
	%	Total income	Operating expenses	%	Total income	Operating expenses
Europe	47.3	18,030	8,523	52.2	15,934	8,319
Spain	48.6	8,233	3,998	52.3	7,748	4,052
United Kingdom	49.6	5,418	2,685	53.8	4,815	2,592
Portugal	38.7	1,295	502	42.9	1,313	563
Poland	28.0	2,474	692	41.0	1,617	663
North America	47.7	12,316	5,871	45.8	10,853	4,967
US	47.2	7,623	3,599	43.9	7,277	3,197
Mexico	44.9	4,623	2,076	46.2	3,553	1,643
South America	37.0	18,025	6,675	35.1	15,337	5,380
Brazil	32.4	12,910	4,180	29.7	10,876	3,236
Chile	40.1	2,449	981	38.4	2,455	942
Argentina	53.9	1,833	987	58.0	1,388	805
Digital Consumer Bank	46.7	5,269	2,462	47.2	5,099	2,405

Underlying RoTE by business area (EUR million and %)

	2022			2021		
	%	Underlying profit attributable to the parent	Average stockholders' equity (excl. minority interests) - intangible assets	%	Underlying profit attributable to the parent	Average stockholders' equity (excl. minority interests) - intangible assets
Europe	9.28	3,810	41,054	6.81	2,750	40,347
Spain	7.89	1,560	19,786	3.40	627	18,453
United Kingdom	10.70	1,395	13,038	11.47	1,537	13,392
Portugal	15.03	534	3,553	11.39	462	4,054
Poland	11.93	364	3,047	4.38	140	3,200
North America	11.06	2,878	26,025	12.73	2,960	23,250
US	9.40	1,784	18,968	13.21	2,252	17,044
Mexico	16.92	1,213	7,168	13.63	816	5,991
South America	18.77	3,658	19,491	20.22	3,317	16,405
Brazil	19.23	2,544	13,232	21.44	2,320	10,818
Chile	19.47	677	3,479	19.25	636	3,303
Argentina	26.23	324	1,237	27.15	270	996
Digital Consumer Bank	13.65	1,308	9,583	12.41	1,164	9,380



Credit risk indicators

The credit risk indicators measure the quality of the credit portfolio and the percentage of non-performing loans covered by provisions.

Ratio	Formula	Relevance of the metric
NPL ratio (Non-performing loans ratio)	$\frac{\text{Credit impaired loans and advances to customers, customer guarantees and customer commitments granted}}{\text{Total Risk}^A}$	The NPL ratio is an important variable regarding financial institutions' activity since it gives an indication of the level of risk the entities are exposed to. It calculates risks that are, in accounting terms, declared to be credit impaired as a percentage of the total outstanding amount of customer credit and contingent liabilities.
Total coverage ratio	$\frac{\text{Total allowances to cover impairment losses on loans and advances to customers, customer guarantees and customer commitments granted}}{\text{Credit impaired loans and advances to customers, customer guarantees and customer commitments granted}}$	The total coverage ratio is a fundamental metric in the financial sector. It reflects the level of provisions as a percentage of the credit impaired assets. Therefore it is a good indicator of the entity's solvency against customer defaults both present and future.
Cost of risk	$\frac{\text{Allowances for loan-loss provisions over the last 12 months}}{\text{Average loans and advances to customers over the last 12 months}}$	This ratio quantifies loan-loss provisions arising from credit risk over a defined period of time for a given loan portfolio. As such, it acts as an indicator of credit quality.

A. Total risk = Total loans and advances and guarantees to customers (including credit impaired assets) + contingent liabilities that are credit impaired.

Credit risk (I) (EUR million and %)	2022	2021	2020
NPL ratio	3.08%	3.16%	3.21%
Credit impaired loans and advances to customers, customer guarantees and customer commitments granted	34,673	33,234	31,767
Gross loans and advances to customers registered under the headings 'financial assets measured at amortized cost' and 'financial assets designated at fair value through profit or loss' classified in stage 3 (OCI), excluding POCl (Purchased or Originated Credit Impaired) that is currently impaired	32,617	31,288	30,318
POCl exposure (Purchased or Originated Credit Impaired) that is currently impaired	271	358	497
Customer guarantees and customer commitments granted classified in stage 3	1,776	1,578	941
Doubtful exposure of loans and advances to customers at fair value through profit or loss	9	10	11
Total risk	1,124,121	1,051,115	989,456
Impaired and non-impaired gross loans and advances to customers	1,058,688	995,646	939,795
Impaired and non-impaired customer guarantees and customer commitments granted	65,433	55,469	49,662



Credit risk (II) (EUR million and %)	2022	2021	2020
Total coverage ratio	68%	71%	76%
Total allowances to cover impairment losses on loans and advances to customers, customer guarantees and customer commitments granted	23,418	23,698	24,272
Total allowances to cover impairment losses on loans and advances to customers measured at amortized cost and designated at fair value through OCI	22,684	22,964	23,577
Total allowances to cover impairment losses on customer guarantees and customer commitments granted	734	734	695
Credit impaired loans and advances to customers, customer guarantees and customer commitments granted	34,673	33,234	31,767
Gross loans and advances to customers registered under the headings 'financial assets measured at amortized cost' and 'financial assets designated at fair value through profit or loss' classified in stage 3 (OCI), excluding POCI (Purchased or Originated Credit Impaired) that is currently impaired	32,617	31,288	30,318
POCI exposure (Purchased or Originated Credit Impaired) that is currently impaired	271	358	497
Customer guarantees and customer commitments granted classified in stage 3	1,776	1,578	941
Doubtful exposure of loans and advances to customers at fair value through profit or loss	9	10	11
Cost of risk	0.99%	0.77%	1.28%
Underlying allowances for loan-loss provisions over the last 12 months	10,509	7,436	12,173
Allowances for loan-loss provisions over the last 12 months	10,836	7,436	12,431
Net capital gains and provisions impact in allowances for loan-loss provisions	-327	—	-258
Average loans and advances to customers over the last 12 months	1,059,872	968,931	952,358

NPL ratio by business area (EUR million and %)

	2022			2021		
	%	Credit impaired loans and advances to customers, customer guarantees and customer commitments granted	Total risk	%	Credit impaired loans and advances to customers, customer guarantees and customer commitments granted	Total risk
Europe	2.37	15,186	639,996	3.12	19,822	636,123
Spain	3.27	9,598	293,197	4.72	13,403	283,953
United Kingdom	1.21	3,059	253,455	1.43	3,766	262,869
Portugal	2.99	1,247	41,755	3.44	1,442	41,941
Poland	3.80	1,268	33,350	3.61	1,210	33,497
North America	3.03	5,629	185,614	2.42	3,632	149,792
US	3.25	4,571	140,452	2.33	2,624	112,808
Mexico	2.32	1,047	45,107	2.73	1,009	36,984
South America	6.20	10,381	167,348	4.50	6,387	141,874
Brazil	7.57	7,705	101,801	4.88	4,182	85,702
Chile	4.99	2,384	47,811	4.43	1,838	41,479
Argentina	2.08	122	5,844	3.61	198	5,481
Digital Consumer Bank	2.06	2,583	125,339	2.13	2,490	116,989

Coverage ratio by business area (EUR million and %)

	2022			2021		
	%	Total allowances to cover impairment losses on loans and advances to customers, customer guarantees and customer commitments granted	Credit impaired loans and advances to customers, customer guarantees and customer commitments granted	%	Total allowances to cover impairment losses on loans and advances to customers, customer guarantees and customer commitments granted	Credit impaired loans and advances to customers, customer guarantees and customer commitments granted
Europe	51.8	7,871	15,186	49.4	9,800	19,822
Spain	51.0	4,890	9,598	51.4	6,887	13,403
United Kingdom	33.8	1,033	3,059	25.8	971	3,766
Portugal	79.3	990	1,247	71.7	1,033	1,442
Poland	74.0	938	1,268	73.9	895	1,210
North America	93.3	5,250	5,629	134.9	4,901	3,632
US	90.3	4,127	4,571	150.3	3,943	2,624
Mexico	106.6	1,116	1,047	95.0	958	1,009
South America	76.0	7,886	10,381	98.3	6,279	6,387
Brazil	79.5	6,128	7,705	111.2	4,651	4,182
Chile	56.3	1,343	2,384	63.3	1,164	1,838
Argentina	180.4	220	122	153.8	305	198
Digital Consumer Bank	92.8	2,397	2,583	107.8	2,684	2,490

Cost of risk by business area (EUR million and %)

	2022			2021		
	%	Underlying allowances for loan-loss provisions over the last 12 months	Average loans and advances to customers over the last 12 months	%	Underlying allowances for loan-loss provisions over the last 12 months	Average loans and advances to customers over the last 12 months
Europe	0.39	2,396	612,142	0.39	2,293	591,703
Spain	0.61	1,618	265,051	0.92	2,320	251,155
United Kingdom	0.12	316	262,973	(0.09)	(245)	258,636
Portugal	0.04	17	40,286	0.09	38	39,805
Poland	1.43	440	30,721	0.67	200	29,777
North America	1.49	2,538	169,980	0.93	1,210	130,635
US	1.35	1,744	128,834	0.43	419	97,917
Mexico	1.95	788	40,348	2.44	791	32,434
South America	3.32	5,041	151,705	2.60	3,251	125,089
Brazil	4.79	4,417	92,188	3.73	2,715	72,808
Chile	0.93	399	42,953	0.85	341	40,344
Argentina	2.91	132	4,541	3.01	140	4,667
Digital Consumer Bank	0.45	544	119,524	0.46	527	115,156



Other indicators

The market capitalization indicator provides information on the volume of tangible equity per share. The loan-to-deposit ratio (LTD) identifies the relationship between net customer loans and advances and customer deposits, assessing the proportion of loans and advances granted by the Group that are funded by customer deposits.

The Group also uses gross customer loan magnitudes excluding reverse repurchase agreements (repos) and customer deposits excluding repos. In order to analyse the evolution of the traditional commercial banking business of granting loans and capturing deposits, repos and reverse repos are excluded, as they are mainly treasury business products and highly volatile.

Ratio	Formula	Relevance of the metric
TNAV per share (Tangible net asset value per share)	$\frac{\text{Tangible book value}^A}{\text{Number of shares excluding treasury stock}}$	This is a very commonly used ratio used to measure the company's accounting value per share having deducted the intangible assets. It is useful in evaluating the amount each shareholder would receive if the company were to enter into liquidation and had to sell all the company's tangible assets.
Price to tangible book value per share (X)	$\frac{\text{Share price}}{\text{TNAV per share}}$	This is one of the most commonly used ratios by market participants for the valuation of listed companies both in absolute terms and relative to other entities. This ratio measures the relationship between the price paid for a company and its accounting equity value.
LTD (Loan-to-deposit)	$\frac{\text{Net loans and advances to customers}}{\text{Customer deposits}}$	This is an indicator of the bank's liquidity. It measures the total loans and advances to customers net of loan-loss provisions as a percentage of customer deposits.
Loans and advances (minus reverse repos)	Gross loans and advances to customers minus reverse repos	In order to aid analysis of the commercial banking activity, reverse repos are excluded as they are highly volatile treasury products.
Deposits (minus repos)	Customer deposits minus repos	In order to aid analysis of the commercial banking activity, repos are excluded as they are highly volatile treasury products.
PAT + After tax fees paid to SAN (in Wealth Management & Insurance)	Net profit + fees paid from Santander Asset Management and Santander Insurance to Santander, net of taxes, excluding Private Banking customers	Metric to assess Wealth Management & Insurance's total contribution to Group's profit.

A. Tangible book value = Stockholders' equity (excl. minority interests) - intangible assets.

Others (EUR million and %)	2022	2021	2020
TNAV (tangible book value) per share	4.26	4.12	3.79
Tangible book value	70,459	70,346	65,568
Number of shares excl. treasury stock (million)	16,551	17,063	17,312
Price to tangible book value per share (X)	0.66	0.71	0.67
Share price (euros)	2.803	2.941	2.538
TNAV (tangible book value) per share	4.26	4.12	3.79
Loan-to-deposit ratio	101%	106%	108%
Net loans and advances to customers	1,036,004	972,682	916,199
Customer deposits	1,025,401	918,344	849,310
PAT + After tax fees paid to SAN (in WM&I) (Constant EUR million)	2,728	2,486	
Profit after tax	1,179	1,016	
Net fee income net of tax	1,549	1,470	

Impact of exchange rate movements on profit and loss accounts

The Group presents, at both the Group level as well as the business unit level, the real changes in euros in the income statement as well as the changes excluding the exchange rate effect (i.e. in constant euros), as it considers the latter facilitates analysis, since it enables business movements to be identified without taking into account the impact of converting each local currency into euros.

Said variations, excluding the impact of exchange rate movements, are calculated by converting P&L lines for the different business units comprising the Group into our presentation currency, the euro, applying the average exchange rate for 2022 to all periods contemplated in the analysis. The table below shows the average exchange rates of the main currencies in which the Group operates.

Impact of exchange rate movements on the balance sheet

The Group presents, at both the Group level as well as the business unit level, the real changes in euros in the balance sheet as well as the changes excluding the exchange rate effect for loans and advances to customers minus reverse repurchase agreements and customer funds (which comprise deposits and mutual funds) minus repurchase agreements. As with the income statement, the reason is to facilitate analysis by isolating the changes in the balance sheet that are not caused by converting each local currency into euros.

These changes excluding the impact of exchange rate movements are calculated by converting loans and advances to customers minus reverse repurchase agreements and customer funds minus repurchase agreements, into our presentation currency, the euro, applying the closing exchange rate on the last working day of 2022 to all periods contemplated in the analysis. The table below shows the period-end exchange rates of the main currencies in which the Group operates.

Exchange rates: 1 euro/currency parity

	Average		Period-end	
	2022	2021	2022	2021
US dollar	1.051	1.182	1.068	1.133
Pound sterling	0.853	0.859	0.887	0.840
Brazilian real	5.421	6.372	5.650	6.319
Mexican peso	21.131	23.980	20.805	23.152
Chilean peso	916.688	897.123	909.200	964.502
Argentine peso	134.786	112.383	189.116	116.302
Polish zloty	4.683	4.564	4.684	4.597

Impact of inflation on operating expenses

Santander presents, for both the Group and the business units included in the primary segments, the changes in operating expenses, as well as the changes excluding the exchange rate effect, and the changes of the latter excluding the effect of average inflation in 2022. The reason is that the two latter facilitate analysis for management purposes.

Inflation is calculated as the arithmetic average of the last twelve months for each country and, for the regions, as the weighted average of each country comprising the region's inflation rate, weighted by each country's operating expenses in the region. The table below shows the average inflation rates calculated as indicated for each of the regions and countries.

Average inflation 2022

%

Europe	9.1%
Spain	8.4%
United Kingdom	9.0%
Portugal	7.8%
Poland	14.3%
North America	8.0%
US	8.0%
Mexico	7.9%
South America	19.0%
Brazil	9.3%
Chile	11.6%
Argentina	70.7%
Digital Consumer Bank	8.4%
Total Group	11.6%

Risk management and compliance



1. Risk management and compliance overview	422	5. Capital risk	469
1.1 Executive summary and 2022 highlights	422	5.1 Introduction	469
1.2 2022 key achievements	426	5.2 Capital risk management	469
1.3 Santander's top and emerging risks	427	5.3 Key metrics	470
2. Risk management and control model	430	6. Operational risk	471
2.1 Risk principles and culture	430	6.1 Introduction	471
2.2 Key risk types	430	6.2 Operational risk management	471
2.3 Risk and Compliance governance	431	6.3 Key metrics	477
2.4 Management processes and tools	432	7. Compliance and conduct risk	478
2.5 Models & Data unit	436	7.1 Introduction	478
3. Credit risk	437	7.2 Compliance and conduct risk management	478
3.1 Introduction	437	8. Model risk	485
3.2 Credit risk management	437	8.1 Introduction	485
3.3 Key metrics	438	8.2 Model risk management	485
3.4 Details of main geographies	444	8.3 Key metrics	486
3.5 Other credit risk details	450	9. Strategic risk	487
4. Market, structural and liquidity risk	456	9.1 Introduction	487
4.1 Introduction	456	9.2 Strategic risk management	487
4.2 Market risk management	457	10. Climate and environmental risk	488
4.3 Market risk key metrics	460	10.1 Introduction	488
4.4 Structural balance sheet risk management	465	10.2 Climate and environmental risk management	490
4.5 Structural balance sheet risk key metrics	466	10.3 Summary by risk type	496
4.6 Liquidity risk management	467		
4.7 Liquidity risk key metrics	468		
4.8 Pension and actuarial risk management	468		



1. Risk management and compliance

Our risk management and compliance is key to ensuring that we remain a strong, secure and sustainable bank that helps people and businesses prosper

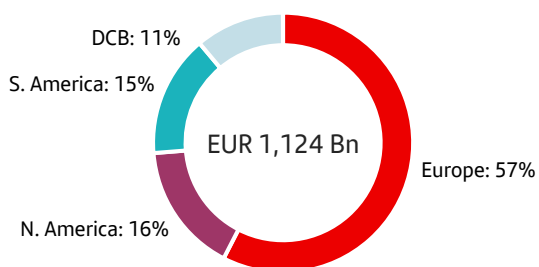
1.1 Executive summary and 2022 highlights

This section outlines Santander’s risk management and risk profile in 2022 based on key risk indicators and their performance. Additional information on each risk type can be accessed using the links provided for each section.

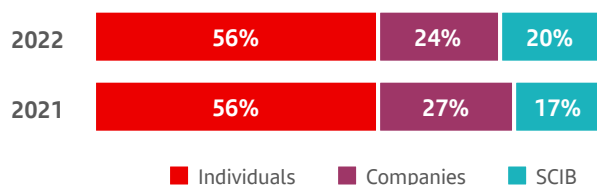
Credit risk [> Section 3](#)

Our proactive risk management and effective control of our portfolios have allowed us to maintain a medium-low risk profile in this uncertain environment.

Total credit risk with customers by region¹



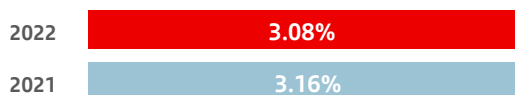
Total credit risk with customers by segment



Despite the increase in the cost of risk mainly due to the uncertainty generated by the macroeconomic environment, the NPL² ratio maintained a positive performance in 2022.

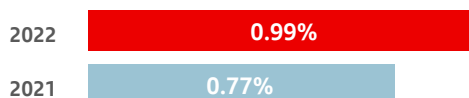
Non-performing loans ratio

Loan growth coupled with positive portfolio performance and portfolio sales drove the NPL ratio down.



Cost of risk³

The ratio was slightly below 100 bp, due to the positive performance of Spain, Portugal and Mexico in the year.



¹ 'Others' not included represent 1% (Corporate Centre).

² Non-performing Loans

³ Cost of risk is the ratio of 12-month loan-loss provisions to average lending on the same period.

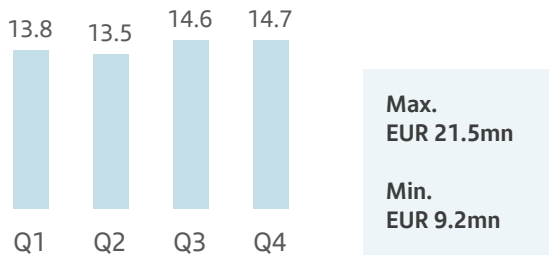
Market, structural and liquidity risk

[> Section 4](#)

Risk levels in trading remained relatively low, in an environment of greater volatility than in 2021.

2022 Avg. Value at Risk (VaR)

EUR million.



VaR remained stable averaging EUR 14 million in the year. It peaked in July 2022 (EUR 21.5 million) due to supply chain disruptions, the rise in interest rates and energy prices.

▼152%

The liquidity ratio (LCR) remained above the regulatory threshold.

We managed liquidity buffers effectively to maintain a sound risk profile (within regulatory limits) and a profitable balance sheet.

Our subsidiaries have a strong balance sheet and a stable funding structure, supported by a large customer deposit base.

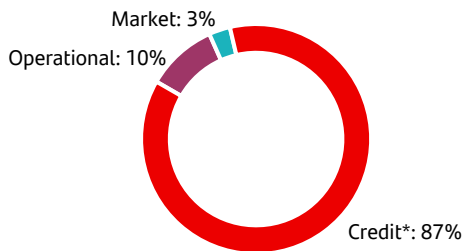
Grupo Santander issued EUR 35,000 million in senior debt and mortgage covered bonds in order to obtain liquidity. This type of issuances has been reactivated within the Eurozone as a result of the current economic conjuncture.

Capital risk

[> Section 5](#)

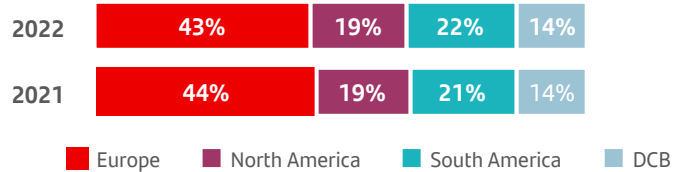
RWA⁴ by risk type

Credit, which is our core business, stands out among RWA.



RWA by region

Diversified and balanced distribution.



DCB: Digital Consumer Bank.
Others not included represent 2% in 2022 and 2021 (Corporate centre).

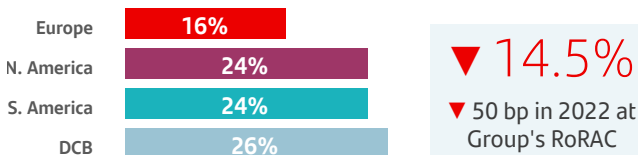
Fully loaded CET1⁵



The CET1 ratio placed at the top of our 11-12% target due to strong organic capital generation through underlying profit and efficient RWA management.

The strength of our diversified retail banking business model is demonstrated by the positive outcome in the eight regulatory stress tests since 2008.

RoRAC⁶



RoRAC at Group level and by geography in 2022 are at levels above the cost of capital and reflect an optimal level of return on capital and value creation for our shareholders. The profit achieved in the year, a solid risk management culture and a balanced geographic and business diversification are the main drivers behind this positive performance.

⁴ Risk weighted assets.
⁵ CET1 in 2021 Include acquisition of SC USA minority interest and Amherst Pierpont Securities completed at the beginning of 2022.
⁶ The Group's total RoRAC includes the operative units and the Corporate Centre, reflecting the Group's economic capital and its return.
(*) Credit risk included counterparty credit risk, securitizations and amounts below the thresholds for deduction.

Operational risk

[> Section 6](#)

Our operational risk profile remained stable in 2022. With the goal of reinforcing controls, during this year our priorities were:

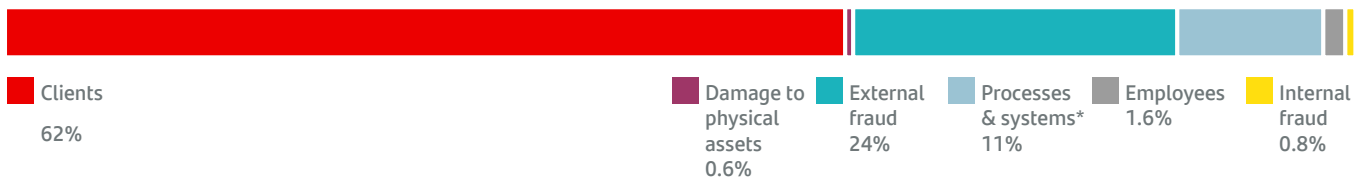


In 2022, we improved our operational risk model by enhancing the risk appetite framework, the holistic risk assessment programme, the assessment methodology of the global cybersecurity transformation plan, as well as the contingency, business continuity and crisis management plans.



Several initiatives to mitigate the most relevant operational risks in 2022 were launched, such as IT, third party, fraud and cyber, and to adapt to regulatory changes, focusing on Operational Resilience, Basel principles related to operational risk, ESG requirements and capital models.

Operational losses by Basel category



(* Processes & systems include the following categories: Execution, delivery and process management, and Business disruption and system failures.

Compliance and conduct risk

[> Section 7](#)

Main initiatives in 2022:



→ Transformation: Continued development of compliance and conduct function strategic transformation plan; exploring Big Data and Machine Learning analysis techniques on voice data from customers and public data from media, support of the digital strategy through: digital channels, Beyond Banking* and limited launch of investment services related to crypto-assets; transformational project to remodel Group's Control Room.

→ More effective process overhaul: homogeneous management methodologies and tools in subsidiaries: Heracles, Capability Maturity Model (CCM), Annual compliance program, product and service approval, common reputational risk reporting tools Group-wide, and strengthening governance through a risk-based approach to oversee our subsidiaries.



→ Compliance & conduct risk management by the first line of defence: We followed the enforcement of international sanctions in response to the war in Ukraine; enhanced control environments for conduct with customers; continuous improvement of reputational risk management and control processes; and participation in climate stress testing and environmental and climate Thematic review by the ECB.

→ Risk culture: Diversity and inclusion initiatives; the General Code of Conduct simplification for employees and other stakeholders; we promoted employee training and awareness as part of our growing commitment to ethics and compliance in corporate culture.

*Non-banking services program that we currently offer in the United Kingdom, especially for individuals and SMEs.

**Model risk****> Section 8**

→ We launched MRM Next, a new strategic plan to manage model risk to strengthen our model risk culture.

→ We continued to enhance our regulatory models - Internal Rating Based Approach (IRB) and Internal Model Approach (IMA) - according to the Basel Committee requirements.

Strategic risk**> Section 9**

→ Strategic management focused on monitoring the macroeconomic consequences of the war in Ukraine, inflationary pressure, monetary and fiscal policies and our transformation initiatives.

→ We made progress with strategy planning, top risk identification and monitoring, business model analysis, new product validation, risk analysis for corporate development transactions and strategic projects.

→ We also optimized reporting to senior management on strategic risk.

Climate and environmental risk**> Section 10**

→ We keep integrating climate and environmental risk into our key risk management processes. A quantitative metric was designed for the energy sector complementing our metric for thermal coal, which will be included in our risk appetite statement in 2023.

→ In 2022, we coped with strict supervisory demands as stress testing and Thematic Review, involving several risk and compliance factors. Overall, we have completed these exercises satisfactorily, and action plans were implemented to cover the improvement points detected.

→ We broadened the scope of credit risk materiality assessments and made them more granular. We began preliminary materiality assessments for climate-related environmental risk to identify credit portfolios that may have a potential impact in terms of biodiversity.

→ We enhanced credit approval procedures, with tighter risk policy for sensitive sectors and activities. In particular, the Risk function developed a target operating model called The Climate Race, which aligns credit approval procedures across the Group regarding climate and environmental risk.

Grupo Santander's risk profile could be affected by the macroeconomic environment, regulation and competition.

This financial information, prepared with the same Group-wide principles, aggregates figures for our various markets and business subsidiaries, based on accounting data and internal management system reporting.

The segments shown are differentiated by the geographical area where profits are earned and by type of business. The financial information of each reportable segment is prepared by aggregating the figures for the Group's various geographical areas and business units. The information relates to both the accounting data of the units integrated in each segment and that provided by internal management information systems. In all cases, the same general principles as those used in the Group are applied.

Additional information on Grupo Santander's provisions, legal proceedings, taxes and other risks, are available in the notes to the consolidated financial statements.



For more details on segments, see section [4.1 Description of segments](#) of the 'Economic and financial review' chapter.



1.2 2022 key achievements

Our risk and compliance functions are forward-looking and proactive. They follow a straightforward, robust strategy, reinforced with lessons learned from the crisis that enable us to be better prepared.

Management of risk from the war in Ukraine	Operational excellence	Creating value	New ways of working
<ul style="list-style-type: none"> → Special situations protocol activated, with numerous initiatives on policy, customer support, donations, risk appetite and other matters → Tighter monitoring of risk and enhanced reporting on key indicators and most affected sectors/customers → Sanctions management strengthened to meet regulatory requirements and support decision-making – 400% escalation increase → Deep dive on Ukraine war and related reputational impacts for the Group. Implementation of Group wide mitigation actions 	<ul style="list-style-type: none"> → Customer-centric, with a simpler onboarding value proposition → Greater digitalization and automation of credit risk to boost customer experience ('Time to yes'/'Time to cash') → Progress on the implementation of One FCC across prioritised units → Risk and compliance data strategy execution (data lakes) → Leveraging hubs in regions to improve risk management effectiveness: <ul style="list-style-type: none"> ◦ Cybersecurity in Europe to enhance monitoring and alert management ◦ Control room enhancement for further implementation ◦ Model validation in North America → ECB's Climate stress test and the SSM's Thematic review completed → Consolidation in de-risking our balance sheet in key countries 	<ul style="list-style-type: none"> → Capital accuracy: Optimal model enhancement and other initiatives → Successful management of mounting regulatory activity → Cost of risk kept below 1%, even amid unprecedented macroeconomic crisis of rising inflation, interest rates and commodity-prices → Canal Abierto¹ further embedded by regulatory compliance Function, with policy rollout across units → Boost advanced analytics techniques in risk management: conduct and customer voice, reputational and credit risk → Enhanced subsidiary oversight in reputational risk and best practices sharing 	<ul style="list-style-type: none"> → Model Risk reinforced with a unique platform (Monet) & all units with a single way of working through a unique policy → Greater flexibility, with an average of 60% remote working, plus permanent hot-desking → Agile initiatives and new visualization and collaborative tools → Redefined behaviours and positive risk culture promoted across the Group

1. Grupo Santander's whistleblowing channel, through which employees can report financial and accounting wrongdoing as well as violations of the General Code of Conduct and our corporate behaviours anonymously and confidentially.



1.3 Santander's top and emerging risks

Through the top risks exercise, we evaluate the most relevant and emerging risks, which could affect our strategic plan, under different theoretical stress scenarios with low likelihood of occurrence. In this way, we identify, evaluate and monitor those risks that may have a significant impact on our profitability, solvency or strategy. Proactive risk management is essential to avoid possible negative impacts and deviations from the established objectives, which, if they occur, would be mitigated with previously defined action plans.

The identification of our top risk involves both the first and second line of defence, in which both the subsidiaries and the corporate centre participate. The risks identified are integrated into the idiosyncratic scenarios of the Group's Internal Capital Adequacy Assessment Process (ICAAP), the Internal Liquidity Adequacy Assessment Process (ILAAP), and recovery and resolution plans.

In 2022, most top risk stemmed acutely from inflation pressure, the war in Ukraine, new government levies on banks, climate change and environmental risk management. Here are some core risks and associated action plans:

Macroeconomic and geopolitical environment

Some of the many macroeconomic and geopolitical factors posing risk to our strategy include changes in monetary and fiscal policy, geopolitical instability, the war in Ukraine, and commodity prices. We analyse situations that we do not include in our base scenario because of their low likelihood (per our top risk and emerging risk methodology described above); however, they can become global risk scenarios that may affect particular areas where we operate in Europe and the Americas. For example:

- Global monetary policies overreaction if inflationary pressures do not recede, which could lead to lower-than-expected growth.
- Industrial impact in Europe, in the event of power supply distortions.
- Increased financial stress due to the decline in asset prices, higher risk premiums and a recalculation of risk-free rates of return, with higher cost of risk as a result of tight monetary policy coupled with expansionary fiscal plans.
- Geopolitical uncertainty due to a possible escalation of the war, growing Euroscepticism, among other geopolitical developments in Europe.

Macroeconomic and geopolitical uncertainty can hinder our growth, lower asset quality and slow down one or many of our markets, potentially impacting our profitability. And because it can also affect our customers' income, losses could mount up if we couldn't recover loans.

Economic volatility can make our estimates seem inaccurate, which in turn may affect the reliability of the process, and the adequacy of our loan-loss provisions seem insufficient.

In response to this uncertainty, Grupo Santander has robust risk policies and processes and a proactive risk management that allow our risk profile to remain within the limits in alignment with Group's risk appetite.

We remain resilient against macroeconomic risk because of our geographical diversification and a wide range of products. The mitigating measures we took in 2022 helped reduce risk severity. They include:

- frequent monitoring meetings to review risk profile, business trends, markets and macroeconomic conditions;
- playbooks designed and implemented to ensure a quick, forward-looking and proactive response to changing circumstances;
- ensuring the means to proactively detect credit impairment and get customers the support they need through specific solutions, identifying better vulnerable customers in new context, with Collections and Recoveries support;
- helping our customers develop sustainable, energy-efficient alternatives; and
- ALCO and Market committee meetings to monitor structural and FX risk and the coverage of our capital ratios in all major currencies.

Growing legislative and regulatory pressure

With a unique business model based on maintaining a significant market share in our core geographies, Grupo Santander is subject to varied regulation. Our status of global systemically important bank (G-SIB) implies high capital requirements that could intensify with subsequent reform or if supervisors revise current requirements. New laws, like levies on credit institutions, that impact on our business and relations with customers could stymie profitability and return on equity, increase funding costs, and undermine our resilience to economic disruption and ability to extend credit.

Many legislative or regulatory action may result in new requirements or more stringent standards, particularly with respect to capital and liquidity. This could directly affect the Group or our subsidiaries, negatively impacting our solvency and/or liquidity levels.

The key mitigation measures for this risk are:

- Initiatives included in the capital plan, in line with the continuous improvement of our regulatory models within the IRB 2.1 project framework (project for the implementation of the Group's EBA Repair Program), as well as to mitigate the possible impacts of Basel guidelines.
- Multidisciplinary working groups to anticipate outcomes of these measures, in collaboration with the banking associations and through the dialogue with regulators and other stakeholders.

Climate and environmental risk

Climate and environmental risk continues to raise concern for several reasons: (i) the macroeconomic and geopolitical situation (e.g. the war in Ukraine, economic slowdown, new energy landscape, etc.) adds pressure to meet commitments and targets in support of a transition to a low-carbon economy; (ii) more climate-aware customers, shareholders and investors; (iii) banks in the US and elsewhere are assessing legal and reputational risk in belonging to platforms of climate-material sectors; (iv) the threat of biodiversity loss to the economy; and (v) new requirements in policies and institutional frameworks.



The transition and physical risks associated with climate change can have negative implications for the Group because of:

- higher credit exposure and companies with inconsistent business models with low-carbon economic transition;
- operational risk, since severe weather can directly disrupt business and operations both for our customers and for the Group;
- challenges to meet several jurisdictions' supervisory expectations, which became more substantial, precise and extensive in 2022, with stricter timescales, and could harm our green product offering subject to different rules and taxonomies under development;
- damaged reputation and relations with customers due to our practices and decisions in relation to climate change and the environment, or due to the practices or engagement of our customers in sectors and initiatives linked to causing or worsening climate change; and
- a lack of hard, quality data on climate change to be able to give reliable, accurate reporting.

To tackle these challenges, the Group has mitigation plans. In particular:

- Because climate risk is intertwined with other core risk types, we continue to integrate climate risk into our strategy and management through better processes, robust governance, internal taxonomy (based on the EBA's Pillar III guidelines), risk appetite statement, stress testing, ESG policy, risk profile assessments, etc.
- In alignment with other areas, risk and compliance advise on efficient green product design and transition plans to help our customers go green (or greener).
- Our climate stress testing and scenario analysis, such as those developed in the ECB's 2022 Climate Stress Test and Thematic Review on Climate & Environmental Risk, heightened our understanding of exposure to this risk and provided greater insight to potentially improve risk management and decision-making.
- Multidisciplinary working groups to anticipate outcomes, in collaboration with banking associations and regulators and other stakeholders.

The automotive industry

As the auto industry transforms in response to gradual changes in legislation, technology, climate and consumption, it has become a more significant source of risk to the Group in recent years.

This transformation could affect our auto finance business (EUR 160 billion of exposure in 2022), which is mainly distributed in SCIB, Digital Consumer Bank and SC USA), in view of:

- a transition from fuel to electric engines and environmental aspects related to emissions and transition risk from political and regulatory decisions (e.g. traffic restrictions in city centres for highly polluting cars);
- growing customer preferences for car leasing, subscription, car sharing and other services instead of vehicle ownership;

- greater market concentration in certain manufacturers, distributors and other agents;
- more online sales channels; and
- self-driving vehicles.

The auto industry has also suffered with supply chain disruption and shortages of batteries, semi-conductors and others in the wake of the pandemic and the war in Ukraine.

In an adverse scenario, the auto lending business could be impacted by a short supply of new vehicles affecting guarantees, residual used car value and loan delinquency.

To manage such threats, the Group:

- continuously monitors auto loan portfolios and dealers, used car prices (especially diesel vehicles), forward-looking analyses of the auto market, check provisions adequacy, commercial focus on leasing, alliances, fleet financing, and innovative product development;
- implements specific plans to address particular concerns: profitability in agreements with manufacturers and campaigns to support distributors; loyalty programmes to boost renewals; rentals and leases, car subscription; digital solutions; plans to lower inventory; used car sales; 'buy now, pay later' (BNPL) and market penetration by insurers; and
- aids the green transition, decarbonization of car fleets and installation of electric vehicle charging stations in the auto industry.

A transforming auto industry could create many opportunities for the Group to:

- help develop the supply of new electric and low or zero-emissions vehicles, which would be positive for the environment, lower emissions and transition risk stemming from public policies and regulation (e.g. aid for charging stations, better legislation to develop electric vehicle infrastructure and traffic restrictions for highly polluting vehicles).
- create new business models with ecological, smart and autonomous vehicles; support competitiveness and investment in the industry, including new mobility companies, with the support of the banking sector.
- capitalize on the growing demand for logistics services, fast delivery and online shopping that suggests that commercial and industrial vehicle sales will rise.
- public support measures for financing of new fleets with low or zero emissions, for example through European funds.



Central bank digital currencies (CBDCs), stablecoins and disintermediation

Digital versions of fiduciary currencies issued by central banks and stablecoins could have potential impacts on the financial system, such as replacing or diminishing bank's current accounts, which could affect the volume, structure, and cost of funding for commercial banks.

Most central banks are exploring issuing digital currencies (CBDCs), through pilot projects focusing in this field. The focus is, above all, on retail CBDCs that offer citizens a digital, central bank liability for payments. Most central banks are yet to make a decision on CBDCs; but in Brazil, China and Sweden, they are already running tests. The ECB is making significant headway with the digital euro. According to the ECB's roadmap, the ECB could be ready to take a decision on whether to issue a digital euro by the end of 2026.

In addition, both CBDCs and stablecoins could be seen as a new standard of payment and bank deposits, which could inadvertently increase disintermediation across the financial system. This could exacerbate financial instability in times of economic stress if bank deposits are substituted with CBDCs, which could be seen as more secure. It is not clear what services and business models banks and other payment providers will be able to provide based on these instruments.

The benefits of digital currencies, also unclear, will depend on each country or region's payments system, economic development, financial inclusion and consumer habits. CBDCs could open up the opportunity to develop innovative digital asset and payment services.

To mitigate CBDCs risk, the Group:

- participates in the debate on CBDCs with domestic and foreign authorities in order to explain their risk to banks and to financial stability (as well as the importance of mitigating it), and make sure they will enable banks to continue creating value for customers;
- monitors central banks' projects, stablecoin markets and consumer behaviour; and
- participates in multidisciplinary working groups with banking associations and regulators to anticipate outcomes.



2. Risk management and control model

Our risk management and control model is underpinned by common principles, a solid risk culture, robust governance and advanced management processes on risk factors

2.1 Risk principles and culture

The principles on which Grupo Santander's risk management and control are based are detailed below. They take into account regulatory requirements, best market practices and are mandatory:

- 1. All employees are risk managers** who must understand the risks associated with their functions and not assume risks that will exceed the Group's risk appetite or have an unknown impact.
- 2. Senior managers** must make sure we keep our risk profile within risk appetite limits, with consistent risk conduct, action, communications, and oversight of our risk culture.
- 3. Independent risk management and control functions**, according to our three lines of defence model (See section [2.3 'risk and compliance governance'](#)).
- 4. We take a forward-looking, comprehensive approach** towards all businesses and risk types.
- 5. We keep thorough and timely reporting** to properly pinpoint, assess, manage and disclose risks.

Risk culture - Risk Pro

The Group's risk culture, which is called Risk Pro (or 'I AM RISK' in the UK and the US), is a core element of both our corporate culture, The Santander Way, and our purpose of helping people and businesses prosper.

What Risk Pro comes down to is each employee's accountability for the risks inherent in their activities and our contribution to the adequately identify, assess and manage all risks.



For more details, see the section '[A strong and inclusive culture. The Santander Way](#)' of the 'Responsible Banking' chapter.

2.2 Key risk types

Grupo Santander's risk classification is based on our corporate risk framework and includes (for further information, each risk type definition can be accessed using the links provided):



Environmental and climate-related risk drivers are considered as factors that could impact the existing risks in the medium-to-long-term.

2.3 Risk and compliance governance

Our risk and compliance governance structure allows us to conduct effective oversight of all risks in line with our risk appetite. It stands on a model of three lines of defence, a structure of committees and strong Group-subsiary relations strengthened by our risk culture, Risk Pro.

Lines of defence

Our model of three lines of defence effectively manages and controls risks:

- 1st

Formed by business and support areas, which are primarily accountable for managing the risk exposure they originate, recognizes, measures, monitors and reports on risks according to risk management policies, models and procedures. Risk origination must be consistent with the approved risk appetite and related limits.
- 2nd

Comprised by risk and compliance & conduct functions, independently oversees and challenges risk management at the first line of defence to make sure we keep risks within the risk appetite limits approved by senior management and promote a robust risk culture in the Group.
- 3rd


Internal audit function, which is fully independent to give the board and senior managers assurance of high-quality and efficient internal controls, governance and risk management to preserve our value, solvency and reputation.

Risk, compliance & conduct, and internal audit are sufficiently separate and autonomous functions, with direct access to the board and its committees.

Risk and compliance committees' structure

The board of directors has final oversight of risk and compliance management and control promoting a sound risk culture and reviewing and approving risk appetite and frameworks, with support from its risk, regulation and compliance committee and its executive committee.

The Group's risk and compliance governance keeps risk control and risk-taking areas separated.

 For more details, see section [4.8 'Risk supervision, regulation and compliance committee activities in 2022'](#) on 'Corporate governance' chapter.

The **Group chief risk officer (Group CRO)**, who leads the application and execution of our risk strategy and promotes proper risk culture, is in charge of overseeing all risks, as well as challenging and advising business lines on risk management.

The **Group chief compliance officer (Group CCO)**, who handles compliance risk and leads the application and execution of the compliance and conduct risk strategy and provides the Group CRO with a complete overview on the situation of risks being monitored.

The Group CRO and the Group CCO report directly to both the risk supervision, regulation and compliance committee and the board of directors.

Board level:	Board of directors		
	Risk management	Risk control	
	Executive committee	Risk supervision, regulation and compliance committee	
Executive level:	Executive risk committee (ERC)	Risk control committee (RCC)	Compliance and conduct committee
Chair:	CEO	Group CRO	Group CCO
Frequency:	Weekly	Monthly	Monthly
Fora:	<ul style="list-style-type: none"> • Model approval forum • Risk proposal forum 	<ul style="list-style-type: none"> • Market, structural, liquidity and capital risk control forum • Credit risk control forum • Provisions forum 	<ul style="list-style-type: none"> • Corporate product governance forum • Financial crime compliance forum • Reputational risk forum



The executive risk, risk control and compliance and conduct committees (described below) are executive committees with powers delegated from the board.

Executive risk committee (ERC)

The ERC manages risk with board-given authority to accept, amend or escalate actions and transactions that may pose significant risk to the Group. It makes the highest-level risk decisions, mindful of risk appetite. It is formed by executive directors and other senior managers from the risk, finance and compliance & conduct functions. The Group CRO can veto the committee's resolutions.

Risk control committee (RCC)

The RCC, which provides a holistic overview of risk, makes sure business units are managing risk within risk appetite. It also identifies, monitors and assesses the impact of current and emerging risks on the Group's risk profile. It is formed by senior officers from the risk, compliance & conduct, finance and accounting & management control functions, among others. Subsidiary-level CROs participate on a regular basis to report to the committee on risk profile.

Compliance and conduct committee

The committee monitors and reviews compliance and conduct risk management. It also oversees corrective measures for new risks and risks detected among management-related deficiencies. It is formed by senior managers representing the compliance & conduct, risk and accounting and management control functions, among others. The chair holds the casting vote over the committee's resolutions.

Executive-level committees delegate some duties to management and control fora and meetings (see table above) that:

- inform the Group CRO, the Group CCO, the risk control committee, and the compliance and conduct committee if risks are being managed within risk appetite;
- regularly monitor each key risk type; and
- oversee measures to meet supervisors and auditors' expectations;

The risk and compliance & conduct functions' internal regulation effectively creates the right environment to manage and control all risk types.

Grupo Santander can also implement extra governance measures for special situations, as it did with Brexit and the covid-19 crisis. Since the beginning of the war in Ukraine, we strengthened the monitoring of all risks, with special attention to the situation in Poland, monitoring of macroeconomic performance, vulnerable sectors/customers, cybersecurity, among other. In addition, the compliance team have continuously reviewed the application of the sanctions. Santander has no presence in, or hardly any direct exposure to, Russia and Ukraine. Our special situations governance enabled the Group to remain resilient against the consequences of the war in Ukraine.

The Group's relationship with its subsidiaries

Grupo Santander's subsidiaries have a model for managing risk, compliance and conduct that is consistent with the frameworks approved by the group's board of directors, which they adhere to through their own boards and can only adapt to higher standards according to local law and regulation. Furthermore, the Group's aggregate oversight area advises subsidiaries on internal regulation and operations. This reinforces a common risk management model across Santander.

In 2022, we continued to build on our Group-subsidiaries' model through a regional approach, benefiting from the Group's global scale to find synergies under a common operating and platform model; to streamline processes; and tighten control mechanisms to grow our business.

The Group CRO, the Group CCO and regional heads of risk are involved in appointing, setting objectives for, reviewing and compensating their country-unit counterparts to evaluating that risks are adequately controlled. Each subsidiary's CRO/CCO interacts regularly with the regional head of risk, the Group CRO and the Group CCO in regional or country control meetings.

Local and global risk and compliance areas also meet to address special matters. Country and regional units work closely to effectively strengthen group-subsidiary relations through these common initiatives:

- restructuring based on subsidiary benchmarks, strategic vision, and advanced risk management infrastructures and practices.
- exchange of best practices that will strengthen processes, drive innovation and result in a quantitative impact.
- search for talent in risk and compliance teams with internal mobility through the global risk talent programme and strong succession plans.



For more details on our relationship with our subsidiaries, see section 7. 'Group structure and internal governance' of the 'Corporate Governance' chapter.

2.4 Risk management processes and tools

Grupo Santander has these processes and tools to carry out effective risk management:

Risk appetite and structure of limits

Risk appetite is the aggregate level and types of risk we deem prudent for our business strategy, even in unforeseen circumstances. In Grupo Santander, these principles influence risk appetite:

- **Risk appetite is part of the board's duties.** It prepares the risk appetite statement (RAS) for the whole Group every year. In a cascading down process, each subsidiary's board also sets its own risk appetite.
- **Comprehensiveness and forward-looking approach.** Our appetite includes of all material risks that we are exposed to and defines our target risk profile for the current and medium term with a forward-looking view considering stress scenarios.

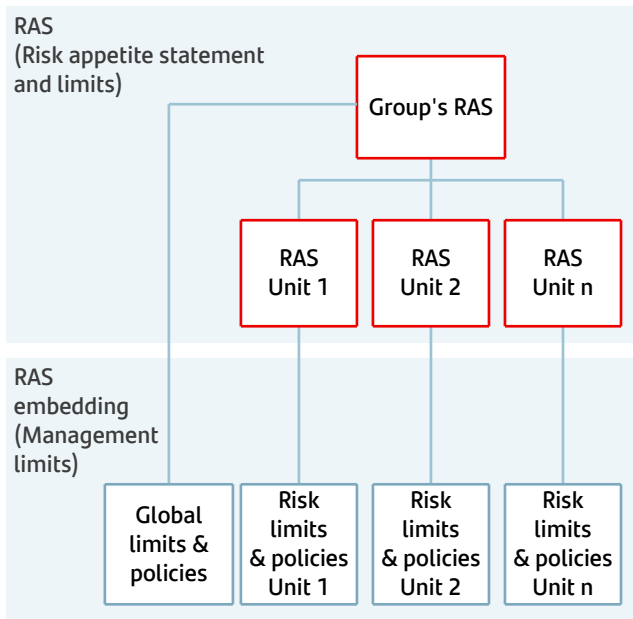
To promote that all material risks are adequately represented, we use corporate methodologies to identify and assess the risk to which we are exposed to and are inherent to our activities (top risks and risk control self-assessment- RCSA- among others).



For more details on these exercises see sections 'Management and control model' [6.2 Operational risk management](#) and [1.3 Santander's top and emerging risks](#).

Additionally, specific workshops are held with the specialized first and second lines for each risk type, to review and enhance the risk appetite metrics.

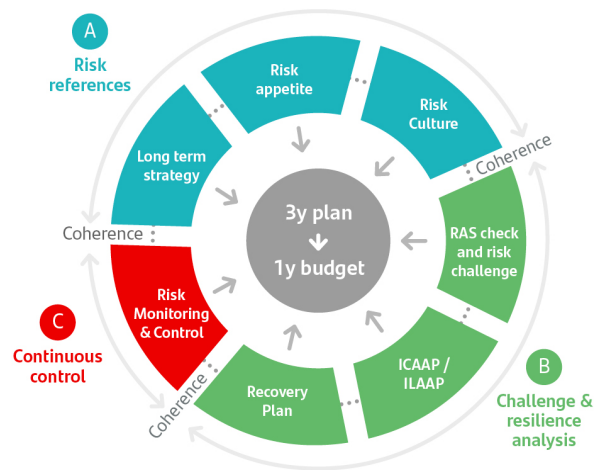
- **Common standards embedded in the day-to-day risk management.** The Group shares the same risk appetite model, which sets common requirements for processes, metrics, governance bodies, controls and standards. It also ensures an effective and traceable embedding of our appetite into more granular management policies and limits across our subsidiaries.



- **Continuous adaptation** to market best practices, regulatory requirements and supervisors' expectations.
- **Aligning with business plans and strategy.** The risk appetite is a key point of reference for strategic and business planning. We verify that the three-year strategic plans, the annual budget, and capital and liquidity planning are within the limits set in the RAS before we approve them.

We promote that strategic and business plans are aligned with our risk appetite by:

- considering the risk appetite, long-term strategic view and the risk culture when drafting strategic and business plans.
- challenging business and strategic plans against the risk appetite. Misalignments trigger a review of either the three-year strategic plan (to make sure we stay within RAS limits) or risk appetite limits, with independent governance.
- monitoring regularly that we comply with the risk appetite limits. We follow a three lines of defence model for constant oversight, with specialized control functions that report on risk profile and compliance with limits to the board and its committees every month.



Our risk appetite and business model rests on:

- a medium-low, predictable target risk profile, centred on retail and commercial banking, internationally diversified operations and a strong market share;
- stable, recurrent earnings and shareholder remuneration, sustained by a sound base of capital, liquidity and sources of funding;
- autonomous subsidiaries that are self-sufficient in terms of capital and liquidity to ensure their risk profiles will not compromise the Group's solvency;
- an independent risk function and a senior management actively engaged in supporting a robust control environment and risk culture; and
- a conduct model that protects our customers and our Simple, Personal and Fair culture.



The risk appetite is expressed through qualitative statements and quantitative limits and metrics that measure bank's risk profile at present and under stress. Those metrics cover all material risks that we have exposure to, and take into account key risk typologies, according to our corporate risk framework. We articulate them in five axes that provide us with a holistic view of all risks we incur in the development of our business model:

Risk Appetite axes	Key risks									
	Credit risk	Market risk	Liquidity risk	Structural risk	Operat. risk	Financial Crime Risk	Model risk	Reputat. risk	Strategic risk	
P&L volatility	Control of P&L volatility of business plan under baseline and stressed conditions (aligned with ICAAP stress test)									
Solvency	Control of capital ratios under baseline and stressed scenarios (aligned with ICAAP)									
Liquidity	Control of liquidity ratios under base and stress scenarios (aligned with ILAAP)									
Concentration	Control of credit concentration on top clients, portfolios and industries									
Non financial risks	Control on non financial risks aimed to minimize events which could lead to financial loss, operative, technological, legal and regulatory breaches, conduct issues or reputational damage									

Key initiatives in 2022

This year we included new metrics for data management risk and public cloud information in our risk appetite. We enhanced controls and metrics to closely follow our environmental commitments.

Risk profile assessment (RPA)

The identification and evaluation of risks is the cornerstone for its proper management, control and reporting. It encompasses all those processes that raise risks and vulnerabilities, both internal and external, to which the Group is exposed, as well as the quantitative and/or qualitative determination of its relevance. The risk framework defines the key types, which are reviewed annually in the light of the outcome of the Group's main identification and assessment exercises.

We systematically assess the risk profile of the Group and its subsidiaries using a single methodology, RPA, which is based on the fundamental principles of the risk identification and assessment model: accountability, efficiency, comprehensive risk coverage, materiality and decision oriented. The calculation of the risk profile under RPA methodology generates results through a scoring system that classifies the profile into four categories of materiality: 'low', 'medium-low', 'medium-high' and 'high', to make sure the board-approved Group risk appetite remains within medium-low and predictable risk profile.

The risk profile is represented at different levels:

- By risk type, where we measure exposure under base and stressed conditions, mainly through a set of metrics and indicators calibrated with international standards.
- By Group/Unit, which gives an aggregated view of risks that Group and their subsidiaries are exposed, also considering

emerging risks that could impact business planning and strategic objectives.

During 2022, we added new credit and strategic risk metrics to capture ESG criteria in the risk profile to align with our ESG and green finance commitments. We also included early warning indicators and intraday liquidity buffers to make risk profile more forward-looking in an ever-changing environment.

By the end of 2022, the Group's risk profile remains at medium-low, despite pressures from high inflation, rising interest rates and the effects of the war in Ukraine which have impacted most risk types. Nonetheless, our cautious and proactive risk management led to strong profitability and good credit indicators while liquidity risk profile remains strong. The control environment also remained satisfactory.

Scenario analysis

Scenario analyses are an important risk management tool at all levels, since it allows us to periodically assess the resilience of our balance sheet and our capital adequacy under stressful conditions. We use findings to review risk appetite and draw up actions to mitigate expected losses or, if needed, to reduce capital and liquidity.

Scenario analyses also enable senior management to identify and understand the nature and scope of the vulnerabilities to which the Group is exposed to in the development of its business plan.

Our Research department plays a key role in determining scenarios, macroeconomic variables and others that can affect our risk profile in our markets.



To make stress testing more consistent and robust:

- Our three lines of defence and senior management are involved in oversight and governance of scenario analyses.
- The models we develop estimate future metric values (e.g. credit losses).
- Our backtesting and reverse stress challenges model outcomes regularly.
- Our teams contribute with expert opinions and a vast understanding of portfolios.
- And we thoroughly monitor models, scenarios, assumptions, results and mitigating management measures.

In the context marked by the war in Ukraine, scenario analyses have been key for the identification and management of potential impacts, such as, rising inflation, energy crisis and interest rate hikes. During 2022 we improved the ability of foresight to pinpoint lines of action, adapt our strategy and remain solvent. To this end, focus was made on sectoral analysis, for which we developed a methodology and tool for the projection of financial statements of companies allowing us to analyse their behaviour under different macroeconomic scenarios, quantify the impacts of the energy crisis and thus being able to carry out anticipated portfolio management.

We have repeatedly obtained excellent quantitative and qualitative scores in the European Banking Authority's (EBA) stress tests.

How we use scenario analysis

We conduct a systematic review of our risk exposure under base, adverse and favourable scenarios that predict an impact on solvency and liquidity. These exercises are fundamental to our processes:

- **Regulatory exercises** based on instructions from EU and domestic supervisors.
- **Business planning** to help set the Group's risk strategy and profile, with:
 - internal capital and liquidity adequacy assessment processes (ICAAP and ILAAP) that measure capital and liquidity in various scenarios;
 - budget and strategy planning to apply a new risk approval policy, based on the Group's risk profile, specific portfolios and business lines;
 - our annual recovery plan, which specifies which tools Santander could use to survive a severe financial crisis. The plan's financial and macroeconomic stress scenarios have various levels of severity, plus idiosyncratic and systemic events; and
 - risk appetite, with stressed metrics to determine how much risk we can assume.

• **Recurrent risk management** also uses scenario analyses for:

- provisions estimates: Since 1 January 2018, scenario analysis, models and methodologies have covered International Financial Reporting Standards (IFRS 9) requirements;
- regular credit and market risk stress testing that simulate changes in expected losses to estimate required capital and absorb unexpected losses; and



For more details on scenario analysis, see sections [3.2 'Credit risk management'](#), [4.2 'Market risk management'](#) and [4.6 'Liquidity risk management'](#) and Note 53 section ['Expected loss estimation'](#) to the consolidated financial statement.

- climate change scenario analyses, with the scenarios defined by Network for Greening the Financial System (NGFS) and others that we've created to calculate climate change impacts.

In 2022, we participated in the stress tests led by the ECB, classified as a learning exercise within the industry, and will be integrated into the Supervisory Review & Evaluation Process (SREP) exercise. Santander UK has also participated in a similar exercise following the requirements of the Prudential Regulation Authority (PRA). On the other hand, improvements related to environmental and climate-related risks have been carried out in the ICAAP 2022 exercise, where the climate scenario has been integrated into the internal projection methodology.



For more details, see ['Monitoring'](#) in section 10.2 'Climate and environmental risk management' in this chapter

Risk reporting structure

To remain fully abreast of our risk profile, top management gets regular reporting from the Enterprise-wide risk management team on current and future risks so it can make the right decisions in a timely manner.

Reporting covers all risks in our corporate risk framework, with all necessary considerations for their proper review. We issue weekly and monthly reports for senior managers, as well as monthly subsidiary risk reports and detailed overviews of each risk type.

Our risk reporting structure balances data collection, analysis and feedback on forward-looking measures, risk appetite and limits, and emerging risk to give an overview of all risks and make sure information and metrics are high-quality and consistent with the corporate data framework.

We continue to enhance our reporting with simpler, automated processes and tighter controls that adapt to new needs. In 2022, we reported on the macro-economic impact of the war in Ukraine and commodity prices, our measures to support vulnerable customers and continuous monitoring of conflict-related sanctions policies. We included information on strategic initiatives to strengthen new business units and environmental risk management, with a special focus on climate change and other risks.



2.5 Models & Data Unit

In 2022, Santander continued to use data and advanced analytics to develop our business strategy. Strong leadership and connection with business units helped us focus on commercial priorities.

We embed data and models in four ways:

1. Business models. Business heads worked with models teams to pinpoint use cases that could enhance customer experience and stimulate growth. In addition, we have a vast matrix of use cases in all our markets and businesses. We have close to 1,000 cases to attract customers, increase their loyalty and enhance their experience, including the Next Best Offer model in all our regions.
2. Risk models. We developed early warning models that delve deeper into the behaviour of our portfolios to manage them better and boost business units' response. We also continued to work on the IRB 2.1 programme. We submitted EBA Repair Programme models to the ECB and met all regulatory and supervisory expectations.
3. In data, we prioritized managing business units' most valuable data. We enhanced data exchange within and between subsidiaries.
4. In data architecture, we're building a Group-wide 360° view of our customers to boost customer knowledge and offer the products and services they need more effectively.

We use cutting-edge technology, unconventional data and model automation to be more efficient, enhance quality, and tackle our customers' and employees' challenges.

We maintain our commitment to promoting transformation in banking through the responsible use of advanced analytics (machine learning and AI). We took part in a Banco de España study published in June 2022 on explainable machine learning models⁷.

⁷ Accuracy of Explanations of Machine Learning Models for Credit Decisions – Banco de España

3. Credit risk

3.1 Introduction

Credit risk is the risk of financial loss due to the failure to pay or impaired credit of a customer or counterparty Santander has financed or maintains a contractual obligation with. It includes counterparty risk, country risk and sovereign risk. It is our most significant risk in terms of exposure and capital consumption.

3.2 Credit risk management

We take a holistic view of the credit risk cycle, including the transaction, the customer and the portfolio, in order to identify, analyse, control and decide on credit risk.

Credit risk identification facilitates active and effective portfolio management. We classify external and internal risk in each business to adopt any corrective or mitigating measures through:

Planning

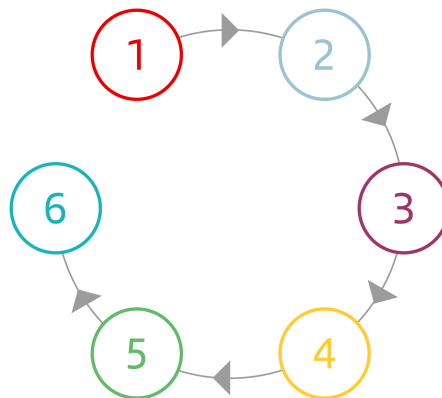
Our planning helps us set business targets and draw up action plans within our risk appetite statement. Business and risk areas prepare holistic strategic commercial plans (SCP) that describe commercial strategies, risk policies, resources and infrastructure for managing credit portfolios.

Risk assessment and credit rating

Risk approval generally depends on the applicant's ability to repay the debt, regardless of any collateral or personal guarantees we require. We review their regular sources of income, including funds and net cash flows from any businesses. Our credit quality assessment models are based on credit rating engines, different in each of our segments, which we monitor to calibrate and adjust the decisions and ratings they assign.

Collections and recoveries

Collections & Recoveries develops a global management strategy based on local economic conditions, business models and other recovery-related particulars, with a full approach and general action lines for our subsidiaries. For effective and efficient recoveries management, the area segments customers based on certain aspects, using new digital channels that help create value.



Scenario analysis

Scenario analysis reveals potential risk in credit portfolios under various macroeconomic conditions so we can develop strategies to prevent future deviations from set targets.

Mitigation techniques

We generally approve risk according to a borrower's ability to make due payment, regardless of any additional collateral or personal guarantees we may require to modulate exposure. We always consider guarantees or collateral as a reinforcement measure in a credit transaction to mitigate a loss if the borrower defaults on their payment obligation.

Monitoring

Our holistic, regular monitoring allows us to track credit quality, spot risk trends early and check credit performance against original targets based on performance forecasts, ratings and other particulars for each customer. In our subsidiaries, local teams use new transaction and CRM databases and advanced early-alarm analytics that help determine an appropriate course of action for each customer according to their assigned rating and segment.



For more details see section '[Credit risk management](#)', in Note 53 to the consolidated financial statement



ATOMiC: Credit risk target operating model

Advanced Target Operating Model in Collaboration (ATOMiC), as part of our new credit risk strategy, has transformed credit risk management, while we continue to work every day. It strengthens our control environment and our ability to anticipate and handle uncertainty caused by complex, unforeseen events (like the Covid-19 crisis or the war in Ukraine) and to adapt to new regulation.

During 2022, ATOMiC focused on keeping advancing in digitalization and innovation (including advanced modelling techniques), on addressing new challenges derived from the political, social and economic instability, technological disruption, regulatory agenda and the transformation towards more sustainable habits, as well as continue to support the Group's five major strategic lines:

1. Customer First: Digital processes and useful solutions to boost customer experience and loyalty and grow our customer base. As part of our New to Bank strategy, Customer First explores new horizons, using new information sources (non-traditional data), digital payment solutions and fraud checks that make it easier for new customers to affiliate with us with less required information.
2. Sustainable profits: Efficient control of costs and exceptions and strong governance to increase volume and expected (risk-adjusted) returns.
3. Responsible banking: Environmental, social and climate change risk embedded in decision-making.
4. Forward-thinking: Stronger planning, forecasting and credit risk data models to anticipate unforeseen events and enhance risk sensitivity analysis, so we can better align decision-making with customer behaviour based on complete information.
5. Effective exploration of opportunities for shared services and fintech.

ATOMiC's a 'living' strategy that we revise annually. In 2022 the Group planned transformation initiatives in subsidiaries with ATOMiC Pro to tackle new challenges based on four key levers: Advanced Target Operating Models (updated TOMs), Business Success Case Studies that help us understand best practices implemented in the Group, KPIs (metrics that help measure the contribution and impacts of ATOMiC on the credit portfolios) and local transformational initiatives that more rapidly promote the implementation of the strategic lines of credit risk in the Group.

Each country unit decides which initiative it undertakes, creating its own plan and targets to achieve the Group's objectives. Local credit risk strategies are defined based on the starting situation of each country, its budgetary needs and readjusting the global objectives to its own reality and particularities. Their strategies combine to define the Group's ambition and strategy regarding credit. ATOMiC positions us better to handle unexpected events, as we constantly strengthen our control framework in terms of:

- risk appetite limits and risk profile;
- forward-looking metrics and concentration limits per customer and sector;

- measures that help determine in advance the risk policies and actions to be implemented with clusters of customer, taking into account the environment (playbooks).
- specific measures for each segment, from individuals to Corporate Investment Banking (CIB), such as sectoral exercises with new macroeconomic scenarios, and review of admission cut-off scores.
- enhanced forecasting, proactive monitoring and recovery management by the Collections & Recoveries area.

3.3 Key metrics

2022 general performance

2022 was a year marred by the worst inflation in decades in Europe and North America, with great uncertainty caused by the war in Ukraine. Our performance was largely affected by monetary policy in our markets. We had to make credit risk control more forward-looking to be ready for future shifts.

The first quarter of 2022 saw the start of war Ukraine. Despite not having a presence or hardly any direct exposure in Russia or Ukraine, the Group tightened monitoring of all risks, with particular attention to Poland, due to its geopolitical situation, and with the customers of every unit whose operations could be affected by the conflict. While the war cast uncertainty and slowed economic activity, our credit portfolio continued to grow, led by our units in Europe and in a South America propped up by a stronger Brazilian real. Credit quality indicators remained stable; delinquency increased in light of the regulatory 'new definition of default' (NDD).

In the second quarter of 2022, we continued to follow geopolitics closely, monitoring key indicators and the most affected customers by the rising prices of energy, oil and commodities. Credit volumes stayed high even though interest rate hikes to curb inflation slowed down the economy, along with global supply chain disruptions, new covid-19 outbreaks and the war's effect on prices. Retail banking activity was moderate, but wholesale banking activity increased. Positive performance in Europe, helped by portfolio sales in Spain and Portugal, set NPLs back on a downward trend.

In the third quarter, the war in Ukraine continued to make waves in the global economy, and the higher energy and commodity prices and interest rates prompted us to run impact analyses to identify the most affected customers. Credit portfolio growth was boosted by corporates and large corporates. Our NPL ratio rose slightly due to loan performance in the Americas, which was partially offset by positive results in Europe and at Digital Consumer Bank (DCB).

In the last quarter, the economy continued to present an inflationary scenario, although economic activity is proving more resilient than expected. The Group continued to closely monitor economic effects from the war in Ukraine in order to take preventive action. Exposure remained stable from previous quarter, slightly declining in Europe due to higher interest rates and offsetting by growth in North America, South America and DCB. The NPL ratio remained stable, driven by good



performance of our portfolios in Europe and DCB together with new non-performing portfolio sales, mainly in Spain.

In December 2022, credit risk with customers rose 7%, like-for-like, from 2021, in part because the currencies in our core markets increased in value and the consolidation of Amherst Pierpont Securities (APS) since April 2022. Still, all core subsidiaries grew in local currency.

Our credit risk remained diversified, with a strong balance between mature and emerging markets: Europe⁸ (57%), South America (16%), North America (15%) and Digital Consumer Bank (11%).

Loan book growth offset the rise of credit impaired loans to EUR 34,673 million (+4.3% vs 2021) and lowered our NPL ratio to 3.08% (-8 bp vs 2021).

The Group recognized loan-loss provisions of EUR 10,509 million in compliance with IFRS 9, which were 41.3% higher from the year ended in December 2021. The pressure from the macroeconomic environment led to build additional provisions, mainly in Spain, the UK and the US, and higher provisions in Brazil (driven by unsecured individual portfolio performance and a single name in SCIB in the fourth quarter) and in Poland (due to CHF mortgages), which have been netted by the still good behaviour in the North American and the DCB portfolios.

Santander's loan-loss allowances totalled EUR 23,418 million. This brought our NPL coverage ratio to 67.5%, down from 71.3% in December 2021. At the end of 2022, approximately 35.4% of net loans to customers were mortgages to individuals, which by and large are found in Spain and the UK and consist of low-risk home mortgages, with low NPL ratios. A low-risk profile means fewer losses.

All support measures (moratoria) that the Group took in response to the covid-19 pandemic have expired, with positive behaviour thanks to economic recovery in 2021, and improved sanitary-health conditions in our main geographies. Government liquidity programmes also remained in force in 2022, of which 77% of total credit granted was in Spain (77% was ICO-secured), and 12% of total credit was in the UK, with 98% government-secured.

In order to relief the mortgage payment burden for vulnerable customers after interest rates increase, the Group is following the government measures launched by Spain, Portugal and Poland. These measures propose, among others, extending the term of mortgages to align customers' instalments with their payment capacity.

⁸ 'Others' not included make up the remaining 1% (Corporate Centre)



The tables below show the results of the key metrics of customer credit risk:

Main credit risk metrics^A

Data as of 31 December

	Credit risk with customers ^B (EUR million)			Credit impaired loans (EUR million)			NPL ratio (%)		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Europe	639,996	636,123	606,997	15,186	19,822	20,272	2.37	3.12	3.34
Spain	293,197	283,953	272,154	9,598	13,403	14,053	3.27	4.72	5.16
UK	253,455	262,869	252,255	3,059	3,766	3,138	1.21	1.43	1.24
Portugal	41,755	41,941	40,693	1,247	1,442	1,584	2.99	3.44	3.89
Poland	33,350	33,497	31,578	1,268	1,210	1,496	3.80	3.61	4.74
North America	185,614	149,792	131,626	5,629	3,632	2,938	3.03	2.42	2.23
US	140,452	112,808	99,135	4,571	2,624	2,025	3.25	2.33	2.04
Mexico	45,107	36,984	32,476	1,047	1,009	913	2.32	2.73	2.81
South America	167,348	141,874	129,590	10,381	6,387	5,688	6.20	4.50	4.39
Brazil	101,801	85,702	74,712	7,705	4,182	3,429	7.57	4.88	4.59
Chile	47,811	41,479	42,826	2,384	1,838	2,051	4.99	4.43	4.79
Argentina	5,844	5,481	4,418	122	198	93	2.08	3.61	2.11
Digital Consumer Bank	125,339	116,989	116,381	2,583	2,490	2,525	2.06	2.13	2.17
Corporate Centre	5,824	6,337	4,862	894	903	344	15.35	14.38	7.08
Total Group	1,124,121	1,051,115	989,456	34,673	33,234	31,767	3.08	3.16	3.21

	NPL coverage ratio (%)			Loan-loss provisions ^C (EUR million)			Cost of risk (%/risk) ^D		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Europe	51.8	49.4	50.3	2,396	2,293	3,344	0.39	0.39	0.58
Spain	51.0	51.4	47.5	1,618	2,320	2,123	0.61	0.92	0.86
UK	33.8	25.8	44.7	316	(245)	677	0.12	(0.09)	0.27
Portugal	79.3	71.7	66.5	17	38	193	0.04	0.09	0.51
Poland	74.0	73.9	70.7	440	200	330	1.43	0.67	1.10
North America	93.3	134.9	182.5	2,538	1,210	3,917	1.49	0.93	2.92
US	90.3	150.3	210.4	1,744	419	2,937	1.35	0.43	2.86
Mexico	106.6	95.0	120.8	788	791	979	1.95	2.44	3.03
South America	76.0	98.3	97.4	5,041	3,251	3,923	3.32	2.60	3.32
Brazil	79.5	111.2	113.2	4,417	2,715	3,018	4.79	3.73	4.35
Chile	56.3	63.3	61.4	399	341	594	0.93	0.85	1.50
Argentina	180.4	153.8	275.1	132	140	226	2.91	3.01	5.93
Digital Consumer Bank	92.8	107.8	113.3	544	527	957	0.45	0.46	0.83
Corporate Centre	1.5	3.6	89.0	(10)	155	31	(0.14)	2.45	0.54
Total Group	67.5	71.3	76.4	10,509	7,436	12,173	0.99	0.77	1.28

A. Management perimeter according to the reported segments.

B. Includes gross loans and advances to customers, guarantees and documentary credits.

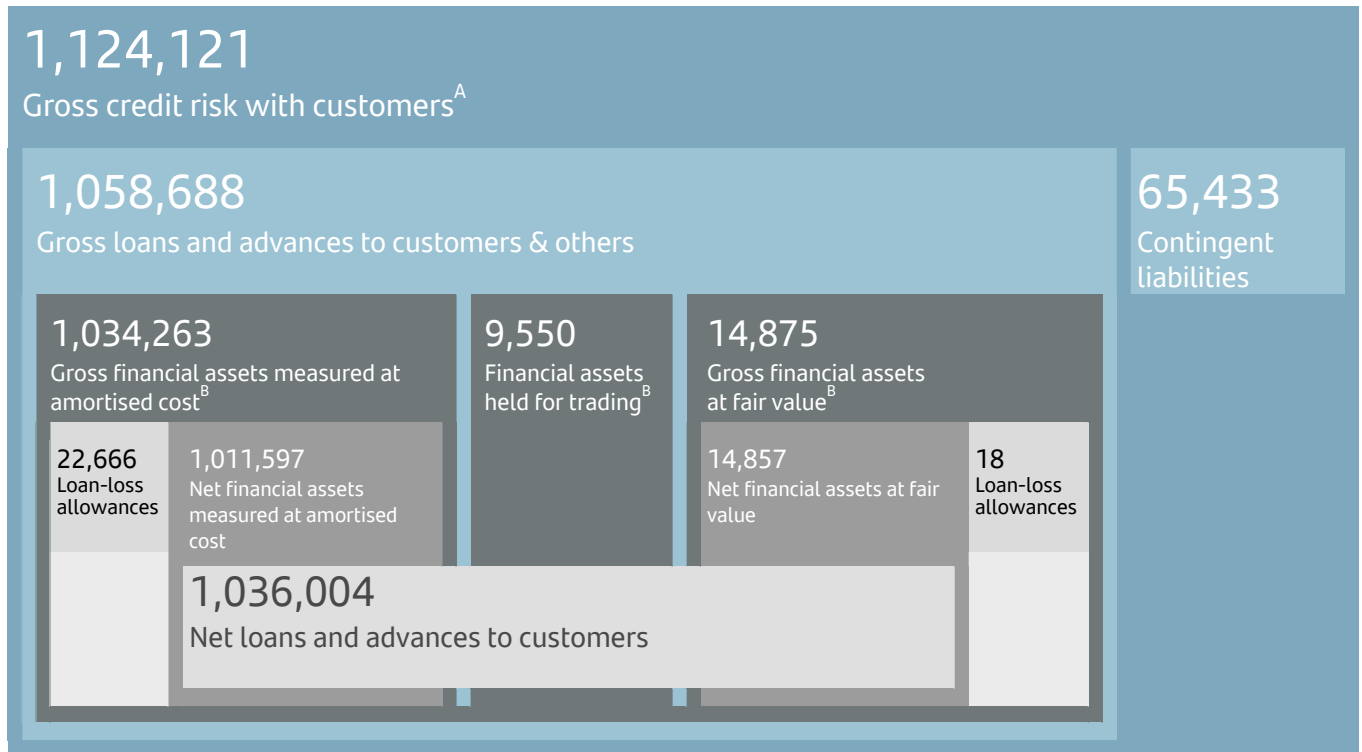
C. Post write-off recoveries (EUR 1,460 million).

D. Cost of risk is the ratio of 12-month loan-loss provisions to average lending of the same period.

Santander Spain 2021 and 2020 have been recalculated taking into consideration new perimeter (European branches).

Reconciliation of key figures

As illustrated in the table below, Santander's 2022 consolidated financial statements disclose loans and advances to customers before and after provision allowances. Credit risk also includes off-balance sheet risk.



■ Credit risk section ■ Balance sheet item from consolidated financial statement

A. Includes gross loans and advances to customers, guarantees and documentary credits.

B. Before loan-loss allowances.

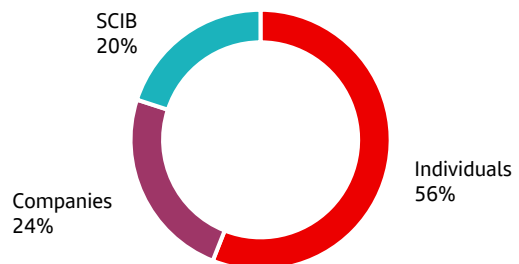
Distribution by region and segment

Santander segments credit risk into three customer groups in each market:

- **Individuals:** All natural persons that are not self-employed individuals, subdivided by income level to manage risk properly by customer type.
- **SME, commercial banking and institutions:** Companies and self-employed individuals, state-owned entities and private not-for-profit entities.
- **Santander Corporate and Investment Banking (SCIB):** Corporate customers, financial institutions and sovereigns on a closed list that is revised annually through analysis of business type, geographic diversification, product types, revenue volume for Santander, and other factors.

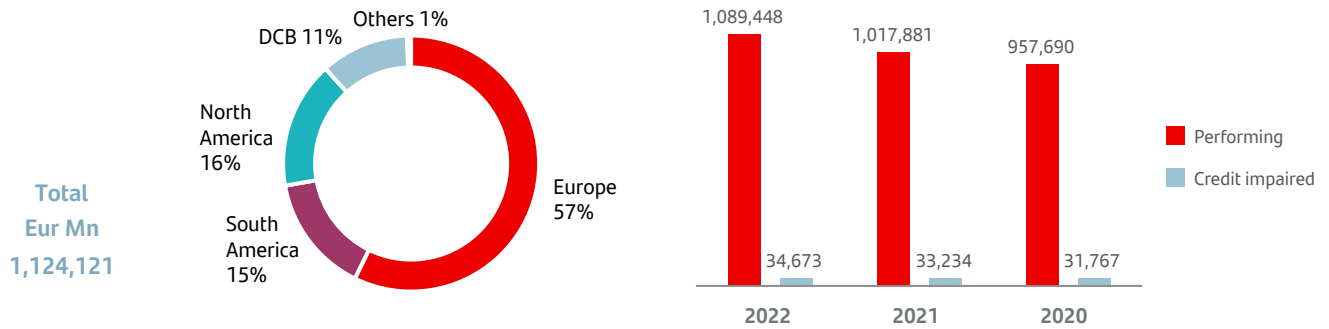
The graph below breaks down credit risk (including gross loans and advances to customers, guarantees and letters of credit):

Credit risk distribution



Below is a breakdown of performing and impaired loans by region:

Total

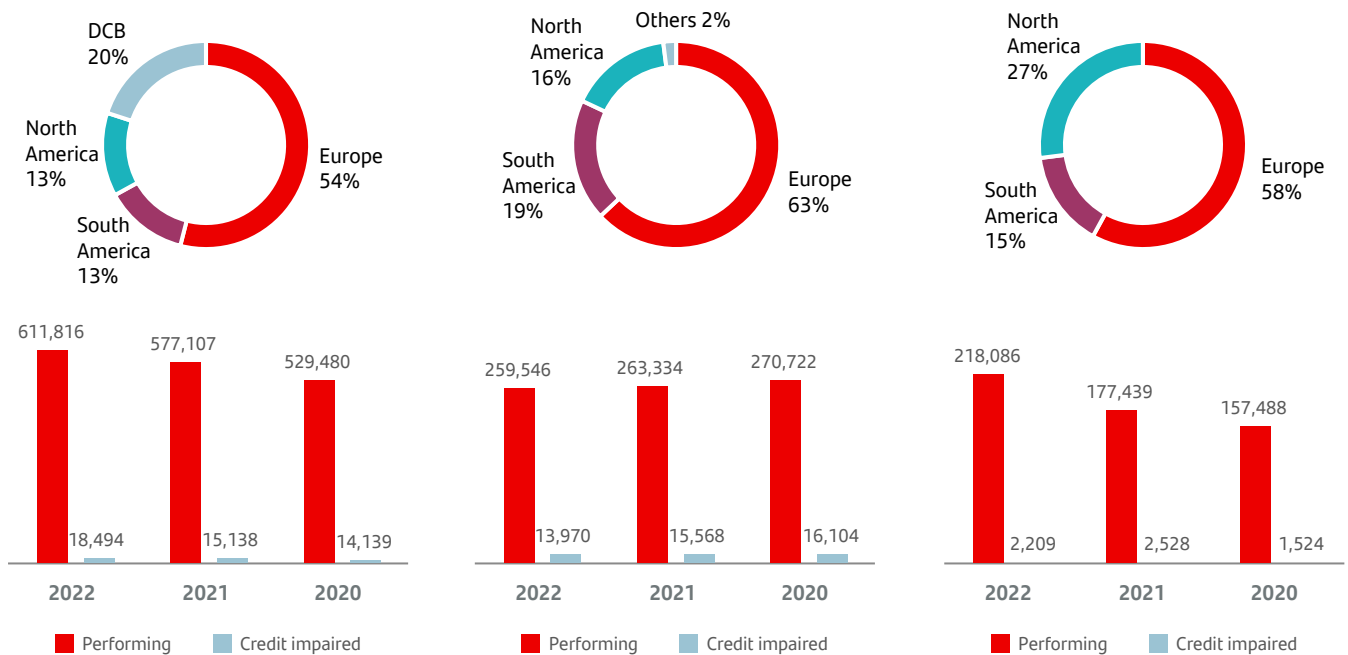


Segments

Individuals
Eur Mn 630,310

SME, Commercial Banking and Institutions
Eur Mn 273,516

SCIB
Eur Mn 220,295



'Others' include Corporate Centre. Performing and non-performing was resegmented for 2021 and 2020.

- **Europe:** the NPL ratio fell 75 bp to 2.37% from 2021 because impaired loans decreased significantly in the UK, and in Spain and Portugal due to the portfolio sales.
- **North America:** NPLs increased by 61 bps to 3.03% year on year, mainly due to the new definition of default and because NPLs had grown at SC USA and the loan book had stabilized once customer relief programmes created in the public health crisis and government stimulus packages had expired.
- **South America:** The NPL ratio rose 170 bp from 2021 to 6.20%, due to increases in Brazil (by unsecured individual portfolio performance and a single name in SCIB, in the fourth quarter) and Chile, offset by the decrease in Argentina.
- **Digital Consumer Bank:** The NPL ratio decreased 7 bp to 2.06%, despite the decrease in automobile financing.

For more details, see section [3.4. 'Details of main geographies'](#).

Financial asset impairment

The IFRS 9 impairment model applies to financial assets valued at amortized cost; debt instruments valued at fair value with changes in other comprehensive income; leasing receivables; and commitments and guarantees not valued at fair value. The portfolio of financial instruments subject to IFRS 9 has three credit risk categories (or stages), according to the level of credit risk of each instrument:

Observed credit risk deterioration since the initial recognition of the financial instrument

Risk category	Stage 1	Stage 2	Stage 3
Classification criteria	Financial instruments with no significant increase in risk since initial recognition.	Financial instruments with a significant credit risk increase since initial recognition but with no materialized impairment event.	Financial instruments with true signs of impairment as a result of one or more events resulting in a loss.
Provisions recognised	The impairment provision reflects expected credit losses from defaults over twelve months from the reporting date.	The impairment provision reflects expected losses from defaults over the financial instrument's residual life.	The impairment provision reflects expected losses for credit risk over the instrument's expected residual life. In this stage, the calculation takes into account that loss events have already occurred and therefore the single scenario is the certainty that they will materialize in losses.

Impairment provisions include expected credit risk losses over the expected residual life of purchased or originated impaired (POCI) financial instruments.

The table below shows Grupo Santander's credit risk exposure by stage and geography:

Exposure by stage and by geography^A

EUR million

	Stage 1	Stage 2	Stage 3	Total
Europe	560,636	39,451	15,186	615,274
Spain	254,994	12,351	9,598	276,943
UK	221,566	20,445	3,059	245,070
Portugal	35,490	5,018	1,247	41,755
Poland	30,362	1,636	1,268	33,266
North America	148,497	11,355	5,629	165,481
US	107,738	8,914	4,571	121,223
Mexico	40,714	2,442	1,047	44,203
South America	145,517	11,061	10,381	166,958
Brazil	85,636	8,125	7,705	101,466
Chile	43,033	2,350	2,384	47,766
Argentina	5,494	229	122	5,844
Digital Consumer Bank	118,019	4,718	2,583	125,320
Corporate Centre	1,907	2,561	894	5,362
Total Group	974,575	69,147	34,673	1,078,396

A. Does not include EUR 29,543 million from reverse repos and EUR 16,183 million from balances not subject to impairment accounting.



Stage 3 financial instruments (showing impairment) performed as follows:

2020 - 2022 Impaired credit assets

EUR million

	2022	2021	2020
Impaired credit (start of period)	33,234	31,767	33,799
Net entries	13,257	10,027	10,277
Perimeter	—	—	(44)
FX and others	417	529	(3,336)
Write-off	(12,235)	(9,089)	(8,930)
Impaired credit (end of period)	34,673	33,234	31,767

2020 - 2022 Allowances

EUR million

	2022	2021	2020
Allowances (start of period)	23,698	24,271	22,965
Stage 1 and 2	9,983	10,491	8,872
Stage 3	13,714	13,780	14,093
Gross provision for impaired assets and write-downs	11,665	8,824	13,263
Provision for other assets	305	(6)	139
FX and other	(14)	(302)	(3,166)
Write-off	(12,235)	(9,089)	(8,930)
Allowances (end of period)	23,418	23,698	24,271
Stage 1 and 2	9,272	9,983	10,491
Stage 3	14,146	13,715	13,780

To quantify expected losses from credit events, we use up to five unbiased and weighted future scenarios that could affect our ability to collect contractual cash flows. They consider the time-value of money, information from past events, and current conditions and projections of GDP, house pricing, unemployment and other important macroeconomic factors.

We calculate impairment losses using parameters (mainly EAD⁹, PD¹⁰, LGD¹¹ and discount rate) based on internal models and regulatory and management expertise. As they are far from being a simple adaptation, we define and validate them according to IFRS 9 guidelines.



For more information regarding Financial asset impairment, see 'Credit risk management' in section '2. Main aggregates and variations' on Note 53 to the consolidated financial statement.

Forbearance

Grupo Santander's internal forbearance policy is a standard for our subsidiaries locally and follows regulations and supervisory expectations such as the EBA Guidelines on the management of credit impaired and forborne exposures.

Its rigorous criteria for assessing and monitoring forbearances ensure the strictest possible care and diligence in recoveries. Forbearance must aim at recovering outstanding debt, with payment obligations adapted to customers' circumstances. Forborne debt should remain classified as 'doubtful' or put on a

watch-list for sufficient time in order to determine both associated risk and reasonable certainty about recovery of ability to pay. We never use forbearance to delay recognition of loss or misstate risk of default.

For years, the sound economic conditions in our core markets sent forborne assets on a downward trend. But 2021 was a turning point, as forbearance grew 24% due to customers' financial struggles during the pandemic. In 2022, forbearance reduced slightly to EUR 34,173 million. 44% of forborne assets qualify as 'non-performing', with an average coverage of 44%.

Key forbearance figures

EUR million

	2022	2021	2020
Performing	18,988	20,504	14,164
Impaired credit	15,185	15,538	14,995
Total forborne	34,173	36,042	29,159
% Total coverage^A	24%	23%	28%

A. Total forbearance portfolio loan-loss allowances/total forborne portfolio.

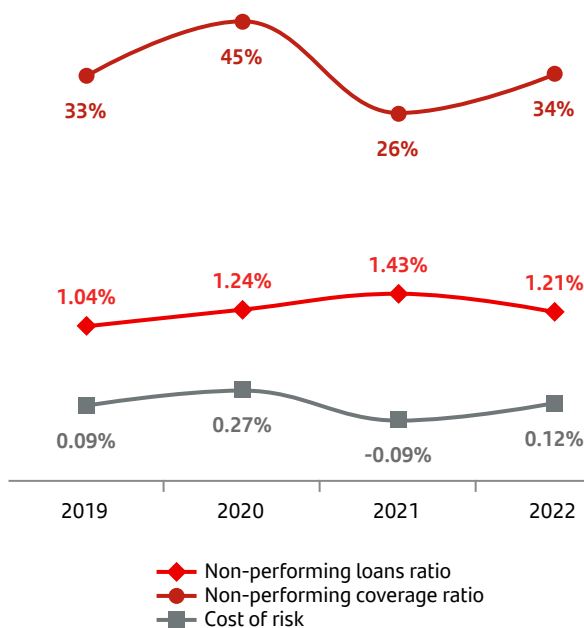
3.4 Details of main geographies

United Kingdom

General overview

Credit risk with customers in the UK (excluding Santander Consumer UK and Santander London Branch) declined year-on-year by 3.6% (+1.8% in local currency) to EUR 253,455 million. 22.5% of Santander's credit risk with customers is in the UK.

At 1.21%, the NPL ratio fell 22 bp from December 2021, due to a significant drop in the corporates segment following covid relief measures and the positive performance of the real estate market. The profile of the different segments remains stable.



⁹ Exposure at Default

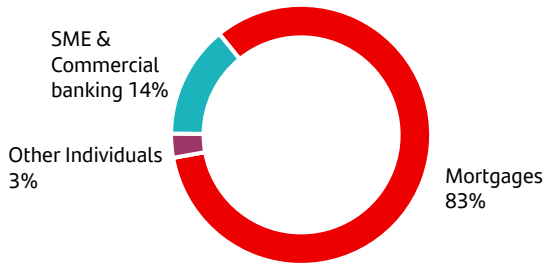
¹⁰ Probability of Default

¹¹ Loss Given Default

The Santander UK portfolio is divided into:

Portfolio segments^A

Dec. 22 data



A. Excluding SCF UK and London Branch

Mortgage portfolio performance

We closely monitor the mortgage portfolio due to its size for both Santander UK and the Group.

As of December 2022, the mortgage portfolio of Santander UK grew by 5.5% in local currency to EUR 209,872 million. It comprises residential mortgages granted to new and existing customers which are first lien mortgages. There are no second or more liens on mortgaged properties.

The high loan origination rate from 2021 carried on into 2022, with very low credit risk. The economy slowdown and the interest rate hikes have moderated the increasing pace of house price increases from the second half of the year.

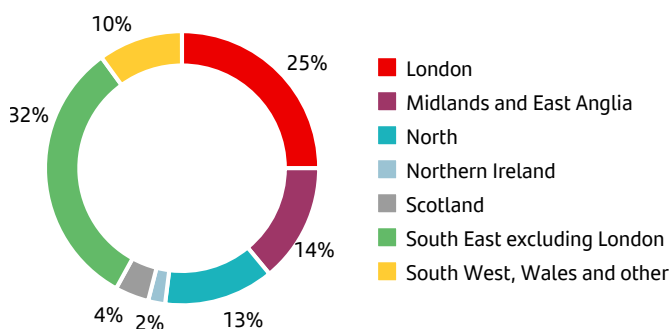
In the second quarter of 2022, interest rate hikes increased customers' monthly instalments on mortgages with a variable rate (nearly 12% of the loan book) or a mixed rate after the fixed-rate period (normally between two and five years) expired. Higher instalments are being mitigated, in part, by our conservative assessments of customers' ability to pay in order to approve them for a mortgage. Also, we are already taking measures to aid customers.

Under Santander's risk management principles, properties are appraised independently before we approve a new mortgage. In line with market practice and legislation, property values used as collateral for granted mortgages are updated quarterly by an independent agency's automatic appraisal system.

We have credit exposure predominantly in south east UK and the London metropolitan area.

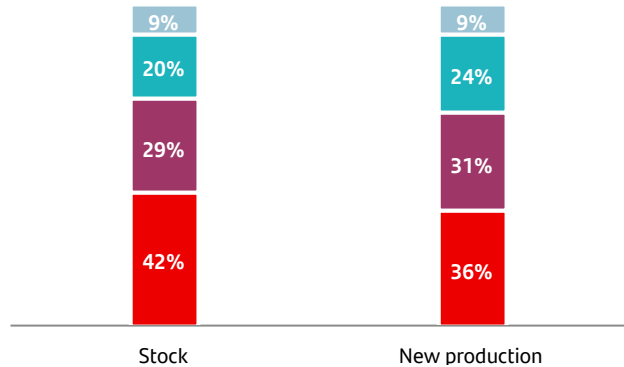
Mortgage exposure by region

Dec. 22 data



The chart below breaks down the portfolio by borrower type:

Mortgage portfolio loan type



- Home mover:** customers who change home, with or without changing the bank that granted the mortgage.
- Remortgage:** customers who switch the mortgage from another financial entity.
- First-time buyer:** customers who purchase a home for the first time.
- Buy-to-let:** houses bought to be rented.

In addition to traditional mortgages, Santander UK's wide range of products include:

- Interest-only loans (22%):** customers make a monthly interest payment and repay the loan principal at maturity. These mortgages require borrowers to have an appropriate repayment vehicle, such as a pension plan or an investment fund. This mortgage is common in the UK. To mitigate inherent risk, Santander UK has restrictive approval policies, such as a maximum loan-to-value (LTV) ratio of 50% and an assessment of the ability to pay both interest and capital.
- Flexible loans (4%):** loan agreements allow borrowers to modify monthly payments or draw down additional funds up to a set limit under various conditions.
- Buy-to-let (9%):** a small portion of the total portfolio, 'buy-to-let' mortgages are subject to strict risk approval policies.

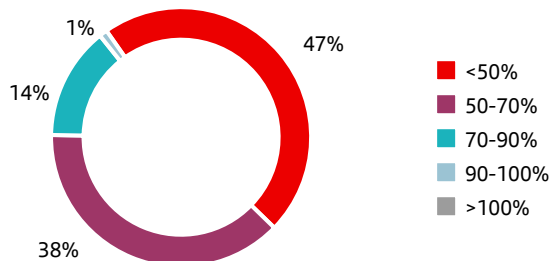
By late December 2022, NPL ratio of the mortgage portfolio had remained stable at 0.98% (-2 bp YoY), reflecting its strength.

With our prudent approval policies, simple average LTV stood at 39%. 1% of mortgages have an LTV of between 90% and 100%. Our policies also helped prevent risk quality deterioration in new mortgages.

The chart below shows the LTV structure of residential mortgages as of December 2022:

Loan to value

Dec.22 data



Loan to value: relation between the amount of the loan and the appraised value of the property. Based on indices.

Our credit risk policies forbid 'high risk' loans (e.g. subprime mortgages) and set out strict credit quality requirements for transactions and customers.

Spain

General overview

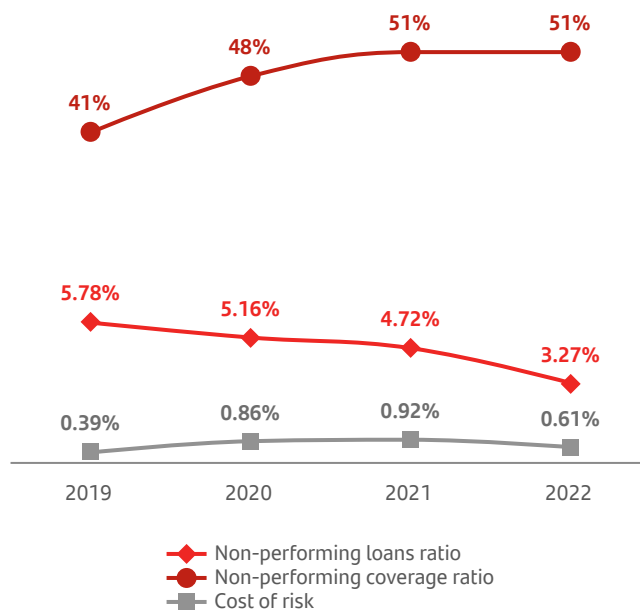
Santander España's credit risk totalled EUR 293,197 million (26% of the Group's total). It is appropriately diversified in terms of products and customer segments.

Spain's macroeconomic outlooks are of high uncertainty, with high inflation, higher rates and lower purchasing power of households as some negative factors. Positive factors include boosted tourism when the end of the pandemic has been declared together with a better than expected macro economic performance.

Lending trends were disparate across segments. Consumer credit and mortgage lending both grew considerably. But with corporates, lending remained stable, and with SMEs, it declined because customers still holding credit lines backed by Spain's Official Credit Institute (ICO) needed less new credit.

Total credit risk grew by 3.3% since December 2021. A large number of companies still hold the ICO loans that were granted during the pandemic, which amounted to EUR 25,428 million. The extension of the ICO loans in 2022 and the new support programmes were less relevant compared to 2020.

3.27% of the credit portfolio was non-performing — 145 bp lower than in December 2021 — due to, overall, the portfolio positive performance, helped by extensions of borrower relief programmes, special loan management and portfolio sales. Year-on-year, the coverage ratio remained at 51% and cost of risk fell 31 bp to 0.61%.

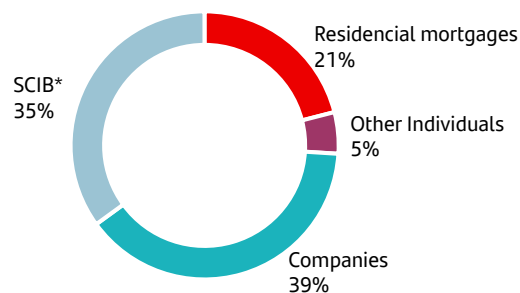


Figures for 2019, 2020 and 2021 have been recalculated to include data from European branches.

Santander España's portfolio is divided into these segments:

Portfolio segmentation

Dec.22 data



(* SCIB includes the European branches).

Residential mortgages performance

Santander España's residential mortgages portfolio amounted to EUR 62,472 million, 21% of total credit risk. 99.5% are secured by the property as collateral.

Residential mortgages^A

EUR million

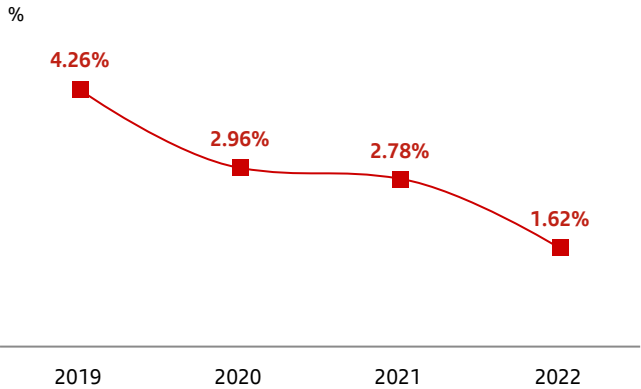
	2022	2021	2020
Gross Amount	62,472	60,948	58,079
Without mortgage guarantee	288	419	387
With mortgage guarantee	62,184	60,529	57,692
of which credit impaired loans	1,033	1,798	1,784
Without mortgage guarantee	24	115	75
With mortgage guarantee	1,009	1,683	1,709

A. Excluding SC España's mortgage portfolio (EUR 1,216 million in December 2022 with EUR 55 million in doubtful loans, and EUR 1,376 million with EUR 62 million in doubtful loans in 2021)



1.62% of mortgages to households to purchase a home were non-performing, down 116 bp from last year, mainly explained by the NPL portfolio sales.

NPL ratio, mortgages to households



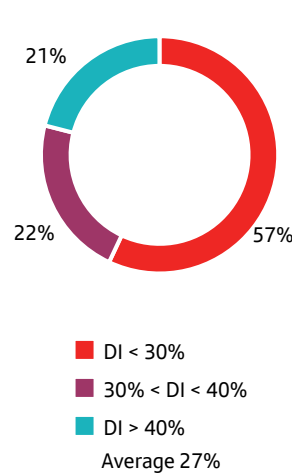
In 2022, new mortgage origination had climbed 9% year on year, due to higher consumer demand. The risk of the portfolio remains medium-low:

- principal repayment begins on the start date of all mortgages;
- early repayment is common, and average transaction life is shorter than the term in the loan agreement;
- the portfolio has high-quality collateral, which is almost entirely from first-time home buyers;
- its average debt-to-income ratio is still near 26%;
- 93% of mortgages have an LTV (the ratio of total risk to the latest available appraisal) below 80%;
- all customers applying for a residential mortgage are subject to a rigorous credit risk and solvency assessment by credit analysts to determine if their income will be sufficient to pay loan instalments and stable until the end of the mortgage term.

By midyear, the instalments of customers with a variable interest rate (75% of the portfolio) began to rise because of the higher Euribor, the ECB's benchmark rate. This has been partially offset by our conservative pre-approval assessment of the ability to pay, and we are already taking measures to aid customers aligned with the Código de Buenas Prácticas for vulnerable customers and middle class.

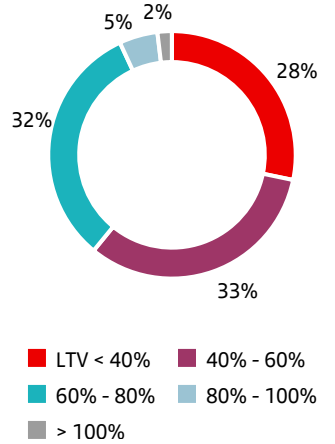
Debt to income*

Dec.22 data



Loan to value**

Dec.22 data



(*) Debt to income: ratio of annual instalments to the customer's net income.
 (**) Loan to value: ratio of the total risk to latest available home appraisal.

Corporate and SME financing

Credit risk with SME and corporates in commercial banking, declined 2.3% from December 2021 to EUR 112,255 million, mainly due to a 4.3% drop in SME lending. Corporates and SME are Santander España's largest segment, at 39% of its total credit risk, at the same level as the SCIB portfolio, which in 2022 has come to include the branches of Europe.

Most corporates and SMEs are assigned a credit analyst to monitor loan payment throughout the risk cycle. Our corporate and SME portfolio is highly diversified and not concentrated in any industry.

In 2022, portfolio indicators were stable following the considerable growth in 2020 supported by ICO-secured loans, which are now being repaid steadily following the liquidity support scheme's grace period and extensions.

By late 2022, 5.79% of corporate and SME loans were non-performing, down 171 bp from 2021, because of the proactive management of NPL supported by portfolio sales, mainly in SMEs.

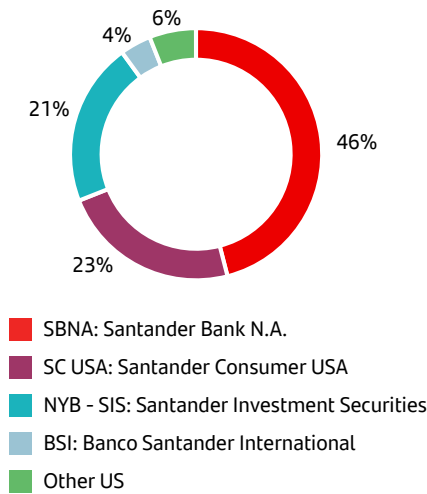
United States

General overview

In December 2022, Santander US's credit risk stood at EUR 140,452 million, 12.5% of the Group's total credit risk. Santander US includes these business units:

Business units segmentation

Dec.22 data



The recovery of the US continues, albeit slowly after the Federal Reserve (Fed) withdrew economic stimulus. Growing concerns over rising inflation, driven by demand and low unemployment, prompted the Fed to raise its benchmark rate.

In December 2022, Santander US's lending grew 24.6% year on year, due overall to the integration of the Amherst Pierpont Securities (APS) portfolio, which began in April. CIB lending grew at the New York Branch, in SC USA and in SBNA due to, in part, a stronger US dollar. Excluding the exchange rate impact, Santander US's total growth was 17.4%.

With stimulus withdrawn and interest rates hikes, 3.25% of total credit was non-performing, a 92 bp increase, due to more NPLs in SC USA. Cost of risk also rose 92 bp year-on-year to 1.35%.

Santander US is focused on supporting customers and making inroads with its strategy to enhance customer experience and capital allocation to businesses. Integrating Amherst Pierpont will boost our wholesale product offering and value proposition and our positioning in structured products, fixed-income issuances and securitizations in the US.

Leases carried out exclusively under the Stellantis Group agreement (primarily with highly creditworthy customers) dropped 1.8% to EUR 13,400 million, providing stable and recurring earnings. Proactive risk management and residual value mitigation measures remain a priority.

Key business units performance

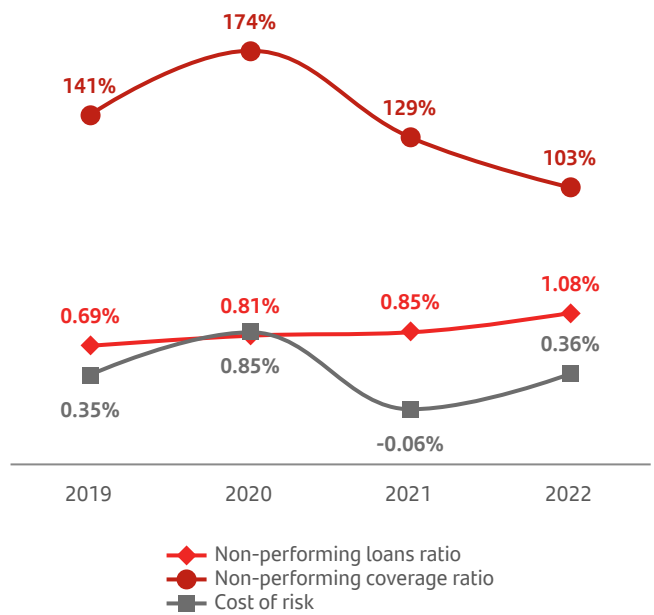
Santander Bank N.A.

SBNA lending amounted to EUR 64,718 million (6% of the Group's credit risk) and grew 12.8% across all segments, helped by a stronger US dollar. In constant euros, loan book growth was 6.3%.

Retail and commercial banking is Santander Bank N.A.'s core business (81% of lending), split between individuals (54%) and corporates (46%).

Santander Bank N.A.'s core strategic objectives include continuing to improve customer experience, growing its customer and deposit base with digital initiatives to transform business and branches, and using its deposit base to build up its Commercial Real Estate business. To maximize returns and growth, retail and commercial banking mainly consists of consumer credit, auto-lending and auto-leasing, but not mortgages or any kind of loans or lines of credit secured by collateral.

In December 2022, NPL rate stood at 1.08%, a 23 bp year-on-year increase. Cost of risk rose 0.36%, once provisions normalized after the additional provisions released in 2021, driven by the relief and fiscal stimulus programmes then in place.



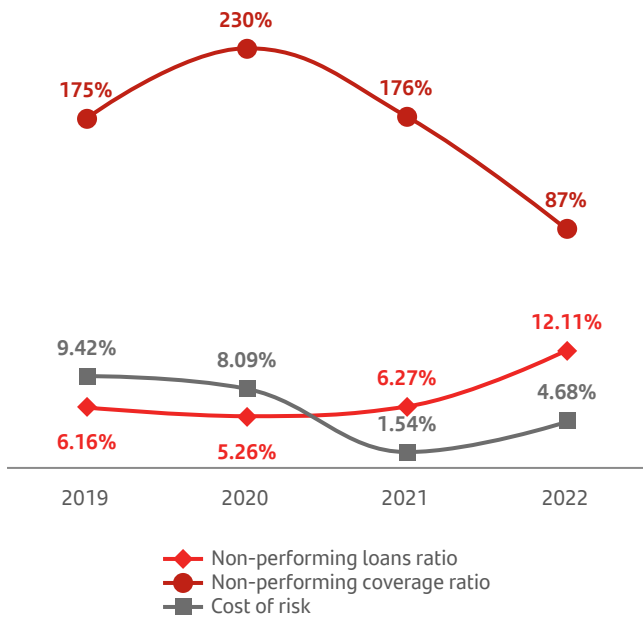
Santander Consumer USA

Santander Consumer USA's (SC USA) risk indicators are higher than other Santander US units due to the nature of its core auto-lending and leasing business.

SC USA lending amounted to EUR 31,961 million (3% of the Group's total) and increased 7.8% in 2022. In constant euros, portfolio grew 1.6%.

It remains focused on improving return-to-risk with pricing suited to the credit quality of the customer/transaction. It has also been enhancing dealer experience. In 2022, auto loan originations did not change year on year due to more expensive used vehicles and a limited supply of new vehicles.

In December 2022, risk indicators stabilized when covid relief programmes for customers and government stimulus ended, and due to new definition of default. NPL ratio rose to 12.11%, a 584 bp year-on-year increase, and cost of risk was 4.68%, up 314 bp from 2020. The coverage ratio fell 89 pp year-on-year to 87%, according to the estimated portfolio losses.



Brazil

General overview

2022 in Brazil was marked by economic instability and high inflation rates, although it has been declining in the second half of the year, standing at 5.8% in December (the lowest rate since February 2021).

Santander Brasil's credit risk amounted to EUR 101,801 million, up 19% from 2021; in constant euros, it grew 6.2%. As of December 2022, Santander Brasil accounted for 9% of Santander's loan book.

Santander Auto set a market penetration record, with 28% of new auto loan agreements. With an individuals market share of 23%, it is now a leading auto lender.

SME lending grew steadily, as practically all subsegments grew in originations, especially among low-risk borrowers. As of August, the relaunch of Government Guarantee Programmes for all subsegments has contributed to the aforementioned increase in production, in order to combat the effects of generalized macroeconomic volatility.

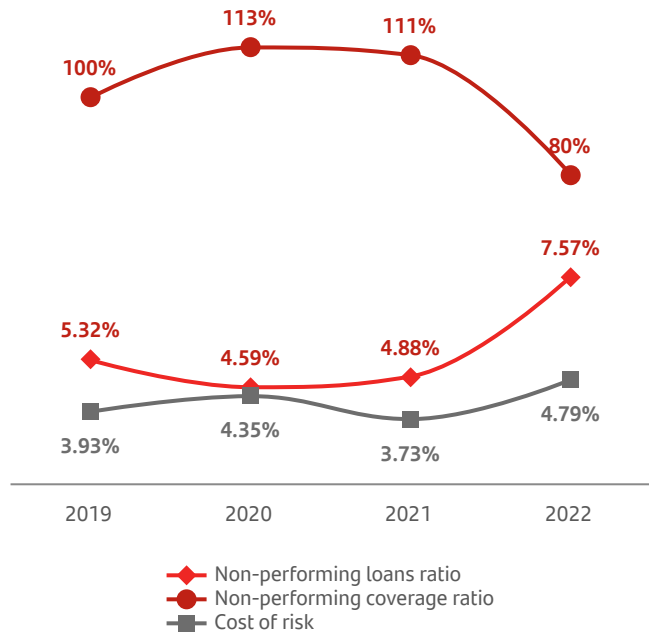
Lending to corporates saw robust growth. New originations had sound risk profiles, which helped keep credit quality indicators within targets and reinforced the portfolio's profitability.

Our digital business continued to grow. 90% of all sales were done online. 'Gente', our virtual assistance channel with artificial intelligence, has over 18 million hits per month.

Santander Brasil's leadership in wholesale banking makes it one of Brazil's top corporate banks, owing to its global experience in infrastructure, agribusiness and equities. It has led the national banking sector in FX derivatives for the last eight years; it is also Brazil's largest trader of commodities.

Because of inflation, benchmark rate ("Selic") hikes and other macroeconomic variables, together with the performance of retail unsecured portfolio and a single name in SCIB in the fourth quarter, at December, loan-loss provisions amounted to EUR 4,417 million, 63% higher than in 2021; in constant euros,

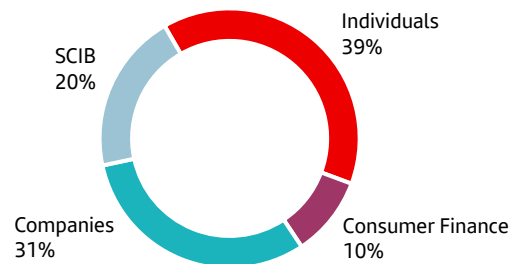
they increased by 38%. As a result, cost of risk increased from 3.73% at the end of 2021 to 4.79%.



Santander Brasil's loan book is distributed as follows:

Portfolio segmentation

Dec.22 data



It is diversified, with a distinct retail profile. 80% of total credit is retail lending, consumer financing and corporate lending.

Portfolio performance

Cost of risk rose among individuals without collateral, but the portfolio mix was robust. The NPL ratio rose from 4.88% in December 2021 to 7.57% in December 2022, and the coverage ratio decreased to 111% from 80%.

The individuals portfolio grew year on year, despite the restrictive measures in place amid the macroeconomic downturn in the second half of 2021.

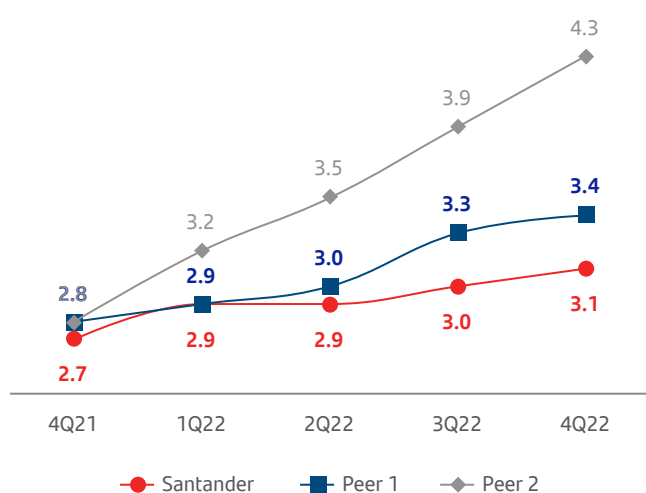
For SMEs, Santander Brasil took measures for loan approvals and reviewed strategy to ensure sufficient credit quality and prevent impairment of aggregate risk metrics.

Credit volume in the corporates portfolio showed sustainable and steady growth, in line with forecasts. Its credit profile improved and helped increase profitability.

One of the core credit risks indicator Santander Brasil uses to measure credit quality and prevent the impairment of the portfolio is the 'Over 90 ratio'¹². Standing at 3.1% as of December 2022 (+40 bp year on year), Santander Brasil's Over 90 ratio has remained below the average of its competitors.

Over 90 total (%)

Dec. 22 data



3.5 Other credit risk details

Credit risk from financial markets activities

This section covers the credit risk generated by treasury activity with customers (especially credit institutions), with money market funding and counterparty risk products to meet the needs of customers and the Group's own needs in their management.

Counterparty credit risk is the risk that a customer will default before the final settlement of a transaction's cash flows. It creates a bilateral credit risk because it can affect both parties to a transaction. It is also uncertain because it depends on market factors, which can be volatile.

We manage counterparties with several credit risk models based on their characteristics and needs. Model segmentation is organized by business and risk treatment and based on counterparty disclosures as well as the credit risk cycle. The exposure that the counterparty credit risk model covers includes derivatives contracts, repurchase agreements, securities and commodities lending, long settlements and margin lending.

An infrastructure that can quickly and dynamically measure current and potential exposure with various degrees of aggregation and granularity to generate detailed reports is important for decision-making.

To measure exposure, we use two methods: 'Mark-to-market' (MtM) (replacement cost of derivatives), plus potential future exposure ('add-on'); and the Monte Carlo simulation for certain countries and products. We also calculate capital at risk and unexpected loss (e.g. economic capital, net of collateral and recoveries, after deducting expected loss).

At market close, we recalculate exposure by adjusting transactions to a new time horizon, adapting potential future exposure, and applying netting, collateral and other mitigants. That way, we can check exposure daily against the limits approved by senior management within risk appetite. For risk control, we use a real-time integrated system that shows the exposure limit with a counterparty, for any product and term, in all subsidiaries.

Counterparty credit risk can also give rise to 'wrong-way' risk if exposure to a portfolio or a counterparty increases but credit quality declines. 'Wrong-way' risk arises in the event that the exposure to a portfolio or to a counterparty increases when its credit quality deteriorates. In other words, there is a wrong-way risk when there is an increase in the risk of default and, therefore, the exposure to the counterparty increases.

Regarding settlement risk, this occurs when the settlement of a transaction involves a bilateral exchange of flows or assets between two counterparties. For example, when a counterparty buys dollars in exchange for euros, the settlement of the transaction implies that one party gives euros and receives an equivalent amount of dollars from the other. Settlement risk is the risk that one of the parties will default on their settlement commitments.

Counterparty risk exposures: over-the-counter (OTC) transactions and organized markets (OM)

By December 2022, with netting and collateral agreements, the positive market value of total counterparty risk exposure (under management criteria) was EUR 13,249 million (net exposure of EUR 45,157 million).

In trading, the market value of derivatives has been rising since December 2021 due to interest rate hikes, higher exchange rates for major currencies (EUR, USD and GBP) and changes in other factors that have the greatest impact on the Group's counterparty credit risk.

Counterparty risk: exposure in terms of market value and credit risk equivalent, including the mitigation effect^A

EUR million	2022	2021	2020
Market value with netting effect and collateral ^B	13,249	5,491	5,235
Net CRE ^C	45,157	31,444	30,139

A. Figures under internal risk management criteria. Listed derivatives have a market value of zero. No collateral is received for these types of transactions.

B. Includes the mitigation of netting agreements and deducting the collateral received.

C. CRE (credit risk equivalent): net value of replacement plus the maximum potential value, less collateral received.

¹² Assets with more than 90 days arrears / credit portfolio. Excluding commitments and guarantees and pulling effect.



The chart below shows counterparty risk products (especially interest rate and FX hedging instruments) by nominal risk:

Counterparty risk by nominal^A

EUR million

	2022	2021	2020
	Nominal	Nominal	Nominal
Credit derivatives ^B	14,765	17,164	14,530
Equity derivatives	26,177	79,062	53,821
Fixed income derivatives	13,320	4,409	11,370
Exchange rate derivatives	1,069,870	947,061	863,001
Interest rate derivatives	5,538,173	4,915,150	4,917,944
Commodity derivatives	13,496	12,022	3,732
Total OTC derivatives	6,479,325	5,786,114	5,695,339
Derivatives organised markets^C	196,476	188,755	169,059
Repos	259,946	129,085	146,984
Securities lending	52,270	48,346	46,418
Total counterparty risk^D	6,988,017	6,152,300	6,057,800

A. Figures under internal risk management criteria.

B. Credit derivatives acquired including hedging of loans.

C. Refers to transactions involving listed derivatives (proprietary portfolio). Listed derivatives have a market value of zero. No collateral is received for these types of transactions.

D. Spot transaction not included.

As the following table shows, most of Santander's derivatives reach maturity in up to five years, and repurchase agreements and securities lending in up to one year.

Counterparty risk: Distribution of nominal risk by maturity^A

EUR million. Dec.22 data

	Up to 1 year	Up to 5 years	Up to 10 years	More than 10 years	TOTAL
Credit derivatives ^B	23%	44%	30%	3%	14,765
Equity derivatives	60%	39%	1%	—%	26,177
Fixed income derivatives	98%	2%	—%	—%	13,320
Exchange rate derivatives	51%	31%	12%	6%	1,069,870
Interest rate derivatives	35%	39%	16%	10%	5,538,173
Commodity derivatives	85%	12%	2%	1%	13,496
Total OTC derivatives	37%	39%	15%	9%	6,479,325
Derivatives organised markets^C	62%	28%	8%	2%	196,476
Repos	95%	5%	—%	—%	259,946
Securities lending	100%	—%	—%	—%	52,270
Total counterparty risk	41%	36%	14%	9%	6,988,017

A. Figures under internal risk management criteria.

B. Credit derivatives acquired, including coverage of loans.

C. Refers to transactions involving listed derivatives (proprietary portfolio). Listed derivatives have a market value of zero. No collateral is received for these types of transactions.

Even if the credit quality of some counterparties declines, most counterparty credit risk is with customers with high credit quality (86% rated A or higher), especially financial institutions (26%) and clearing houses (68%).

Counterparty risk: Notional values by customer rating^A

Dec.22 data

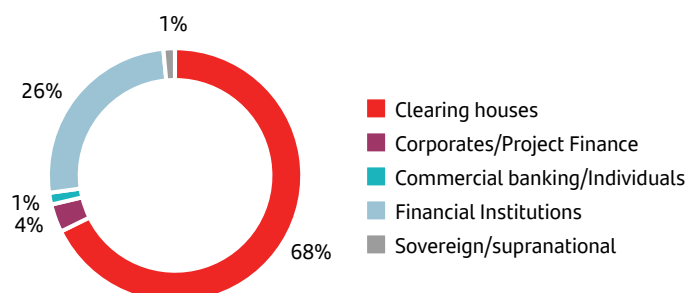
Rating	%
AAA	0.85%
AA	0.51%
A	84.96%
BBB	12.53%
BB	1.09%
B	0.04%
Other	0.02%

A. Ratings based on internally defined equivalences between internal ratings and credit agency ratings.

Transactions with clearing houses and financial institutions are subject to netting and collateral agreements, with which we also seek to cover all other transactions. In general, the collateral agreements Santander signs are bilateral; still, we do sign some unilateral agreements in the customer's favour, mainly with multilateral organizations and securitization funds.

Counterparty risk: Notional values by customer segment

Dec.22 data



We use collateral to reduce counterparty risk. It consists of highly liquid instruments with economic value. They are deposited or transferred from one counterparty to another to guarantee or reduce counterparty credit risk from portfolios of cross-risk derivatives.

We measure trades subject to collateral agreements daily, with parameters to determine the amount of collateral to be paid or received from the counterparty (in cash or securities).

With high volatility (especially during the pandemic), the processes we have in place to manage collateral properly and more often have proved effective.

Most of the collateral received under Credit Support Annex (CSA), Overseas Securities Lending Agreement (OSLA), International Securities Market Association (ISMA), Global Master Repurchase Agreement (GMRA) and other agreements signed by the Group has been effective (41%); the rest is subject to strict quality policies in regard to the issuer and their rating, debt seniority and haircuts.

Because of the credit risk we assume with each counterparty, we apply credit valuation adjustments (CVA) to over-the-counter (OTC) derivatives when calculating the results of trading portfolios.

A CVA is a change to the market value of OTC derivatives that accounts for counterparty credit risk throughout the contract life. A counterparty's CVA adds up to the CVA on all maturity dates. It discounts the value of a derivative offered by a buyer based on the chance that the counterparty will default. We calculate it with exposure at default, probability of default, loss given default, the discount curve and other inputs.

We also apply debt valuation adjustments (DVA), which are similar to CVA but result from credit risk assumed by OTC counterparties trading with Grupo Santander. Both CVA and DVA are done within the potential period of exposure.

By late December 2022, CVA increased 39.4% year on year to EUR 329.7 million, and DVA rose 90.7% year on year to EUR 308.6 million. This was mainly due to credit market movements, with much wider spreads since 2021 year end.

Counterparty risk, organized markets and clearing houses

Santander's policies promote early action according to regulation on OTC derivatives, repurchase agreements and securities lending (whether settled through clearing houses or bilaterally). In recent years, we have been standardizing OTC transactions to settle and clear new contracts through clearing houses according to current regulation, in addition to promoting electronic execution systems internally.

Also, we actively manage contracts not settled by clearing houses to optimize volume, in accordance with regulation on margins and capital.

While our counterparty risk management does not contemplate credit risk in such transactions, we have been calculating regulatory credit exposure for organized market exchanges since the Capital Requirements Directive (CRD) IV and the Capital Requirements Regulation (CRR) took effect in 2014, transposing the Basel III principles on capital calculation.



The table below shows the weight of contracts settled by CCP versus total counterparty risk as of December 2022:

Counterparty risk: Notional values by settlement channel and product^A

Nominal in EUR million	Bilateral		CCP ^B		Organised markets ^C		Total
	Nominal	%	Nominal	%	Nominal	%	
	Credit derivatives	9,917	67.2%	4,848	32.8%	—	
Equity derivatives	19,067	72.8%	758	2.9%	6,352	24.3%	26,177
Fixed income derivatives	13,305	99.9%	15	0.1%	—	—%	13,320
Exchange rate derivatives	1,003,017	93.8%	24,349	2.3%	42,504	4.0%	1,069,870
Interest rate derivatives	847,313	15.3%	4,555,519	82.3%	135,341	2.4%	5,538,173
Commodity derivatives	1,218	9.0%	—	—%	12,278	91.0%	13,496
Repos	150,698	58.0%	109,248	42.0%	—	—%	259,946
Securities lending	52,270	100.0%	—	—%	—	—%	52,270
Total	2,096,804		4,694,737		196,476		6,988,017

A. Figures under internal risk management criteria.

B. Central counterparties (CCP).

C. Refers to transactions involving listed derivatives (proprietary portfolio). Listed derivatives have a market value of zero. No collateral is received for these types of transactions.

Risk settled by CCP and product^A

Nominal in EUR million	2022	2021	2020
Credit derivatives	4,848	6,714	6,245
Equity derivatives	758	—	62
Fixed income derivatives	15	—	—
Exchange rate derivatives	24,349	38,755	31,043
Interest rate derivatives	4,555,519	4,054,711	4,020,927
Commodity derivatives	—	—	—
Repos	109,248	35,284	39,397
Securities lending	—	—	—
Total	4,694,737	4,135,464	4,097,674

A. Figures under internal risk management criteria.

Credit derivatives

We use credit derivatives to hedge transactions, customer business in financial markets and trading. The credit derivatives Santander has negotiated have a low notional value: 0.3% of the notional value of counterparty risk. Furthermore, we subject credit derivatives to internal robust controls and procedures to minimize operational risk.

Concentration risk

Concentration risk control is key element in our management processes. We continuously monitor credit risk concentration by region and country, economic sector, customer type and other criteria.

The board sets concentration limits according to risk appetite. Based on those limits, the executive risk committee develops risk policies and monitors to ensure that exposure remains appropriate to manage credit risk concentration consistently with the CRR provisions on large risks.

Because Santander is bound to the CRR regarding large risks, exposure with a customer or group of associated customers will be considered 'large exposure' if its value is equal to, or greater than, 10% of eligible capital. To limit large exposures, no bank may assume any exposure with a single customer or group of

associated customers if it exceeds 25% of their eligible capital once the credit risk reduction effect that the regulation mentions has been factored in.

With our risk mitigation techniques, no groups had triggered those thresholds by the end of December. Regulatory credit exposure with the 20 biggest groups within the scope of large risks made up 5.6% of credit risk (lending to customers and off-balance sheet risks) as of December 2022.

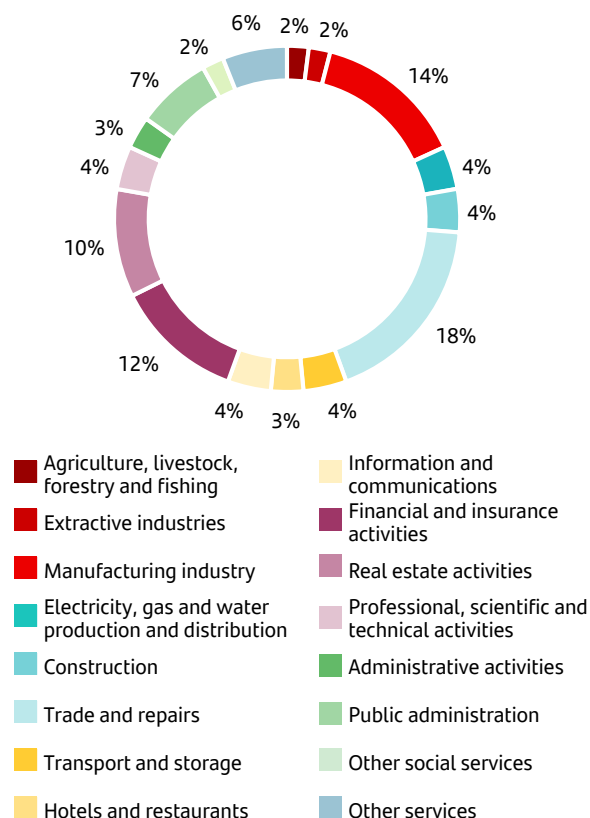
Our Risk division works closely with the Finance division to manage credit portfolios, aimed at reducing the concentration of exposures through credit derivatives, securitizations and other techniques to optimize the risk-reward of the entire portfolio.

As indicated in the key metrics section, credit risk is diversified among our core markets: the UK 22.5%, Spain 26%, the US 12.5%, Brazil 9%, etc. 56% is with individuals, who are inherently highly diverse. It is also well distributed, with no significant concentrations in a particular industry.



The chart below shows the distribution as of December 2022:

Diversification by economic sector^A



A. Excluding individuals and reverse repos.

Vulnerable sectors identification

Grupo Santander carries out quarterly monitoring of exposure to customers operating in sectors that could be affected by macroeconomic conditions. The monitoring involves the use of internal tools to forecast customer behaviour and trends in each sector under several macro scenarios, as well as this information:

- Market information: Industries' stock market performance.
- Analysts' EBITDA forecasts for the coming years.
- Internal information: Changes in credit exposure, defaults (in different timelines) and stagings.
- Our industry experts' opinion, based on specific details about our exposures and our relationships with customers

Following the effects of the pandemic, in the second quarter of 2022, we adapted our definition of 'affected sectors' to the current backdrop of rising energy and commodity prices and others macroeconomic variables.

Country risk

In credit risk, country risk is defined as the risk incurred for transactions in which the debtor resides in a country other than the lender entity, due to circumstances other than the usual commercial risk. It includes sovereign risk and transfer risk, as well as war, natural disaster, balance of payments crisis and other things that can disrupt international finance. In accordance with regulation, our models and provisioning processes contemplate country risk.

We assume country risk very selectively in transactions that enhance our global relations with customers. And we follow highly cautious standards to manage it.

Sovereign risk and risk with government agencies

Sovereign risk arises from central bank transactions (including regulatory cash reserves), government bonds (public debt) and transactions with non-commercial government institutions funded exclusively by a state's budget revenue.

Our standard for sovereign risk differs somewhat from the EBA's standard for regular stress testing. In particular, the EBA does not consider deposits with central banks, exposures with insurance companies or indirect exposures from guarantees and other financial instruments. However, its standard does generally include entities run by regional, local and central governments.

We continue to track and manage transactions with sovereign risk based on available information, such as reports by rating agencies and international organizations. We monitor each country where we have cross-border^{13,19} and sovereign risk. We analyse events that could affect the country's political or institutional stability and assign its government or central bank a credit rating. This helps us set limits for transactions with sovereign risk.

Our exposure to local sovereign risk not in the issuer country's currency at the end of December was minor (EUR 6,039 million or 1.4% of total sovereign risk), based on our management criteria. Exposure to non-local sovereign issuers with cross-border risk was also minor¹⁴ (EUR 8,867 million or 2.1% of total sovereign risk). The sovereign debt we hold in Latin America, which is recorded in local ledgers, is predominantly in local currency and short-term.

¹³ Risks with domestic public or private borrowers in foreign currency and originated outside the country.

¹⁴ Countries that are not considered low risk by Banco de España.



In recent years, total sovereign risk exposure has remained within regulatory requirements. Because exposure spans several countries, each with its distinct macroeconomic outlook and growth scenario, it varies due to our liquidity management strategy and our interest and FX rate coverage, which apply limits based on each country's credit rating. The table below shows exposure ratios by rating¹⁵:

	2022	2021	2020
AAA	27%	15%	18%
AA	19%	32%	25%
A	34%	26%	25%
BBB	11%	11%	14%
Lower than BBB	9%	16%	18%

Sovereign exposure at the end of December 2022 is shown in the table below (data in million euros):

	2022				2021	
	Portfolio					
	Financial assets held for trading and Financial assets designated as FV with changes in results	Financial assets at fair value through other comprehensive income	Financial assets at amortised cost	Non-trading financial assets mandatory at fair value through profit or loss	Total net direct exposure	Total net direct exposure
Spain	2,666	240	26,189	—	29,095	19,557
Portugal	(299)	2,005	3,750	—	5,456	6,544
Italy	(1,055)	301	8,169	—	7,415	884
Greece	—	—	—	—	—	—
Ireland	—	—	—	—	—	9
Rest Eurozone	205	789	4,657	—	5,651	3,629
UK	53	315	1,738	—	2,106	366
Poland	4	7,754	957	—	8,715	11,293
Rest of Europe	(7)	14	125	—	132	1,368
US	3,503	8,938	10,857	—	23,298	22,469
Brazil	8,017	9,969	5,742	—	23,728	28,559
Mexico	2,627	11,303	3,376	—	17,306	13,509
Chile	175	818	5,492	—	6,485	6,071
Rest of America	123	1,211	630	—	1,964	1,425
Rest of the World	1	2,012	1,529	—	3,542	3,337
Total	16,013	45,669	73,211	—	134,893	119,020

¹⁵ Internal ratings are applied.



4. Market, structural and liquidity risk

4.1 Introduction

This section describes our management and control of market risk in 2022, including trading risk, liquidity risk and structural risk. It provides a description of our methodologies and metrics.

Activities exposed to market risk encompass transactions where risk is assumed as a consequence of potential changes in interest rates, inflation rates, exchange rates, stock prices, credit spreads, commodity prices, volatility and other market factors; the liquidity risk from our products and markets, and the balance-sheet liquidity risk. Therefore, they include trading risks and structural risks, such as:

- Interest rate risk
- Inflation rate risk
- Exchange rate risk
- Equity risk
- Credit spread risk
- Commodity price risk
- Volatility risk

Options, futures, forwards, swaps and other derivatives can mitigate some or all of the risks above.

Market risk factors that require more complex hedging are correlation, market liquidity, pre-payment or cancellation and underwriting risk.



For further detail on market factors see section '[Activities subject to market risk and types of market risk](#)', in Note 53 to the consolidated financial statement.

On-balance sheet liquidity risk, also relevant, which is where the bank would have insufficient liquid assets or pay a high price for liquid assets in order to meet due obligations. Losses may result from a forced asset disposal and a cash flow imbalance.

Pension and actuarial risk also depends on market variables (see the end of this section for more details.)

In 2022, we continued increasing our attention to climate and environmental risk, which arises from the possibility that climate change could adversely affect the value of a financial instrument, or a portfolio, or the Bank's liquidity, for which we use market and liquidity risk stress scenarios to measure their potential exposure.

We check our compliance with the Basel Committee's Fundamental Review of the Trading Book (FRTB) and its implementation according to EU's Capital Requirements Regulation (CRR II) and the EBA's guidelines on market risks.

In 2022, we ran several projects to give managers and control teams the best resources to manage market risk and capital consumption. They include:

- a new capital calculation engine under the for the fundamental review of the trading book (FRTB SA) standardized approach;
- a better governance framework for models in use, with new products and entities that were previously outside the perimeter;
- documents on new qualitative requirements, based on the trading-banking book boundary;
- a more robust technical and functional control environment to keep consistent perimeters for risk management and capital calculation; and
- better reporting on risk and capital metrics for internal management and regulatory purposes.

IBOR reform

Since 2013, various organizations and authorities such as International Organization of Securities Commissions (IOSCO) and Financial Stability Board (FSB) have been promoting initiatives aimed at improving interest rate indexes.

To execute the transition towards new interest rate indexes, the central banks and regulators of various jurisdictions organized different working groups to give their recommendations on new indexes. Some of these new indexes are: SONIA, replacing the Libor references in sterling, SOFR, replacing Libor in US dollars, and €STR instead of Libor in euros.

As a result of the effort made in the working groups, the transition process has been materializing in different milestones between 2019 and 2022, remaining only, in 2023, the execution of the plans to replace the Libor pound sterling and the Libor dollar US.

At Grupo Santander we focused on making all the contractual, commercial, operational and technological changes necessary to undertake the transition of these reference indices. In 2023, we will continue to address the following transition milestones in all of our jurisdictions.



For further detail see section '[IBOR Reform](#)' in Note 53 to the consolidated financial statement,

4.2 Market risk management

Because factors inside and outside a unit can give rise to market risk, management and control must cover all potential risk sources with coordinated, uniform treatment by all subsidiaries.

The Group's senior management receives thorough, accurate reporting on a regular basis to measure units' risk profiles and gain a holistic view of risk for global analysis and control.

Limits management and control system

Daily control by the market risk area promotes market risk positions will remain within approved limits, and evaluates significant changes in related metrics.

We set market risk limits in a dynamic process according to risk appetite levels in the annual limits plan prepared by senior management and extended to all subsidiaries.

To ensure limits cover all market risk factors based on risk appetite, we take a prudent approach that includes:

- Value at Risk (VaR) and Stressed VaR (sVaR) limits.
- Equivalent and/or nominal positions limits.
- Interest rate sensitivity limits.
- Vega limits.
- Limits for risk of delivery of short sales (bonds and equities).
- Limits to reduce effective losses or protect profits during the period (loss trigger and stop loss).
- Credit limits (limits for total exposure and jump-to-default by issuer).
- Origination limits.

Those general limits have sub-limits that make the structure granular enough to control market risks from trading. We monitor subsidiaries daily, checking changes in portfolios and at trading desks as well as events that may necessitate immediate mitigation.

We set global approval and control limits, global approval limits with subsidiary-run control and subsidiary-level approval and control limits. Each subsidiary's business unit manager requests limits based on business particulars and budgetary targets so that they will match the risk/reward ratio. Risk bodies approve limits according to established governance.

Subsidiaries must adhere to approved limits. When a limit breach occurs, subsidiary business managers must provide a written explanation with an action plan to correct it the same day the breach occurs. Measures could be to reduce a position within the limits or create a strategy to justify increasing them.

Market risk-related capital requirements

We use internal and standard models to determine market risk-related capital requirements.

At Grupo Santander we use internal models to calculate regulatory capital for the trading books of our subsidiaries in Chile, Mexico and Spain, for which the latter has included the Santander London Branch, diversifying its positions. We aim to include the rest of our subsidiaries gradually and have been working closely with the ECB, reviewing the new requirements recently published by the Basel Committee to strengthen financial institutions' capital.

We launched the Market risk advanced platform (MRAP). MRAP is a global initiative to strengthen market risk infrastructure according to the new FRTB and to adapt internal market risk models to the latest Targeted Review of Internal Models (TRIM) and to supervisory demands. Its multi-disciplinary and multi-regional approach includes all subsidiaries that generate market risk; the market risk, T&O, front office, finance and regulatory affairs areas; and other relevant stakeholders.

In 2022, we expanded MRAP's perimeter to cover our overhaul of processes to measure 'fair value'. It significantly enhanced our functional and technological architecture and operating models, with added synergy from initiatives and resources.

Our internal market risk model calculates the Group's consolidated regulatory capital as subsidiaries' total regulatory capital that the ECB has approved. Because it does not consider capital savings owing to geographical diversification, our model is conservative.

It uses advanced methods with VaR, sVaR, Incremental Risk Charge (IRC) and Risk Not in Model (RNIM) as fundamental metrics to calculate ECB-approved regulatory capital in trading consistently with the Basel requirements gathered in the CRR.

Methodologies and key aspects

a) Value at Risk (VaR)

VaR, our standard methodology for managing and controlling market risk, measures maximum expected loss with a certain confidence level over a given time. For standard historical simulation, the confidence level is 99% and the time window is one day. We also apply a two-year horizon or VaR over 520 days and other statistical adjustments in order to quickly and efficiently account for recent events that influence our risk levels.

We report the highest of two VaR figures, which we calculate every day. One figure includes an exponential decay factor with a low weighting on the oldest observations; the other weights all observations the same. We also use the same methodology to calculate value at earnings (VaE), which gives maximum potential earnings with a certain confidence level over specific time horizon.

As a risk metric, historical VaR simulation has many advantages. It states a portfolio's market risk in a single figure according to market movements, without assumptions about functions, forms or correlations between market variables. Still, it does have its limitations, some of which are inherent to the VaR metric, no matter the methodology used to calculate it. In particular:



- VaR is calibrated to a certain confidence level, above which it does not reveal potential losses.
- The liquidity horizon of certain products in a portfolio is longer than the VaR model's.
- VaR is not a dynamic measure of risk even day to significant, albeit unlikely, changes.

Historical simulation also has limitations, such as:

- high sensitivity to time window used;
- inability to show plausible high-impact events outside the time window;
- no market inputs (e.g. correlations, dividends or recovery rates) for measurement parameters; and
- slow adaptation to new volatility and correlations, as the weighting of the newest and the oldest data is the same.

To circumvent some limitations, we use stressed VaR (sVaR) and expected shortfall (ES); calculate VaR with exponential decay; make conservative measurement adjustments; and run analyses and backtesting to assess the accuracy of the VaR calculation model.

b) Stressed VaR (sVaR) and Expected Shortfall (ES)

Every day, we calculate sVaR for our main portfolios using the same VaR calculation method but with these exceptions:

- A window of 260 observations (as opposed to 520 for VaR) over a continuous stress period. For each portfolio, we review the history of a subset of market risk factors (selected with expert criteria) and the most significant positions per books.
- Unlike with VaR, the percentile we take to get sVaR has uniform weighting and is not the highest one based on exponential and uniform weightings.

We calculate ES as expected loss in case VaR is exceeded at a given confidence level, 99% in our case. We also weight all observations the same. Unlike VaR, ES has the advantage of showing tail risk (i.e. the risk of loss due to a rare event) while being a subadditive metric. According to the Basel Committee, 97.5% ES is a risk level similar to 99% VaR.

c) Scenario analysis

Santander's risk measures are based on normal market conditions, price stability, sufficient liquidity and other assumptions used in daily risk management and decision-making. However, it is possible that extreme movements and strong unforeseen changes will not be properly anticipated.

Scenario analysis is important in risk management so we can recognize unexpected outcomes with a large variety of risk. It gives us an estimate of how much capital could be needed to absorb losses stemming from those outcomes. The scenarios we use to predict future risk are important to overcome the limitations of models and historic data, support liquidity and capital plans, report on risk tolerance levels, and help us execute risk reduction and contingency plans under stress.

We regularly calculate and review stress test scenarios for all the trading books of the Group and our subsidiaries, such as:

Historical scenarios

Historical scenarios consider trading portfolio performance during a crisis or significant past market events to estimate maximum losses if such events reoccur.

- 'Subprime crisis': historical scenario based on 2007-2008 events arising from the US subprime mortgage crisis. The financial crisis caused high volatility and drastically low liquidity in markets across the globe. For each market risk factor, we determine the worst market shocks over one-day and ten-day horizons.
- 'Covid crisis': historical scenario added to our stress testing programme in 2020 and based on abrupt movements in financial markets owing to a health crisis. After calculating a ten-day horizon of peak trading losses in the first half of 2020, all risk factors were affected. Stock indices plummeted, volatility increased for all risk factors, emerging market currencies depreciated, government bond yield hit record lows and credit spreads widened significantly.

Hypothetical scenarios

We use extreme scenarios based on market risk shocks that do not relate to past events. Unlike generally ex post historical scenarios, hypothetical scenarios are ex ante.

- Abrupt crisis: a scenario of strong, sudden movements in all risk factors, including higher interest rate curves, stock market crashes, a stronger US dollar against other currencies, higher volatility, wider credit spreads, commodity price decline, lower dividend yields and default from main fixed-income and equity positions.
- Worst case: A hypothetical scenario that combines movements of each risk factor with its volatility. We base these scenarios on historical volatility with between ± 3 and ± 6 standard deviations per day (irrespective of any historical correlation between them) in order to review trading books' risk profile and potential maximum losses under the worst possible scenario.
- EBA's adverse scenario: A hypothetical scenario based on the EBA's proposed adverse macroeconomic scenario for all market risk factors in biennial EU-wide stress testing.
- Forward-looking scenario: a plausible hypothetical scenario based on portfolio positions and expert opinions about expected short-term market risk movements that could have a negative effect on trading positions.

Reverse stress test scenarios

Reverse stress test scenarios indicate loss-causing market variables that may compromise the bank's survival. They supplement traditional stress test scenarios and point out potentially vulnerable business areas, hidden risks and correlations between risk factors.

They begin with a known stress outcome (e.g. missing certain capital, liquidity or solvency ratios) to indicate extreme scenarios in which market risk movements could cause events that undermine business viability.

**Other stress scenarios**

We also run different quarterly stress tests based on extreme market movements to determine potential losses or major impacts on capital:

- Incremental Risk Charge (IRC) scenarios: To stress capital consumption according to IRC market risk, which relates to the risk that debt issuers in our trading portfolio will either default or suffer a change in credit rating.
- Stress proxy scenario: Specially constructed to measure how selecting the wrong proxies would affect VaR.
- Illiquidity and concentration scenarios: To show the impact of scarce liquidity in markets under stress, price gaps and concentration risk.

d) Calibration and backtesting

According to regulation, the VaR model must accurately show material risks. Because VaR uses statistical techniques under normal conditions for a certain confidence level over a set time horizon, the estimate of maximum potential loss may differ from actual losses. We review and contrast the VaR calculation model on a regular basis to verify its accuracy.

We run internal backtesting, contrast VaR and review assumptions about portfolios for subsidiaries that follow the internal market risk model. For subsidiaries with an approved internal model, we run regulatory backtesting to find exceptions (where daily loss or profit is higher than VaR or VaE) that will influence the calculation of regulatory capital requirements for market risk.

Through backtesting, we assess the quality and general effectiveness of our risk measurement model. Our backtesting compares daily VaR/VaE observed on D-1 to profit and loss (P&L) observed on D:

- Economic P&L: P&L at end-of-day mark-to-market or mark-to-model value. Backtesting indicates if the VaR/VaE methodology to measure and aggregate risk is appropriate.
- Actual P&L: The difference between a portfolio's end-of-day value and real value by the end of the next day, in light of intraday trading (but not fees or interest margin). Backtesting results enable us to determine the number of regulatory exceptions.
- Hypothetical P&L: The difference between a portfolio's end-of-day value and real value by the end of the next day, under the assumption that positions will not vary. Backtesting does not consider the time effect, intraday trading or changes in portfolio positions in order to maintain consistency with VaR. We use it to determine if portfolios can withstand an intraday risk not reflected in closing positions (nor in VaR) over time. We also use it to count the number of regulatory excesses.
- Risk-Theoretical P&L: Calculated with the market risk calculation engine, without intraday trading, changes in portfolio positions or time ('*Theta*'). Backtesting of Risk-Theoretical P&L enables us to check the quality of the internal VaR model.

We run daily backtesting for our subsidiaries, as well as internally (non-regulatory) depending on portfolio granularity.

The number (or proportion) of exceptions we record is one of the most intuitive indicators of a model's soundness. As our regulatory backtesting covers a historical period of one year (250 days) and a 99% VaR, we expect two to three exceptions per year. To calculate regulatory capital for market risk, we take the regulatory K^{16} from the number of exceptions we find in actual and hypothetical backtesting.

e) Analysis of positions, sensitivities and results

Santander uses positions to quantify the market value of derivative transactions by main risk factor and with the *Delta* value of futures and options. We can express risk positions in subsidiaries' base currency and in the currency used to standardize information. We monitor positions every day to immediately correct whatever incidents we uncover.

Sensitivity to market risk is the estimated impact of change in a risk factor on the market value of an instrument or portfolio. To measure it, we take analytical approximations from partial derivatives or a full portfolio revaluation.

The market risk function's daily P&L statement is an excellent indicator of the impact of changes of financial variables on portfolios.

f) Derivatives activities and credit management

Because of their atypical characteristics, we have special measures to monitor derivatives and credit management daily. On the one hand, we monitor the sensitivity of underlying assets to price movements (delta and gamma), to volatility (Vega¹⁷) and over time (theta). On the other hand, we systematically check measurements of their sensitivity to spread risk, jump-to-default risk and position concentrations by rating.

Based on regulation and the Basel Committee's recommendations, we also calculate the incremental risk charge (IRC), an additional metric for credit risk in the trading book.

The IRC covers default risk and rating migration risk (which VaR does not show adequately) by taking credit spread changes into account. In general, we apply it to bond spots; forwards, options and other bond derivatives; and credit default swaps, asset-backed securities and other credit derivatives. To calculate it, we take direct measurements of loss distribution tails at the right percentile (99.9%) over a one-year horizon and follow the Monte Carlo method with one million simulations.

g) Credit valuation adjustment and debit valuation adjustment

The Group calculates trading book results with CVA and DVA.



For further detail on CVA and DVA see 'Credit risk from financial markets activities' in section 3.5 'Other credit risk aspect'

¹⁶ K: Parameter used for calculating the consumption of regulatory capital due to market risk.

¹⁷ Vega, a Greek term, is the sensitivity of the value of a portfolio to changes in the price of market volatility.

4.3 Market risk key metrics

In 2022, trading risk levels stayed low amid the high volatility caused by the war in Ukraine; mounting energy prices, inflation and pressures on central banks; and new covid-19 outbreaks in Asia.

Risks mainly originated from trading non-complex instruments with customers. Most were hedges for interest rate and FX risk.

2022 saw generally low consumption of trading limits, which are based on the Group's market risk appetite.

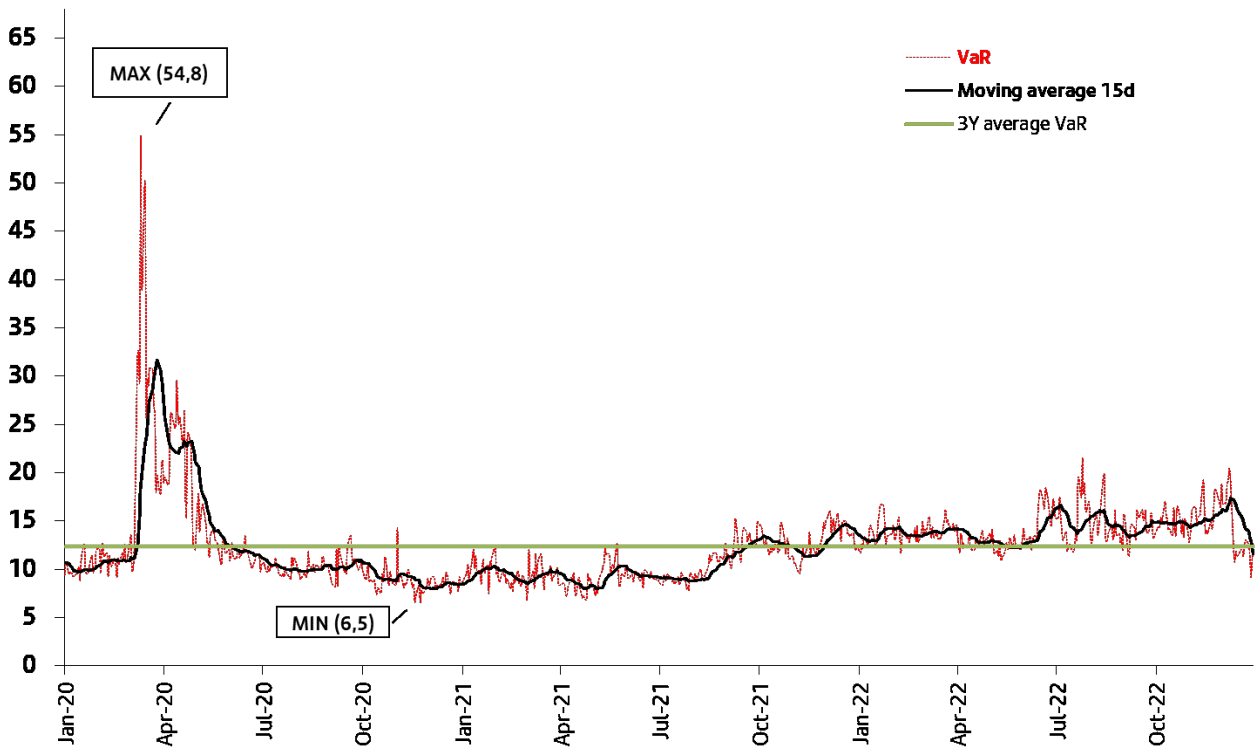
VaR analysis

As demonstrated by the VaR of SCIB's trading book, Santander's strategy focuses on trading with customers to minimize net directional exposure and keep risk diversified by geography and risk factor.

Because market volatility remained high throughout the year (especially in terms of interest and FX rates), VaR stayed mostly above its three-year average. It did rise in the second half of the year owing to the up tick in volatility when central banks hastened monetary policy to fight inflation. VaR ended December at EUR 11.6 million.

VaR 2020-2022

EUR million. VaR at 99% over a one day horizon



In 2022, VaR fluctuated between EUR 21.5 and EUR 9.2 million. Average VaR climbed to EUR 14 million from EUR 10.5 million in 2021 and EUR 12.5 million in 2020.

Risk by factor

This table shows the latest and average VaR at a 99% confidence level by risk factor in the last three years. It also shows the high and low VaR values in 2022 and 97.5% Expected Shortfall at the end of December 2022:

VaR statistics and Expected Shortfall by risk factor^A

EUR million. VaR at 99% and ES at 97.5% with a one-day time horizon

	2022				ES (97.5%) Latest	2021		2020	
	VaR (99%)					VaR		VaR	
	Min	Average	Max	Latest		Average	Latest	Average	Latest
Total Trading	9.2	14.1	21.5	11.6	10.8	10.5	12.3	12.5	8.3
Diversification effect	(7.8)	(14.6)	(30.5)	(15.5)	(15.6)	(12.9)	(13.4)	(13.0)	(11.8)
Interest rate	8.1	12.6	21.5	9.9	9.8	9.6	9.1	9.2	5.4
Equities	2.4	4.2	7.3	5.5	5.5	3.5	5.1	4.4	3.1
Exchange rate	2.5	4.8	10.3	3.6	3.2	4.2	5.7	5.9	6.0
Credit spread	3.4	5.4	8.5	5.8	4.9	4.8	5.1	5.5	4.5
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	0.5	1.1
Total Europe	7.9	12.2	21.9	10.5	9.2	9.3	9.9	10.5	8.0
Diversification effect	(5.1)	(10.4)	(16.8)	(14.2)	(12.0)	(9.3)	(12.6)	(10.7)	(8.9)
Interest rate	5.5	10.2	18.4	10.1	7.8	7.7	7.1	7.9	6.5
Equities	2.2	3.6	5.8	5.5	5.5	3.3	5.8	4.3	3.0
Exchange rate	1.9	3.4	5.8	3.3	3.0	2.8	4.5	3.5	2.9
Credit spread	3.4	5.4	8.7	5.8	4.9	4.8	5.1	5.5	4.5
Commodities	—	—	—	—	—	—	—	—	—
Total North America	1.5	2.3	4.7	2.7	2.2	2.5	2.7	6.6	2.9
Diversification effect	0.7	(0.8)	(4.0)	(1.1)	(1.3)	(0.7)	(0.6)	(2.2)	(1.0)
Interest rate	0.7	2.2	5.7	2.7	2.4	2.5	2.7	3.4	3.3
Equities	—	0.1	1.0	0.1	0.1	0.1	—	0.3	0.1
Exchange rate	0.1	0.8	2.0	1.0	1.0	0.6	0.6	5.1	0.5
Total South America	5.2	8.0	14.2	6.2	6.5	5.9	6.3	5.6	4.5
Diversification effect	(1.3)	(5.0)	(19.8)	(4.2)	(4.4)	(4.9)	(5.1)	(3.8)	(5.4)
Interest rate	4.5	7.0	14.9	5.5	5.7	5.5	5.8	5.2	4.1
Equities	0.7	1.6	4.8	1.7	1.6	1.2	1.1	1.0	0.5
Exchange rate	0.7	2.7	9.9	0.9	0.6	2.8	3.8	2.7	4.2
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	0.5	1.1

A. In the Americas, credit spread VaR and North Americas' commodity VaR are negligible and, thus, not shown.

At the end of 2022, VaR was slightly lower (EUR 0.7 million) than at the end of 2021, consequence of an update in calculation model and a lighter pressure in markets as inflation started to moderate in some regions, as the Eurozone.

Although by risk factor, VaR has followed a generally stable trend in recent years, in 2022 the average VaR rose by EUR 3.6 million compared to 2021. By risk factor, average VaR was greater in all of them, specially in interest rate due to a higher market volatility. The temporary increases in VaR are due more to short-term price volatility than to significant changes in positions.

By region, average VaR grew for all risk types in Europe and South America, which have the highest market risk exposure.



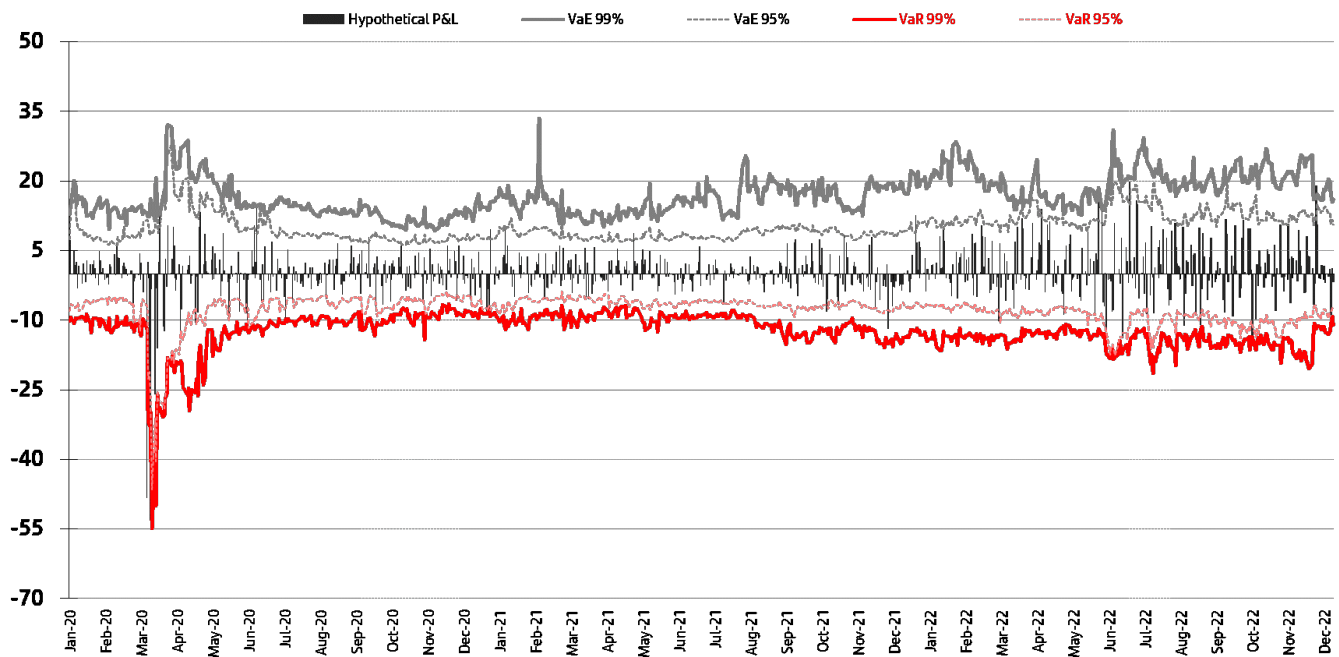
Backtesting

Actual losses can differ from predicted losses because of the mentioned VaR's limitations. Santander measures the accuracy of our VaR calculation model to make sure it is reliable (see 'Methodologies and other key details' under section [4.2 'Market risk management'](#)). The most important tests we run involve backtesting:

- Backtesting of hypothetical P&L and of the entire trading book showed no exceptions to 99% VaR in 2022. Regarding to 99% VaE, there was an exception the 15th of December as a consequence of market volatility concurrent with the last ECB's year meeting where a 50 bp interest rate hike was confirmed.
- These results are consistent with assumptions in the VaR calculation model.

Backtesting of trading portfolios: daily results vs. VaR for previous day

EUR million



Derivatives risk management

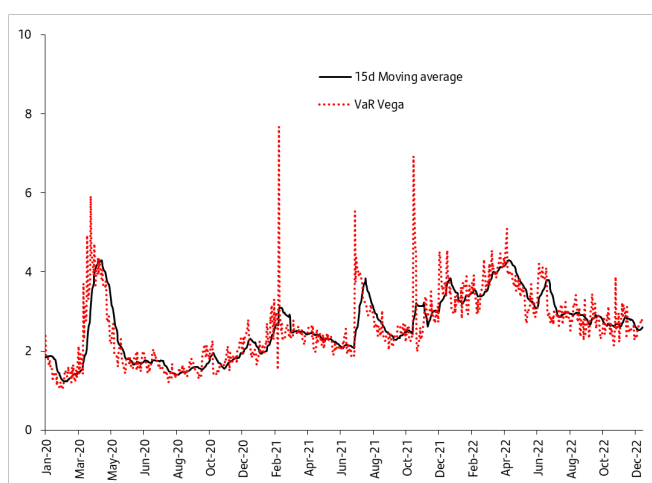
Our operations with derivatives mainly involve selling investment products and hedging risks for customers. We aim to keep open net risk as low as possible. Trading includes equity, fixed-income and FX options, chiefly in Spain, Brazil, the UK and Mexico.

The graph below shows the Vega VaR of structural derivatives over the last three years. Over the last three years, on average, it has increased some EUR 2.6 million. In general, high VaR values stem from sudden spikes in high market volatility, such as at the start of the health crisis, amid changes to monetary policy, or at times of political uncertainty in our geographies.

Average VaR was based on interest rates, equities and FX rates. Average risk (EUR 3.2 million) was slightly higher than in 2020 and 2021, considering the high volatility in interest rates throughout 2022 (see table below):

Change in risk over time (VaR) of structure derivatives

EUR million. VaR Vega at a 99% over a one day horizon



Financial derivatives. Risk (VaR) by risk factor

EUR million. VaR at a 99% over a one day horizon

	2022				2021		2020	
	Minimum	Average	Maximum	Latest	Average	Latest	Average	Latest
Total VaR Vega	2.1	3.2	5.1	2.7	2.6	3.7	1.9	2.3
Diversification effect	(0.5)	(1.1)	(2.0)	(1.0)	(0.9)	(0.1)	(1.3)	(1.7)
interest rate VaR	1.3	2.0	2.9	1.4	1.4	1.2	1.0	1.8
Equity VaR	0.9	1.4	2.3	0.9	1.2	1.6	1.3	1.4
FX VaR	0.4	0.9	1.9	1.4	0.9	1.0	0.9	0.8
Commodity VaR	—	—	—	—	—	—	—	—

Thanks to our risk culture and prudent risk management, exposure to complex structured instruments or vehicles is minor. At the end of December 2022, we had exposure to:

- hedge funds (as the counterparty in derivative contracts): EUR 4 million (indirect). We review this type of counterparty risk on a case by case basis, setting collateralization ratios based on each fund's characteristics and assets.
- monolines: no exposure at the end of December 2022.

Our policy on approving new derivatives transactions has always been extremely prudent and conservative. It is reviewed by senior management.



Scenario analysis

The table below shows Worst case (i.e. maximum volatility) scenario results from late December 2022:

Stress scenario: maximum volatility (worst case)

EUR million. Dec. 2022

	Interest rate	Equities	Exchange rate	Credit spread	Commodities	Total
Total trading	(30.6)	(11.0)	(12.0)	(5.2)	—	(58.8)
Europe	(17.9)	(8.7)	(3.6)	(5.1)	—	(35.3)
North America	(4.5)	(0.2)	(4.0)	—	—	(8.7)
South America	(8.2)	(2.1)	(4.4)	(0.1)	—	(14.8)

Our analysis found that Santander's trading books would lose EUR 59 million in market value in the worst-case scenario of market stress. Losses would mainly affect Europe, especially in interest rates (if these should get higher) and in equities (if markets were to crash).

Connection with balance sheet items

Below are items on Santander's consolidated balance sheet that generate market risk. The table distinguishes positions whose main risk metric is VaR from others that are monitored with different risk metrics.

Risk metric values on the consolidated balance sheet

EUR million. Dec. 2022

	Balance sheet amount	Main market risk metrics		Main risk factors for 'Other' balance
		VaR	Other	
Assets subject to market risk				
Cash, cash balances at central banks and other deposits on demand	223,073		223,073	Interest rate
Financial assets held for trading	156,118	156,118		
Non-trading financial assets mandatorily at fair value through profit or loss	5,713	3,711	2,002	Interest rate, spread
Financial assets designated at fair value through profit or loss	8,989	815	8,174	Interest rate, spread
Financial assets at fair value through other comprehensive income	85,239	1,941	83,298	Interest rate, spread
Financial assets measured at amortised cost	1,147,044		1,147,044	Interest rate, spread
Hedging derivatives	8,069		8,069	Interest rate, exchange rate
Changes in the fair value of hedged items in portfolio hedges of interest risk	(3,749)		(3,749)	Interest rate
Other assets	104,163			
Total assets	1,734,659			
Liabilities subject to market risk				
Financial liabilities held for trading	115,185	115,185		
Financial liabilities designated at fair value through profit or loss	55,947	—	55,947	Interest rate, spread
Financial liabilities at amortised cost	1,423,858		1,423,858	Interest rate, spread
Hedging derivatives	9,228		9,228	Interest rate, exchange rate
Changes in the fair value hedged items in portfolio hedges of interest rate risk	(117)		(117)	Interest rate
Other liabilities	32,973			
Total liabilities	1,637,074			
Total equity	97,585			



4.4 Structural balance sheet risk management

Structural risk: Risk that market or balance sheet movements will change the value or profit generation of assets or liabilities in the banking book.

It covers insurance and pension risks, as well as the risk that Santander will not have sufficient capital (in terms of quantity or quality) to meet internal business targets, regulatory requirements or market expectations.

Limits management and control systems

The policies of senior management dictate mechanisms to monitor and control structural risk according to regulatory requirements and our risk appetite. The mechanism consider sub-types of structural risk and their implications, contingencies and interrelations.

The Structural risk function's role in the second line of defence is to ensure structural risks are understood, controlled and reported to senior management according to established governance:

- It sets interest rate risk metrics and reviews and challenges structural risk appetite and limits proposed by the first line of defence.
- It oversees the first line of defence's structural risk management and checks compliance with set limits.
- It regularly reports on risk profile to senior management and issues guidelines to business lines about measures it deems necessary.
- It reviews and challenges business proposals and helps senior management and business units understand the interest rate risk of Santander's businesses and operations.
- It develops and revises models and policy. And it checks that structural risk procedures are fit and proper.

Like market risk, structural risk also has an annual plan framework to set structural balance sheet risk limits according to risk appetite.

These are the main limits we use:

- Structural interest risk in the banking book:
 - Net interest income (NII) sensitivity limit over a one-year horizon.
 - Economic value of equity (EVE) sensitivity limit.
 - Market value limit on ALCO portfolios under stress scenarios and with a potential influence on shareholders' equity based on their accounting entry (fair value through shareholders' equity).
- Structural FX risk:
 - Limit on the net permanent position of the core capital ratio.
 - Limit on individual hedge required for each currency.

Business lines' risk managers must provide explanations for potential limit and sub-limit breaches as well as an action plan to correct them.

Methodologies and other key details

a) Structural interest-rate risk

As part of structural risk, interest rate risk in the banking book (IRRBB) is a key balance sheet risk.

Santander measures the potential impact of interest rate movements on Economic value of equity (EVE) and Net interest income (NII). Because of the effect of changing rates, we must manage and control many subtypes of interest rate risk, such as repricing risk, yield curve risk, basis risk and option risk (e.g. behavioural or automatic).

Interest rate positions on the balance sheet and market conditions and outlooks could necessitate certain financial measures to achieve the risk profile target (such as changing positions or setting interest rates on products we market).

Metrics for checking IRBBB include NII and EVE sensitivity to interest rate movements.

- **NII:** Is the difference between interest we receive from assets and the interest we owe for liabilities in the banking book over a typical one- to three-year horizon (one year being standard in Santander). Because NII sensitivity is the difference in income between a selected scenario and the base scenario, it can have as many values as considered scenarios. It enables us to see short-term risks and supplement economic value of equity (EVE) sensitivity.
- **EVE:** Is the difference between the net current value of all assets minus the net current value of all liabilities in the banking book. It does not include shareholders' equity and non-interest-bearing instruments. Because EVE sensitivity is the difference in EVE between a selected scenario and the base scenario, it can have as many values as considered scenarios. It enables us to see long-term risks and supplement NII sensitivity.

b) Interest rate models

Interest rate risk metrics consider the behaviour of financial products under stress scenarios in which uncertainty is common and the failure to meet contractual obligations is possible. We have methodologies that help explain how such products will behave. These are our key interest rate risk models:

- **Treatment of liabilities without stated maturity.** The Group's model shows balances of all accounts without maturity using stable and unstable volumes, settlement speed over time, customer and market types, and other variables
- **Prepayment treatment for certain assets.** Prepayment risk mainly affects fixed-rate mortgages at subsidiaries where contractual rates are below market rates and customers have the incentive to pay off all or part of their mortgage early. Prepayment of variable-rate mortgages owes to factors like the economic cycle, taxes or culture but has a lower IRRBB risk impact because of variable revaluation. The Group models prepayment risk and includes it in risk appetite metrics.

c) Structural foreign exchange rate risk/hedging of results

Every day, we measure FX positions, VaR and P&L.

d) Structural equity risk

We measure equity positions, VaR and P&L.

4.5 Structural balance sheet risk key metrics

Market risk profile of the Group's balance sheet remained moderate in 2022 in terms of asset, shareholders' equity and NII volumes.

Each subsidiary's finance division manages interest rate risk from retail banking and is responsible for handling structural risk from interest rate fluctuations.

To measure interest rate risk, we use statistical models based on strategies to mitigate structural risk with interest-rate instruments (such as bonds and derivatives) and keep risk profile within risk appetite.

Exposure across all geographies and all countries was moderate relative to annual budget and capital levels in 2022.

The NII and economic value of equity (EVE) sensitivities below are based on scenarios of parallel interest rate movements between ± 100 bp.

Structural interest rate risk

Europe

At the end of December, the sensitivity of NII on our core balance sheets and of Santander España's EVE to interest rate hikes was positive; but at Santander UK it was negative.

At the end of December, under the scenarios previously described, significant risk of NII sensitivity to the euro amounted to EUR 1,009 million; to the pound sterling, EUR 191 million; to the US dollar, EUR 51 million; and to the Polish złoty, EUR 64 million, all with risk of rate cuts.

Net interest income (NII) sensitivity

% of total

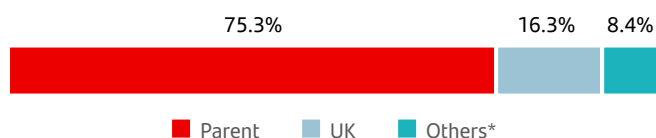


* Other: Portugal and SCF.

Significant risk of EVE sensitivity to yield curves of the euro was EUR 2,820 million; of the pound sterling, EUR 440 million; of the US dollar, EUR 11 million; and of the Polish złoty, EUR 91 million, mostly with risk of rate cuts.

Economic value of equity (EVE) sensitivity

% of total



* Other: Poland, Portugal and SCF.

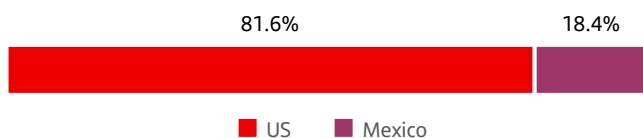
North America

At the end of December, sensitivity of NII on our North America balance sheet to interest rate hikes was positive while EVE sensitivity was negative to interest rate hikes.

At the end of December, significant risk to NII was mainly in the US and amounted to EUR 151 million.

Net interest income (NII) sensitivity

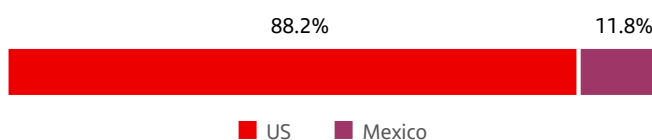
% of total



The most significant risk to EVE was in the US and amounted to EUR 763 million.

Economic value of equity (EVE) sensitivity

% of total



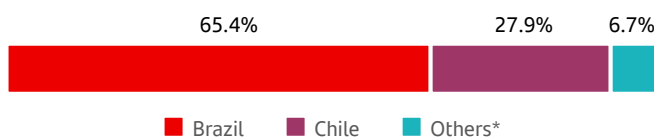
South America

EVE and NII on our main South American balance sheets are positioned for interest rate cuts.

At the end of December, most significant risk to NII was mainly in Chile (EUR 72 million) and in Brazil (EUR 169 million).

Net interest income (NII) sensitivity

% of total

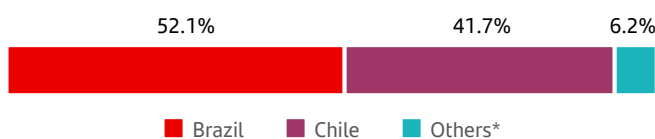


* Other: Argentina, Peru and Uruguay.

Most significant risk to EVE was recorded in Chile (EUR 309 million) and in Brazil (EUR 386 million).

Economic value of equity sensitivity

% of total



* Other: Argentina, Peru and Uruguay.

Structural foreign exchange rate risk/results hedging

Our structural FX risk exposure mainly stems from the performance of, and from hedges for, permanent financial investments. In our dynamic management of this risk, we aim to limit the impact of FX rate movements on the core capital ratio. In 2022, we hedged nearly all currencies that have an impact on our core capital ratio.



In December 2022, our permanent exposures (with potential impact on shareholders' equity) were, from largest to smallest, in US dollars, Brazilian reais, British pounds sterling, Mexican pesos, Chilean pesos and Polish zloty.

We use FX derivatives to hedge part of those permanent positions. Our Finance division manages FX risk and hedging for the expected profits and dividends of subsidiaries whose base currency is not the euro.

Structural equity risk

Santander holds equity positions in its banking and trading books. They are either equity instruments or stock, depending on the share of ownership or control.

Equities in the banking book at the end of December 2022 were diversified, with securities from Spain, China, Morocco, Poland and other countries. Most of them invest in the financial and

insurance sectors. We have minor equity exposure to property and other sectors.

Structural equity positions are exposed to market risk. We calculate their VaR with a set of market prices and proxies. At the end of the year 2022, VaR at a 99% confidence level over a one-day horizon was EUR 195 million (EUR 309 million in 2021 and EUR 319 million in 2020).

Structural VaR

Homogenous metrics like VaR make it possible to monitor all market risk in the banking book (minus SCIB trading; see section 4.3 'Market risk key metrics'). We differentiate fixed income based on interest rates and credit spreads in ALCO portfolios, FX rates and shares.

In general, the structural VaR of our total assets and equity is minor, as shown in the following table:

Structural VaR

EUR million. VaR at a 99% over a one day horizon

	2022				2021		2020	
	Minimum	Average	Maximum	Latest	Average	Latest	Average	Latest
Structural VaR	538.5	664.0	1,084.4	538.5	993.7	1,011.9	911.0	903.1
Diversification effect	(323.5)	(417.1)	(489.5)	(422.4)	(327.3)	(240.2)	(349.8)	(263.4)
VaR Interest Rate ^A	266.2	350.8	577.0	304.5	400.7	287.8	465.1	345.5
VaR Exchange Rate	400.4	493.4	682.3	461.0	600.6	655.2	499.9	502.6
VaR Equities	195.4	236.9	314.6	195.4	319.7	309.1	295.9	318.5

A. Includes credit spread VaR on ALCO portfolios.

4.6 Liquidity risk management

The second line of defence ensures liquidity risk is understood, controlled and reported to senior management and across the Group according to established governance.

- It defines liquidity risk and provides detailed measurements of current and emerging liquidity risks.
- It sets liquidity risk metrics, and reviews and challenges liquidity risk appetite and limits proposed by the first line of defence.
- It oversees the first line of defence's liquidity risk management, measures how long business will remain within risk appetite limits and checks compliance with liquidity risk limits.
- It reports to governing bodies on risk, risk appetite and exceptions.
- It evaluates and challenges commercial and business proposals, and gives senior management and business units things they need to understand Santander's liquidity risk.
- It provides a comprehensive overview of our liquidity risk exposure and profile.
- It makes sure the liquidity risk procedures in place are appropriate to manage business within risk appetite limits.

Methodologies and key other key details

To measure liquidity risk, we use tools and metrics for the right risk factors such as:

- Liquidity buffer
- Liquidity coverage ratio (LCR)
- Wholesale liquidity metric
- Net stable funding ratio
- Asset encumbrance metrics
- Other liquidity indicators
- Liquidity scenario analysis
- Early-warning indicators (EWI)
- Intraday liquidity metrics



For more details on the definition of liquidity metrics, see section '[Liquidity risk measurement](#)', in Note 53 to the consolidated financial statement,



4.7 Liquidity risk key metrics

The Group's sound liquidity and funding position stands on a decentralized liquidity model. Each subsidiary manages its own liquidity autonomously, keeping a large stock of highly liquid assets.

In general, the LCR remained stable and well above the regulatory threshold. In 2022, our minimum regulatory required LCR was 100% and our risk appetite limit was 110%. We calculate and monitor this metric on a daily basis.

We manage liquidity buffers effectively to maintain a sound risk profile within regulatory limits and a profitable balance sheet. They mostly consist of level 1 assets: cash and sovereign debt, adequately diversified by currency according to the Group's balance sheet needs.

Our subsidiaries have a sound balance sheet and stable funding structure, supported by a large base of customer deposits, low dependence on short-term funding and liquidity metrics well above local and corporate regulatory requirements and within risk appetite limits.

The regulatory net stable financing ratios (NSFR) of our core subsidiaries and the Group remained above the regulatory requirement of 100% and the internal risk appetite of 101.5%.

Our main sources of structural asset encumbrance are collateralized issues (e.g. securitizations and covered bonds) and credit transactions with central banks with collateral. The asset encumbrance decreased in 2022 on the back of fewer appeals to central banks for covid-19 relief funds. Santander's asset encumbrance is comparable with the other European banks'.

As demonstrated by stress scenarios run under uniform corporate standards, the balance sheets of our subsidiaries are robust. Under the worst scenario, every subsidiary would survive and handle liquidity needs with nothing more than its liquidity buffer for at least 45 days.

Santander manages intraday liquidity risk based on other liquidity metrics, with daily limits and warning indicators to help anticipate contingencies.



For more details on liquidity metrics, see section [3.4 'Liquidity and funding management'](#) of the chapter on Economic and financial review.

4.8 Pension and actuarial risk management

Pension risk

Grupo Santander operates a number of defined benefit pension schemes which generate financial, market, credit and liquidity risks from the assets and investments, as well as actuarial risks from pension obligations.

We aim to identify, measure, control, mitigate and report on pension risk and all its sources.

Grupo Santander measures and controls market and actuarial components of pension risk using mainly Value at Risk (VaR) techniques. VaR is also used to set risk appetite limits and to calculate Economic Capital.

Additionally, we estimate combined losses each year on assets and liabilities under a stress scenario that includes shifts in interest rates, exchange rates, inflation, stock markets, property values and credit spreads.

In 2022, the markets' effect on pension risk was positive mainly because of higher discount rates in our core markets, which caused actuarial liabilities to decline significantly.

Actuarial risk

Actuarial risk stems from biometric changes in defined benefit recipients and life insurance policyholders' life expectancy; from suddenly higher non-life insurance payments; and from policyholders' unexpected behaviour to file claims covered by insurance policies. These are the actuarial risks we distinguish:

- **Life liability risk:** risk of loss on liabilities due to changing risk factors that affect pension obligations. We split them into:
 - mortality/longevity risk: risk of loss on liabilities due to death or survival rates that exceed expectations.
 - morbidity risk: risk of loss on liabilities due to changes in estimated policyholder disability or incapacitation rates.
 - withdrawal/surrender risk: risk of loss on liabilities due to early policy surrender or changes in policyholders' exercise of withdrawal rights, extraordinary premium payments or suspension of premium payments.
 - expense risk: risk of loss on liabilities from negative shifts in expected costs.
 - catastrophe risk: losses caused by catastrophic events that increase the bank's life insurance obligations.
- **Non-life liability risk:** risk of loss on liabilities from risk variations that increase Santander's non-life payment obligations towards employees. We split them into:
 - premium risk: loss from insufficient premiums to cover future claims.
 - reserve risk: loss from insufficient reserves for unpaid claims (including management costs).
 - catastrophe risk: losses caused by catastrophic events that increase the bank's non-life insurance obligations.

5. Capital risk

5.1 Introduction

Our structural risk includes the risk of insufficient quality or quantity of capital to meet internal business objectives, regulatory requirements and market expectations.

Our capital risk function, which is part of our second line of defence, oversees first-line capital management and controls that our capital adequacy and coverage are in line with our risk profile. It also oversees transactions that could be significant risk transfers (SRT).

Capital management falls under the Group's capital framework and model. It brings together capital planning, budget execution and tracking, and the ongoing measurement, reporting and disclosure of capital data.

5.2 Capital risk management

The capital risk function controls and oversees the capital activities carried out by the first line of defence. These activities split into four workflows to ensure monitoring is adequate to Santander's risk profile:

- **Capital planning:** Internal process to determine capital levels and returns according to our strategy. Because we must ensure solvency and efficiency of capital, we identify the necessary measures to achieve our capital ratio and return on capital targets.
- **Capital adequacy:** We measure capital levels against the type and amount of risk assumed based on a risk profile assessment (RPA), our strategy and risk appetite.

We review capital planning and adequacy exercises to make sure capital is consistent with risk appetite and the risk profile to:

- ensuring the monitoring of Santander's significant risks in the course of its operations;
 - checking that planning methodologies and assumptions are appropriate;
 - confirming that results are reasonable and consistent with business strategy, the macroeconomic environment and system variables; and
 - assessing the consistency of adequacy exercises (especially ones that use baseline and stressed scenarios).
- **Capital risk management:** The required actions to measure capital metrics, based on a set methodology to obtain final figures. It also supports the stages of capital management, monitoring, oversight and control.

Continuous monitoring of our regulatory capital measurement is an additional capital risk control function to ensure the right capital risk profile. We conduct a qualitative analysis of the regulatory and supervisory framework and a review of capital metrics and specific thresholds. We also monitor compliance with capital risk appetite to maintain capital levels above regulatory requirements and market expectations.

- **Origination:** Assessment of our portfolios' capital efficiency to identify capital optimization initiatives such as securitizations, risk mitigation and asset sales.

We oversee securitizations that might be significant risk transfers originated by Santander, in accordance with articles 243 and 245, articles about SRT, of Regulations (EU) 2017/2401 and 2017/2402.

This first step is an essential prerequisite for synthetic and traditional securitizations, especially if they can reduce RWA under regulatory standards.

The aim is to make sure that oversight includes analysis of the conditions that could alter the securitization's SRT classification, namely:

- if it can effectively transfer risk;
- if it complies with all prudential regulation requirements;
- if its risk parameters follow our methodology; and
- if its economic rationale meets group-wide standards.

Key initiatives

The macroeconomic uncertainties have caused the expectations of recovery coming from 2021, after the pandemic, to be lowered.

Against this backdrop, our capital risk management focused on protecting the Group's solvency and making sure internal objectives were met. We pinpointed and assessed the risks that could affect solvency and continuously monitored key metrics.

In capital planning, the Capital Risk function regularly assesses potential deviations in capital forecasts to set budget uncertainty levels. We oversee progress with organic capital and securitization plans, as well as the impact of Internal Rating Based (IRB) model reviews.

In 2022, we continuously monitored the achievement of capital contribution targets to identify threats and opportunities relating to our capital targets for the year. We also checked the impact of market variables on capital levels. We continued to



implement hedging policies to mitigate exchange rate volatility on our CET1 ratio.

The capital risk function and first line of defence set the solvency limits, which were consistent with the Group's medium-low risk appetite and resilient to stressful conditions. We added new solvency risk appetite metrics for the Group and its subsidiaries in order to make our risk appetite framework more robust and more consistent with the Group's risk profile, as well as to boost coverage of the risks we're exposed to.

We also added the analysis of Minimum Requirement for own funds and Eligible Liabilities (MREL) and Total Loss-Absorbing Capacity (TLAC) metric forecasts to our scenarios.

We focused on enhancing reporting and governance of oversight of SRT securitizations during origination. Subsidiaries became more involved in monitoring and in driving automation through use of the corporate tool.

5.3 Key metrics

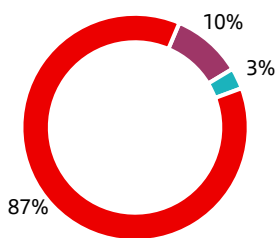
Banco Santander's strong capital position is consistent with our business model, balance sheet structure, risk profile and regulatory requirements. Our robust balance sheet and profitability enable us to finance growth and accumulate capital.

Our model of subsidiaries with autonomy over liquidity and capital allows us to mitigate risk. Our capital metrics are stable, with ratios that remain comfortably above regulatory requirements and that are consistent with senior management-approved risk appetite

The distribution of risk-weighted assets by risk factor and by region at the end of December reflects the Group's core business in credit risk and geographic diversification:

RWA by risk type^A

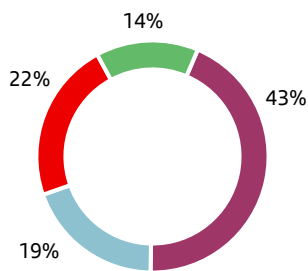
Dec. 22 data



Operational
Market
Credit

RWA by region^B

Dec. 22 data



Europe
North America
South America
DCB

A. Credit risk included counterparty credit risk, securitizations and amounts below the thresholds for deduction.

B. Others, not included, represent 2% in 2022 (Corporate centre)

At the end of December, our fully-loaded CET1 was 12.10%, above our 11-12% target.

The fully-loaded CET1 ratio rose 8 bp, owing to strong organic generation of 76 bp (net of dividend accruals) based mainly on the year's profit, growth in risk-weighted assets (RWA) and the successful execution of the securitization plan.

Regulatory and model impacts caused a 28 bp drop, while other items on the back of market developments triggered a 39 bp fall.

Under IFRS 9 transitional arrangements, the CET1 phased-in ratio was 12.18% and the total phased-in capital ratio was 15.99%, comfortably meeting the Basel Committee's 9.07% and 13.26% minimum levels, respectively.

The fully-loaded leverage ratio was 4.70% and the phased-in ratio was 4.74%, which also met the Basel Committee's 3% minimum comfortably.

We kept capital ratios above solvency limits established in the risk appetite, throughout the whole year.



For more details, see section [3.5 'Capital management and adequacy. Solvency ratios'](#) in the 'Economic and financial review' chapter.

6. Operational risk

6.1 Introduction

In accordance with the Basel framework, Santander defines operational risk as the risk of loss due to inadequate or failed internal processes, people, and systems or to external events. It covers risk types such as fraud, technological risk, cyber risk, legal risk¹⁸ and conduct risk.

Operational risk is inherent in all products, activities, processes, and systems, and is generated in all business and support areas. All employees are responsible for managing and controlling the operational risks generated by their activities.

Our operational risk management and control model is based on a continuous process of identifying, evaluating and mitigating sources of risk, regardless of whether they have materialized or not, promoting that risk management priorities are established appropriately, and internal controls are defined and executed to manage and mitigate the risk across the organization.

6.2 Operational risk management

Management and control model

Our operational risk model establishes the items needed to manage and control operational risk properly according to advanced regulatory standards and best management practices. Its phases are:

- strategic planning;
- identification and assessment of risks and internal controls;
- ongoing monitoring of the operational risk profile;
- implementation of actions to manage the risks, including mitigation measures, and
- disclosure, reporting, and escalation of relevant matters.

The main operational risk tools used by the Group throughout the management cycle are the following:



- Internal event database: registry of operational risk events, whose impact could be financial (e.g., losses, irrespective of their amount) or non-financial (i.e., relating to regulation, customers, or services). This information:
 - enables the analysis of root causes;
 - increases the awareness of risks for better operational risk management;
 - enables the escalation of relevant operational risk events to senior risk executives in the shortest time possible;
 - facilitates regulatory reporting, and
 - facilitates the development of the economic capital model within the internal capital adequacy assessment process (ICAAP).
- Operational risk control self-assessment (RCSA): a qualitative process that evaluates each area's operational risks and assesses the control environment based on the opinion of experts from each function. Its purpose is to identify, assess and measure material operational risks that could prevent the business or support units from achieving their objectives. After assessing risks and internal controls, mitigating measures for risk levels above tolerance are identified.

Our RCSA integrates specific reviews that allow to identify cyber, technology, fraud, third party supplier and other risk drivers that could lead to operational risk as well as the failure to meet regulations. In addition, the RCSA incorporates reviews related to regulatory compliance, conduct and

¹⁸ Legal proceedings stemming from operational risk.



financial crime risk (for more details, see Section [7.2 'Compliance and conduct risk management'](#)).

- Control score: independent assessment of the control environment performed by second line of defence in order to oversee and challenge the accuracy of each area's control assessments
- External events data: quantitative and qualitative information about external operational risk events. This information facilitates detailed and structured analysis of relevant events in the industry; the comparison to Group and subsidiaries' loss profiles; as well as the preparation for RCSA exercises, insurance and scenario analysis.
- Operational risk scenario analysis: identifies highly unlikely events that could result in significant losses for us and establishes appropriate mitigating measures based on the assessment and opinion of experts from business lines and risk managers. Scenario analysis results are also used as an input to the economic capital models.
- Key risk indicators: indicators that provide quantitative information about our risk exposure and control environment. The most relevant indicators are those related to the bank's main risk exposures, and are part of operational risk appetite.
- Risk appetite, which has the following structure:
 - a global non-financial risk appetite statement, which asserts our commitment to controlling and limiting non-financial risk events that can result in financial losses; fraud events; operational and technological incidents; legal and regulatory infractions; issues associated with conduct; or reputational damage. This statement has associated loss and control environment metrics.
 - Statements regarding technology risk, cyberrisk, cloud, fraud, financial crime compliance, product sales, regulatory compliance, model risk, data management, and supplier risk management, and their own forward-looking monitoring metrics.
- Economic capital model: a loss distribution approach (LDA) model that captures our operational risk profile, with information collected from the internal loss database, external data, and scenarios. Its purpose is to determine operational risk economic capital and estimate expected and stressed losses for operational risk appetite.
- Other instruments are used to analyse and manage operational risk, such as the assessment of new products and services, and transformation initiatives; business continuity plans (BCP); review of corporate insurance; review of the management perimeter; recommendations from internal and external auditors, and supervisors; and the quality assurance process.

Heracles, which is our management and reporting system for operational risk, supports the operational risk programme and tools with a Governance, Risk and Compliance (GRC) approach. It provides information for management and reporting at subsidiaries and throughout the Group. Heracles also facilitates better operational risk management decisions by using a common set of taxonomies and methodological standards to allow information consolidation, duplication prevention, and

reporting simplification. Through Heracles, we ensure that employees can have a timely, complete, and precise view of their risks.

The main objective of the second line of defence is to challenge and oversee the operational risk profile through the ongoing monitoring of the previously described toolset.

Model implementation and enhancement initiatives

In 2022, we strengthen our operational risk model by:

- enhancing the risk appetite framework: establishing new metrics at Group level (related to cloud and data management); and improving definitions, thresholds and measurements;
- reviewing the current operating model to achieve a risk-intelligent model based on industry best practices and regulations;
- improving and progressing with our holistic risk assessment programme, in which each specialized second line monitors and contrasts the principal risks that are integrated within non-financial risks;
- improvements in the process to determine, identify and assess reference risks and standard controls, with the objective of strengthening and ensuring consistency of our risk and control environment;
- consolidating initiatives to assess climate related factors that impact operational risk within our management model;
- improving the assessment methodology of the global cybersecurity transformation plan to identify and measure the reduction in risk due to the implementation of new information security developments;
- improvements to contingency, business continuity and crisis management plans, in coordination with the recovery and resolution plans, while also hedging emerging risks; and
- developing the methodology to analyse, assess, measure and compare transformation risk among our subsidiaries.

Operational resilience and the business continuity plan

Digital transformation is revolutionizing how banks operate, presenting new business opportunities. At the same time this structural change is also giving rise to new emerging risks such as technology risk, cyber risk, and an increased dependency on third party suppliers, which increase the potential exposure to events that could affect the provision of services to our clients.

We are also witnessing changes in regulations that are increasingly focused on the importance of Operational Resilience, such as:

- the recently published Basel Principles for Operational Resilience guidelines;
- the policy statement and final rules, Building the UK Financial Sector's Operational Resilience, by the Bank of England (BoE), the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA);



- the EU's Digital Operational Resilience Act (DORA).

These regulations require banks to strengthen their ability to recover from disruptive events that could have an impact on their core business services and operations.

We are firmly committed to maintaining a robust control environment according to the best standards in the banking industry. This allows us to reinforce our operational resilience against potential disruptive events thus ensuring the provision of services to our customers as well as ensuring systemic stability.

A major pillar of our operational resilience is our business continuity management system (BCMS), which ensures the continuity of our business processes in all our subsidiaries in the event of a severe incident or disaster. It is a holistic management process that identifies potential threats and their impact to our operations and resources. It also defines the proper protocols and governance to provide an effective response. Its main objectives are:

- safeguarding people's safety in a contingency situation;
- guaranteeing that core functions are performed, and service is delivered to our customers;
- fulfilling our obligations towards employees, customers, shareholders, and other stakeholders;
- to comply with regulatory requirements;
- to minimize potential losses to Grupo Santander as well as the impact on business activities;
- to safeguard the bank's reputation and credibility, as well as our client's confidence in the bank;
- to reduce the effects of an incident by ensuring efficient procedures, priorities, and strategy for the recovery and restoration of business operations in a contingency situation; and
- contribute to a stable financial system.

In 2022, we continued to enhance and revise our BCMS with particular emphasis on the following aspects:

- internal continuity strategies or workarounds to minimize the impact on business activities derived from the potential disruptions in the services provided by critical suppliers;
- mandatory risk assessments and cost-benefit analyses in order to select the necessary continuity strategies for each contingency scenario identified;
- several risk assessments to evaluate the Group's preparedness to address potential emerging risks such as Solar Flares or Power shortages (due to the war in Ukraine);

- strengthening the HQ contingency sites to ensure proper risk coverage and a quick recovery of critical business activities in the case of contingency scenarios impacting main offices, or other situations such as ransomware attacks, power shortages affecting the homes of staff; and
- enhancing the methodology to manage and monitor the maturity level of subsidiary business continuity programmes.

In addition, the current BCM framework and systems are being updated to ensure proper coverage of the new Operational Resilience regulatory requirements.

Important mitigating measures




We continuously implement and monitor mitigation actions for major sources of risk identified by internal operational risk management tools and other external sources of information.

Fraud

The transformation and digitalization of the business has given rise to new risks and threats, such as more payment scams and credit fraud (fraud in origination). To mitigate these risks, we enhanced control mechanisms and designed new products. Strong customer authentication processes, in line with the EU's Payment Service Directive (PSD2), such as biometric validation (e.g., facial recognition) in customer onboarding and enhancing anti-fraud alerts in origination are becoming increasingly widespread to mitigate fraud risk.



To reduce fraud, Grupo we apply special measures in some subsidiaries such as:

 Card fraud	 Online/mobile banking fraud	 Forgery and identity theft fraud
<ul style="list-style-type: none"> → Generalized use of chip and PIN (transactions with chip cards that require a numeric verification code) for all transactions in ATMs and stores, with advanced authentication mechanisms between ATMs, Points of Sale and Grupo Santander's systems. → Continuously improved card protection against e-commerce fraud, with a secure standard (3D Secure) via two-step authentication based on one-time passwords, mobile applications that enable card deactivation for e-commerce transactions, or virtual cards issuance with safety features such as dynamic CVVs (Card Verification Value). → Use of a new biometric authentication system in ATMs and branches. Customers can use their fingerprint to withdraw cash from ATMs. → Continuous integration of monitoring and fraud detection tools with internal and external systems for better detection of suspicious activity. → Reinforced ATM security with new physical protection and anti-skimming elements, as well as improved logical security of devices. 	<ul style="list-style-type: none"> → Online banking transaction verification with a second security factor of one-time passwords. The evolution of technology differs across countries, e.g., the use of QR codes generated for payments. → Continuous improvements to online banking security with a transaction scoring system that assigns transactions a risk level, which trigger additional authentication when a given security threshold is breached. → Implementation of specific mobile banking protections, such as identification and registration of customer devices. → Monitoring of the e-banking platform security to avoid systems attacks. 	<ul style="list-style-type: none"> → Enhanced fraud controls that verify the applicant's identity and the device used to submit the request. → Implementation of biometrics for customers and employees (in some geographies). → New management and authentication platforms.

Cyberrisk

In 2022 the war in Ukraine and the increased professionalization of cybercriminals have produced a worsening threat landscape that has increased the frequency and severity of cyberattacks that are impacting businesses, third parties, critical infrastructure and even governments. This situation has made cybersecurity a top risk concern for financial institutions; thus we increased our activity in terms of cybersecurity initiatives to mitigate emerging threats.

Our greater reliance on digital systems, also makes cybersecurity one of the main non-financial risks of the business. Our objective is to make Grupo Santander a cyberresilient organization that can quickly resist, detect and respond to cyberattacks, with constant evolution and improvement of its defences.

In that sense, we continue to develop our risk management and controls in line with the Group's global cybersecurity framework and international best practices. From the second line of defence perspective, the cybersecurity risk team has developed and implemented a framework for the measurement, and monitoring of the cyberrisk profile and control environment. The main areas of focus for this year have been:

- establishment of a European second line of defence Center of Excellence for cyberrisk providing an opportunity to strengthen control risk activities while achieving efficiencies, simplification and harmonization;
- root cause analysis of recent external events;

- deep dives reviews of BAU processes; and
- KRI and risk scoring automatization.



For more details on cyber security, see section 5 'Research, development and innovation (R&D&I)' on 'Economic and financial review' chapter.

IT risk

The process of digital transformation as well as Santander's mission to become the best open financial services platform requires that we constantly review, assess and improve our controls to mitigate and manage IT risk.

Despite a demanding environment that is constantly changing, we have quickly adapted our technology to meet the new needs of our customers as well as new regulatory requirements. It is important to note that, even with the current digital transformation, relevant IT incidents at Group level have continued their downward trend in comparison with recent years. For 2022 key aspects of our IT Risk Management programme are summarized below:

- The adoption of a risk-based approach to ensure we prioritize the necessary resources and corrective actions taking into consideration the criticality of our IT assets. These critical assets have corresponding risk appetite metrics that are used to monitor the level of IT risk in areas such as availability, obsolescence, and the application of security patches. We



made significant progress on reducing the level of obsolescence in key IT assets in all subsidiaries.

- We continued the enhancement of an automated tool that enables IT risk data correlation, analysis, and reporting. This tool facilitates information gathering and consolidation to enable the prioritization of risk management activities, allowing for more efficient independent oversight of IT risk.
- Detailed deep dive analyses of relevant IT risks as identified in our RCSA to gain an in-depth understanding of these risks, controls and ensure appropriate mitigation plans.
- Oversight and challenge of the main IT transformation initiatives.
- An IT risk management and oversight policy that establishes common protocols and standards for the monitoring and controlling of IT risks, in conjunction with functional and governance aspects.
- Regular review of KRI and related thresholds to grant a consistent oversight of our most relevant IT Risk.

Supplier risk management

Our digitalization strategy sets out to offer our customers the best solutions and products in the market. This can entail an increase in third-party services and the use of new technologies such as cloud.

In 2022, in light of an increase in cyber and environmental related risks as well as regulatory requirements, the Group has strengthened the supplier risk management model and the internal control framework. A new IT platform is being developed to properly assess and manage the risks in outsourcing and third-party agreements.

We revised our methodologies and tools to enhance the monitoring of third-party risk in our subsidiaries. In addition, we adopted a risk-based approach that focuses on those suppliers, in the different entities of the Group, that could increase the potential risk level in our operations and client services. We have implemented enhanced monitoring of those suppliers to ensure:

- they present an appropriate control environment in accordance with established Group policies and with the risk level of the service provided;
- business continuity plans are in place to guarantee the delivery of the service even in the event of a disruption;
- the proper controls are in place to guarantee the protection of information processed during the provision of service;
- contracts and third-party agreements include the required clauses to protect the interests of the Group and our customers, while providing coverage of the legal obligations in force;
- regular monitoring of these providers is carried out, with particular attention to the monitoring of service level agreements and to the regular testing of the supplier's business continuity plans; and

- exit strategies are defined, including reversion or migration plans, particularly for those services with a high impact on business continuity and complex substitution.

We are embedding our environmental, social and governance approach in our strategy and culture to build a more responsible bank. In this regard, as our suppliers can affect the environment and broader society, we hold them to strict ethical, social and environmental standards. A new certification process is being defined to ensure that our suppliers follow the ESG sustainability standards and criteria required by the Group.

Other key mitigating actions

We are constantly improving our risk mitigation measures related to customer, products, and business practices. Santander has specific frameworks and policies on the marketing and selling of products and services; customer complaint handling and analysis; financial crime prevention; and compliance with new regulations.



For more details on compliance risk mitigation, see section [7.2 'Compliance and conduct risk management'](#).

Insurance in operational risk management

Santander considers insurance to be a key component in the management of operational risk. The Corporate Insurance function is responsible for the use of risk transfer formulas to optimize and safeguard the bank's financial results. The Corporate Insurance function, in collaboration with Non-Financial Risk (NFR), performs the continuous oversight and supervision of entities across the Group to ensure the proper application of policies and procedures to manage risk that is insurable. This collaboration is governed by:

- NFR participation as a permanent member in the quarterly Corporate Insurance forum.
- NFR attendance of the quarterly Claims forum, which monitors and enhances processes for loss recovery via insurance.
- Procedures outlining the interaction model between NFR and Corporate Insurance, as well as other functions that correspond to the various insurance typologies (e.g., facilities, cybersecurity, legal, etc.). These procedures ensure the proper management of insurance throughout the entire process of identification, assessment, transfer, and retention of risk.
- The coordination on an annual basis of the mapping of risks to insurance across the Group, with the objective of monitoring the effectiveness of insurance coverage, and identifying and correcting any potential gaps in coverage.

We continue to adapt the use of insurance to align our management with changes in the risk environment. As a result, we have expanded our analysis and implemented coverage related to climate change, ESG, cyber risk, the digital environment, and other elements. To respond to these and other transversal risks, we have global insurance programmes for property damage, general liability, fraud, expenses arising from cybersecurity breaches, and third-party claims against directors and officers of the Group (D&O insurance). These global policies are complemented by local insurance policies that adapt to the characteristics of each subsidiary and are



purchased according to the Corporate Insurance risk management model implemented in each geography.

Analysis and oversight of controls in Santander Corporate & Investment Banking (SCIB)

Given the nature, specificity, and complexity of financial markets, SCIB improves operational risk management and control on a continuous basis. The following enhancements were implemented in 2022:

- Continued to strengthen processes and drive the operational excellence of services provided to our customers by reinforcing a culture of quality and promoting the best standards in all SCIB geographies
- The control framework was subject to continuous improvements through regular review of controls and enhancements of reports that facilitate the holistic supervision and monitoring of Markets' activity. The risk of unauthorized trading kept being monitored via a specific risk appetite metric that measures the periodic assessment of key risk mitigation controls.
- Constant incident and risk surveillance to resolve them in a quick manner and therefore have more effective operational risk mitigation measures.
- Enhancement of the control model related to regulatory requirements such as MiFID¹⁹ II (, the Dodd-Frank Act, EMIR²⁰, IFRS 9, GDPR²¹ and other regulations.
- Strengthened the oversight of third-party risk management to comply with internal and regulatory requirements through specific tasks such as watchlist and deep dives reviews, enhancing the risk profile and the function itself.
- Due to the cybersecurity landscape, the maturity levels of the cyber-controls deployed have been improved with focus on vulnerability management and recovery processes, data leaks and services deployed in the public cloud. In addition, oversight and challenge exercises have been increased to ensure the correct execution of the controls.



For more details on regulatory compliance in markets, see section '[SCIB Compliance](#)' in 7.2 'Compliance and conduct risk management'

¹⁹ Markets in Financial Instruments Directive.

²⁰ European Market Infrastructure Regulation.

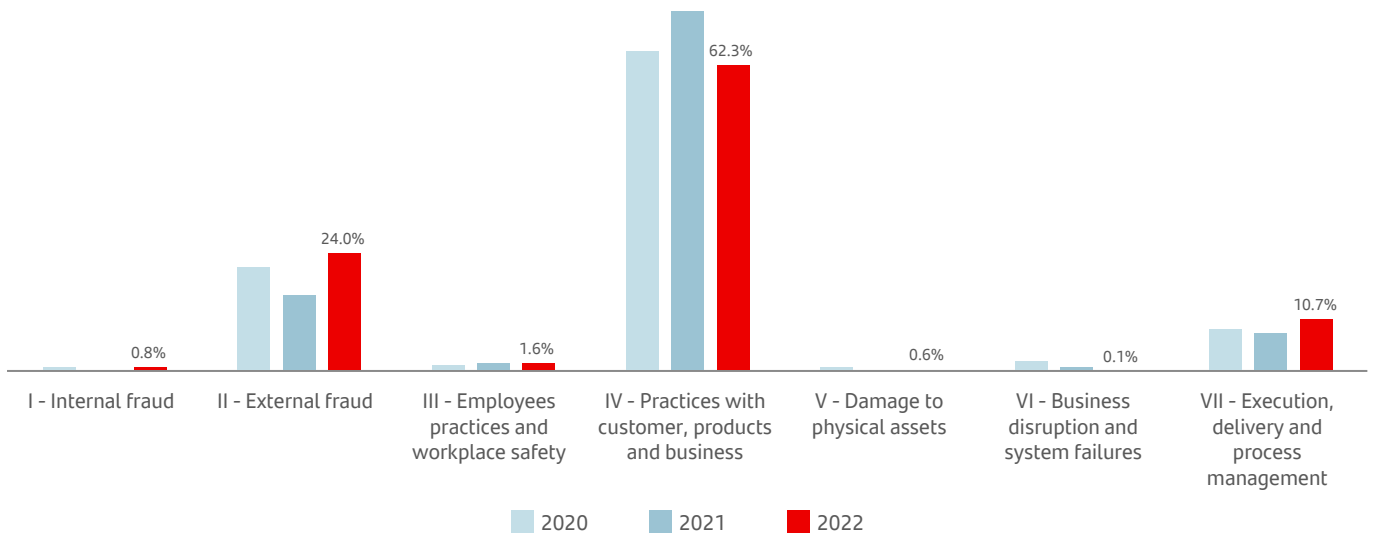
²¹ General Data Protection Regulation.

6.3 Key metrics

Net losses (including incurred losses and net provisions) as per Basel²² risk categories in the last three years were:

Net losses by operational risk category^A

(% o/total)



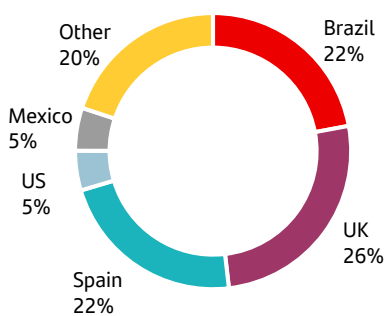
A. Does not include employees litigations in Brazil

Losses due to practices with customers, products and business were lower than in the previous year. However, those due to execution, delivery and process management as well as external fraud losses have increased.

The net losses by country were:

Net losses by country^A

(% o/total)



A. Does not include labour proceedings in Brazil.

Santander considers employee litigation in Santander Brazil to be a staff expense. Our governing bodies continuously monitor expense levels with specific risk appetite metrics and take special actions to reduce them. These expenses are reported under the categories defined by the Basel Operational Risk framework.

In 2022, the most significant losses by category and geography are related to litigation in Santander Brazil (with ongoing root cause analyses of the main products), Spain (due to legacy cases) and the UK (due to fraud and legacy cases). Additionally, the amount of losses in the US remains stable compared to last year.

²² The Basel categories incorporate risks which are detailed in section 7 'Compliance and conduct risk'.



7. Compliance and conduct risk

7.1 Introduction

Under Santander's three lines of defence model, the compliance and conduct risk function is an independent control function within the second line of defence. It reports directly and regularly to the board of directors through the Group Chief Compliance Officer (GCCO). It facilitates critical, independent debate, overseeing first-line management of risk in terms of regulatory compliance, product governance, consumer protection, financial crime and reputation. It also measures the impact of compliance and conduct risk on risk appetite and risk profile.

The compliance and conduct function reports to governance bodies on risk when necessary and, especially, breaches of risk appetite. It also promotes a common risk culture and gives expert judgement and guidance on important compliance and conduct risk matters.

Banco Santander and each subsidiary run compliance programmes that suit their size and complexity. Programmes are structured according to the four management risks mentioned earlier, and set out the core initiatives to be undertaken throughout the year. They are essential for oversight of subsidiaries' Compliance and conduct risk control environment.

7.2 Compliance and conduct risk management

The compliance and conduct risk function upholds the General code of conduct ('GCC'). It is supervised by the compliance and the risk supervision, regulation and compliance committees.

The GCC sets out the ethical principles and conduct rules that must govern our employees' work. It is to be applied along with all other internal regulation. It sets out:

- compliance functions and duties;
- the Group's employee general ethical principles;
- the general rules of employee conduct;
- the consequences for failure to comply;
- an ethical channel (Canal Abierto) to report possible misconduct in a confidential and anonymous manner.

Regulatory compliance

The regulatory compliance function oversees regulatory risk from employees, data processing and securities trading (together with SCIB's compliance team). In 2022, it reinforced the coverage of our Investment platform Unit²³ and the restructuring area with the appointment of an officer who oversees all compliance risks of this activity.

The main parts of the Regulatory Compliance function are:

A. Employees

The regulatory compliance function promotes a culture of ethics and compliance among our employees, with standards for preventing criminal risk, conflicts of interest and anti-competitive practices according to the GCC. Together with subsidiary-level compliance departments, it runs Canal Abierto, Grupo Santander's whistleblowing channel, through which employees can report financial and accounting wrongdoing as well as violations of the GCC and our corporate behaviours anonymously and confidentially.

In 2022, it worked with other areas in the Group to simplify the GCC, which the board approved in July 2022, to make it easier for employees and other stakeholders to read, understand and use, with plain and inclusive language; a more dynamic and engaging look and feel; guidelines on dealing with colleagues, customers, third parties and broader society that are based on our corporate behaviours and Santander Way culture; and internal browsing features.

It ran training and spread awareness about guidelines and raised commitment towards a corporate culture of ethics and compliance. In particular, it organized courses on the GCC, competition law and other topics, taught by an external law firm for compliance experts. It also promoted the 'Your conduct matters' campaign, with content on the GCC and Canal Abierto for all employees. The Group's subsidiaries undertook communications initiatives with core vendors to share Santander's conduct guidelines, ethical standards and culture.

For the second year running, the Group's compliance and conduct function ran initiatives to promote inclusion and diversity of gender, age and culture and to spread awareness with Fundación Universia about including professionals from different backgrounds.

²³ Investments in debt and or equity through a specialized fund manager. Characteristics of the businesses IPU participates are that Banco Santander invests in both the fund and the asset manager.



Employees' compliance functions

Canal Abierto



- Provides a channel for employees to report unethical conduct and breaches of internal regulation.
- Manages and investigate reported cases.
- Promotes a culture of speaking up and truly listening.

Disciplinary proceedings



- Investigate conduct that is inconsistent with our ethics and compliance principles.
- Participate in the assessing of disciplinary measures.

Nominations



- Assess the suitability of the Group's nominees to the board and senior management positions*.

Anti-trust



- Manages the compliance programme on competition law.

(*) This is a corporate procedure involving the Regulatory Compliance function, Legal and Internal Governance at HQ.



For more details on Canal Abierto, see section [Ethical channels](#) in '3.2 Conduct and ethical behaviour' of the Responsible Banking chapter.

B. Market abuse

The market abuse function's control room team applies the Code of conduct in securities markets (CCSM) to prevent risk from inside information, trading, unlawful disclosures and market manipulation. A project was launched to remodel Group's control room. The project aims to create a global team to help manage conflicts of interest in transactions by the Group's units and ensure robust governance of access to data flows in compliance with regulation. It is a transformative endeavour that involves reviewing policy and procedures and enhancing reporting systems.

Also, during the second half of the year, a new specialist team was built to continue monitoring benchmarks, and treasury shares including buyback programmes of Bank's shares.

C. Regulatory communications

The regulatory team communications core functions are:

- disclosure of Group's relevant information to the markets. In 2022, the Group issued several releases of inside and other relevant information, which can be found on both our website and the Comisión Nacional del Mercado Valores' (Spain's securities market commission or 'CNMV').
- reporting on transactions with treasury shares or significant holdings of Banco Santander and on transactions and remuneration schemes of board members and senior

Training and awareness



- Develop employee training programmes and awareness campaigns on corporate defence and compliance.
- Issue messages about ethics to the entire Group and promote relationships built on trust.

Policies and procedures



- Enforce the GCC with special policies and procedures.
- Report to governing bodies regularly.

Queries about ethics



- Manage queries from employees and members of governing bodies about ethics and internal regulation.
- Provide advice on ethics amid controversy.

managers (CNMV and other regulatory bodies where Santander is a publicly traded company).

D. Data processing

In 2022, data processing focused on:

Data protection

A specialist area that enforces the fulfilment of our corporate policy on data protection which sets out guidelines for all subsidiaries, and its special governance model. It is headed by each subsidiary's designated data protection responsible. A comprehensive compliance programme is also enforced to effectively manage data protection risks. The programme is supported by a robust control framework based on periodical KPIs and the subsidiary's annual self-assessment, reported to the GCCO at year-end Data Protection meeting.

In our commitment to constant improvement, action plans were developed throughout 2022 in more than 90 subsidiaries, based on our oversight programme.

Our corporate privacy office is the team of data protection experts advising our business lines.

- It produced some 400 analyses and opinions on subsidiaries' new products and services, strategic proposals made in internal forums, and suitability of vendors and services for data processing.



- It is part of the working teams formed to develop key projects in Grupo Santander's digitalization strategy.

Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standards (CRS)

Corporate oversight of automatic tax disclosure in subsidiaries (pursuant to FATCA and CRS) checked their regular reporting obligations and execution of action plans.

E. SCIB Compliance

Build out of a dedicated SCIB Compliance function commenced in 2020 and is progressively moving to full global coverage of SCIB compliance risks in tandem with SCIB's strategy of becoming one of the top wholesale banks in Europe, while strengthening its leadership position in Latin America and to up-tier its franchise in the US to compete on a level playing field. The function supports local CCOs and Compliance teams based in headquarters and in each of the international branches by providing centralised global compliance oversight and services. Local Compliance teams continue to oversee local compliance and regulatory risks.

During 2022 we continued to:

- develop and reinforce SCIB specific and globally consistent compliance and conduct frameworks and standards within the wider corporate framework, including but not limited to global management of firm and individual conduct risk
- focus on good culture and behaviours to underpin good customer and conduct outcomes
- deliver a global mandatory training program on conduct and regulatory requirements
- enhance globally consistent surveillance and monitoring capabilities
- oversee control frameworks put in place to meet obligations to our international regulators

Product governance and consumer protection

Our product governance and customer protection area promotes that we base our actions on our customers' interests, regulation, our values and our principles

That means promoting a customer-centric culture with a Simple, Personal and Fair approach, through the following pillars:

1 Action and governance principles:

- Establish the internal guidelines on customer service in the conduct risk management model updated in 2022, which is developed in a robust regulatory framework. These guidelines promote a robust, customer-centric culture throughout the commercialization process and retail customer relations.
- Run corporate product governance forum to approve new products and services, and escalate customer conduct risk issues. We carry this out through the conduct and customer voice follow-up meetings, and especially to the compliance, risk, responsible banking and board committees.

2 Oversight of key procedures to make sure:

- our products and services are designed with the right balance of risk, cost and profitability meet customers' needs;
- we sell to the right target markets and provide transparent information, with proper sales force training and customer-centric remuneration schemes; and
- our customer and post-sale services strive to be Simple, Personal and Fair, and we carry out a follow-up and root-cause analysis of our customers' voice and product evolution to check for product deterioration and process shortcomings.

3 Risk management by:

- reporting to senior managers to enable correct decisions on customer strategy, and drawing up and tracking action plans;
- oversight of the design and use of controls for marketing and customer relations, and reviews of the management and control model in the second line of defence;
- risk detection and measurement with methodologies that involve customer survey analysis, management indicators follow-up, thematic assessments, first-line self-assessments, regulatory trends, industry practices, supervisor and auditor opinions, learning from internal and external events and other sources.



Product and service governance

We have a two-pronged approach to product approval governance. Each subsidiary has its own approval body to manage risk from marketing products and services and to ensure they meet the needs of their target market, are sold through appropriate channels and processes, and have clear and fair terms and conditions. New products and services are first escalated to the corporate product governance forum (CPGF, which all the Group's support and control areas attend) to be approved.

In addition, the meetings of the fiduciary risk function control that the investment products have an adequate definition of their investment policies and their management is carried out in a robust risk control environment, according to that defined in the Group's fiduciary risk admission, monitoring and control policy.

In 2022, products and services design included the following new features:



Promoting sustainable products and services:

- Investment: Transforming products and designing new ones based on ESG standards to meet our customers' sustainability needs.
- Sustainable development: Initiatives on innovation and sustainable development, promoting responsible consumption (for example, CO₂ emissions offsetting and investment in funds with a social purpose).



Supporting our digital strategy:

- Digital channels: Enhancing coverage, quality and user experience of online products and services.
- Beyond banking: Taking logistics, supplier marketplaces and other digital services a step further than traditional banking through innovation.
- Crypto: Limited launch of investment services related to cryptoassets and implementing new procedures to mitigate risk through new processes and controls.

Key conduct risk lines of action in 2022

	Objectives	Lines of action
	Principles and internal rules on customer conduct Keeping consumer protection principles and the retail customer conduct model up to date.	→ Approved a new corporate customer conduct risk model that builds on the outdated commercialization and consumer protection framework.
	Awareness and accountability of the first line of defence Raising awareness of conduct risk management and prevention and management in business and support areas.	→ Training for our first and second line defence local teams on conduct risk, and revision of mandatory employee conduct training for 2023 to all our employees throughout the Group. → First-line teams' remuneration linked to conduct and quality with customers. We paid special attention to remote customer service and sales teams given the growing importance of digital channels. → Medium-term project to design and implement with a rating scheme that will increase conduct risk management integration in employees' work.

**Sustainable products and services**

Supporting projects relating to the Group's transition towards a more sustainable economy in cooperation with other risk and compliance functions, and Responsible Banking areas.

- Transparent information on the investment products and services we offer to retail customers.
- ESG risks embedded in our management through measurement tools and methodologies that enable us to categorize products correctly, measure ESG risk and meet our customers' sustainability preferences.

**Vulnerable customers and special cases**

Treating vulnerable customers fairly and appropriately, and making sure we consider their circumstances as part of our services.

- Global vulnerable customer strategy, with implementation of action plans for units.
- Monthly monitoring of collection and recovery indicators.
- Special monitoring of practices related to customers with disabilities, elderly customers and customers affected by the rising cost of living.

**Artificial intelligence in conduct**

Researching big data and machine learning analysis techniques on customer voice data and business indicators.

- Developing a root-cause analysis methodology for customer complaints.
- Analysing consumer protection indicators, correlations and impacts through customer surveys and business scorecards.

**Enhancing conduct risk control**

Reviewing the control environment in the customer conduct first and second line of defence.

- Self-assessments to raise awareness of the importance of conduct risk.
- Stronger supervision and control in the second line of defence to promote a risk-based approach.

Financial Crime Compliance (FCC)

Financial crime risk is the risk arising from actions or the use of the Group's means, products and services in criminal or illegal activities. Such activity includes money laundering, terrorist financing, violation of international sanctions, corruption, bribery and tax evasion.

Financial crimes are universal, globalised phenomena that take advantage of the international economy, and thus their detection, deterrence and disruption call for a coordinated global response by the international community and the financial sector. Compliance with financial crime regulation at Santander goes beyond the Group's legal and regulatory obligations. Our commitment to partnering with law enforcement and competent authorities to disrupt threat finance networks is key to supporting the societies in which the Group operates, including implementing international sanctions programmes aimed at defending human rights and civil liberties, and deterring corruption and armed conflict. We are fully committed to the fight against financial crime, seek to continuous improvement in our control framework, and do not tolerate compliance failures with financial crime regulations both internationally and in the countries in which we operate.

Over 2022, we have been a strong advocate for peace in Ukraine and have embraced our role in enforcing sanctions compliance related to the war across the Group's global footprint. Our FCC function continues to identify and develop new approaches, both internally and via public-private partnership, on responding to existing and emerging threats, including through FCC Strategic Transformation Programme. In parallel, we ensure that financial crime compliance is an enabler, not a barrier, to the Group's responsible banking strategies, particularly on areas like financial inclusion.

Our business functions maintain the primary responsibility for managing financial crime risk and to support and promote the organisation's risk culture. The FCC function in turn is responsible for monitoring and overseeing financial crime risks and for ensuring adequate policies and procedures have been implemented to manage effectively the business within the Group's established risk appetite.

Since the end of 2019, the FCC Strategic Transformation Programme has been underway to strengthen the Group's control framework and operating model, embed a sustainable and dynamic approach to customer due diligence, and implement next generation technological platforms on transaction monitoring and sanctions screening.

Key achievements over 2022 include:

- A return to in-person supervision and monitoring of local Santander subsidiaries by the Group Oversight team within the FCC function, with tangible progress on improving control environment effectiveness;
- Reinforcing, via the Group's operating model, the risk ownership and accountability of the business in the activities they undertake;
- Issuing a fully revised, Group-wide anti-bribery and corruption policy (ABC) to embrace the expanded ABC programme approved by the Board of Directors in 2021;
- Progressing on the FCC target operating model, including, when permitted, responsible hubbing of FCC-related activities in newly established operational centres of excellence;



- Advancing significantly on the full implementation of the strategic platform for transaction monitoring for Santander entities providing correspondent banking services, and piloting the platform on retail banking activity;
- Moving into production in various jurisdictions with the Group's strategic platform for sanctions screening, with results indicating strong advancement on screening effectiveness; and
- Kicking-off pilot activity in select Santander entities on a digital, dynamic strategy for enhancing customer onboarding and on-going due diligence.

Our Board of Directors and senior management continue to see and reinforce the importance of the FCC Strategic Transformation Programme, in response to the control framework challenges that have occurred in the past while preparing the bank's functional and technical control framework for the future.

In 2022, we continued to grow to build capacity and capability across FCC staff. Monthly in-person, face-to-face all-hands and smaller working group specialised training sessions were implemented, bringing in external guests from law enforcement, regional and international governmental organisations, and key stakeholders from civil society to cover topics ranging from complex terrorist finance investigations, tax evasion and other tax crimes, fraud, corruption, internal governance, regulatory change, and country perspectives on specific financial crime typologies. We have also continued with the mandatory annual training on FCC matters for all Group employees in order to raise awareness in this topic.

While sanctions compliance has been a pillar of the Group's FCC programme for several years for deterring armed conflict, the financial sector's role in supporting national and supra-national diplomacy has been a clear focus of 2022 and a priority for Santander. The financial sector's role in supporting national and supra-national diplomacy has been a clear focus of 2022 and a priority for us. Sanctions programmes such as the Global Magnitsky Sanctions, aimed at fighting human rights abuses and corruption, are applied Group wide, and with the advent of the war in Ukraine, additional resources were diverted to the sanctions team to ensure the Group would be prepared to navigate the evolving, multi-jurisdictional sanctions programmes and fulfil our commitment, as a multinational financial institution, in supporting a resolution to the crisis.

During the war in Ukraine, we maintained our objectives not only to enforce sanctions compliance across the Group's international operations and respond rapidly to escalations from Santander offices, but also ensure that global food and energy supply chains continue to function, particularly given Santander's unique role in supporting European and Latin American trade corridors.

Besides complying with sanctions in all of the Group's international operations and providing the necessary support to the subsidiaries, internal guidance was issued and enacted over 2022 in the European Santander offices and branches to ensure that Ukrainian refugees would be able to access financial products safely and swiftly. Contact between the FCC function and relevant competent authorities was constant over the year to ensure an aligned, coordinated strategy between the public and private sectors.

We continued to place important emphasis on ensuring the Group is prepared to respond to a rapidly evolving digital landscape, particularly as it regards payment methods and remote onboarding. Leadership within the FCC function plays an important role in chairing industry forums and working groups, including through the Wolfsberg Group (of which Santander is a founding member), on reinforcing payment transparency – as it is vital to safeguard the integrity of the payment industry and to ensure effective financial crime detection – and on defining a robust control framework for onboarding customers via digital, non-face-to-face engagement.

We also led work on 'mule' accounts – closely associated with fraud and cyber-dependent and enabled crime – within Europol's Financial Intelligence Public Private Partnership.

In 2022, we continued with our flagship FCC Summit, bringing together all Santander FCC heads to hear from senior management within the bank on the importance of financial crime compliance, and to engage with internal and external stakeholders on confronting the challenges faced in disrupting threat finance networks.

The Summit included a series of sessions, including the following:

- Session led by Sepblac, the Spanish Financial Intelligence Unit, in providing feedback on the quality of suspicious activity reporting
- Session led by the EBA on the importance of AML/CFT governance
- Arrangements, interventions from Europol on environmental crime
- United Nation's FAST Initiative on finance against slavery and trafficking and the importance of financial inclusion
- Wolfsberg Secretariat and Basel Institute on payment transparency
- Regional subject matter experts on areas like drug trafficking and on emerging threats, such as online child abuse.

The relationships formed at the Summit helped prepare the FCC function to complete, by the end of 2022 a full, group-wide threat assessment of the priority crimes that face the bank globally.

Santander FCC leadership also continues to serve as chair of the United Nations Office on Drugs and Crime's Private Sector Dialogue on the Financial Disruption of Forestry Crime, highlighted at COP27 in Sharm al Sheikh by the Executive Director of the UNODC for bringing together top financial institutions with financial intelligence units and law enforcement around the world to combat illegal deforestation. The FCC function also continues to be an active member of the United for Wildlife Financial Taskforce, aimed at disrupting illegal wildlife trafficking networks.



Highlights over 2022 in key activities include:

- The return of in-country subsidiary reviews (post-COVID), conducted directly by the Group FCC Function, covering countries across 3 continents
- 237,505 disclosures to authorities (+58% vs. 2021)
- 371,296 investigations conducted
- 165,185 employees trained
- 8 specialised training sessions for experienced FCC staff

Reputational risk

We define reputational risk as risk of a current or potential negative economic impact due to damage to the perception of the bank on the part of employees, customers, shareholders and investors, and the wider community. Reputational risk may arise from various sources, including other risks, business and support operations, the social and political environment, and events concerning our competitors.

Our reputational risk model takes a preventive management and control approach, with effective processes for of early warnings, identification, management and monitoring of risk events. This requires regular revision of the Group's risk appetite and processes to promote forward-looking management and prevention.

2022 highlights:

We continued to enhance management and control, updating guidelines for certain areas. In particular, we:

- Revised reputational risk analysis procedures as well as policy on financing, defence and other sensitive sectors
- Prepared new guidelines on measuring reputational risk with transactions, customers and contributions to social causes;
- Developed tools to manage risk events and transactions and customers prone to reputational risk;
- Reviewed reputational impact and developed prevention and mitigation measures and best practices on for branch and workforce restructuring in Europe;
- Reviewed the methodology for identifying, assessing, escalating and reporting reputational risks and events
- Engaged in the ECB's climate stress testing and thematic review of climate and environmental risks;
- Helped prepare corporate guidelines on handling invitations to sponsor sporting organizations and events;
- Developed special training and e-learning on reputational risk policy, and reviewed the board's training; ran corporate initiatives for all employees, such as Santander Business Insights and others within Risk Pro training;
- Ran initiatives to share best practices with subsidiaries' risky-level areas with a new collaborative tool and 'Best Practice' workshops;

- Revised risks and mitigation plans in the corporation and in subsidiaries as part of the global reputational risk assessment;
- Developed the reputational risk tool that measures stakeholders' perception of Santander and the financial sector;
- Enhanced management consolidation and reporting based on a forward-looking risk approach in the corporation and in subsidiaries; and
- Strengthened subsidiary oversight in terms of governance, challenge and updating oversight guidelines;
- Reformed a detailed reputational risk assessment of the war in Ukraine and identified several mitigation actions that were implemented Group wide (such as specific criteria for donations, specific communications to employees and customer engagement, etc.).

8. Model risk

8.1 Introduction

A model is a system, approach or method that makes quantitative estimates based on statistical, economic, financial and mathematical theories, techniques and assumptions about data.

Santander uses models for scoring and rating and for measuring capital, behaviour trends, provisions, and market, operational, compliance and liquidity risk.

Models that are poorly developed or misused in decision-making can have bad consequences, including financial loss, poor decision-making and strategy, and harm to the Group's operations.

Model risk stems from:

- incorrect or incomplete data in the model itself or the modelling method used in systems;
- incorrect use or implementation of the model.

8.2 Model risk management

We have been measuring, managing and controlling model risk for years. Our model risk function covers the corporation and our core subsidiaries.

Our internal regulation sets out principles, obligations and procedures for organizing, approving, managing and governing models throughout their life cycle.

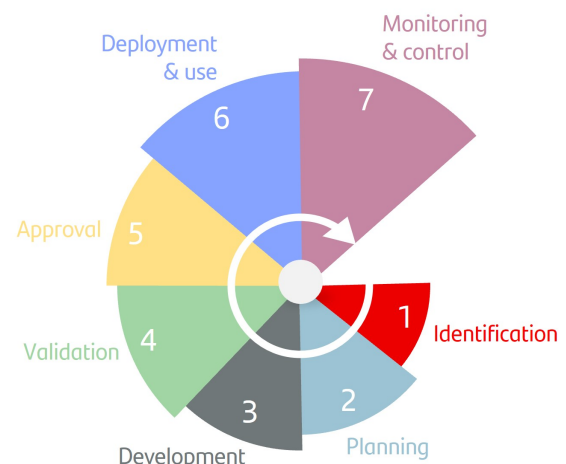
We manage model risk according to each model's importance. We synthesize the importance of non-regulatory models through tiering. Regulatory models, which are particularly important to Grupo Santander, are subjected to more intense monitoring and management.

In 2022 we launched MRM Next, a multi-year strategic plan to promote model risk culture and place Santander at the forefront in the banking industry. MRM Next replaces the regulatory Model Risk Management 2.0 (MRM 2.0) plan, which ended successfully in 2021, ensuring compliance with the regulatory standards (ECB's Guide to internal models, 2018).

The MRM Next strategy, coordinated and combined with the global models & data unit, is based on advanced model risk management, as well as extensive knowledge and forward-looking of the behaviour of our portfolios, optimizing the efforts with the support of digitalized processes and specializes staff.

We are fully committed to enhancing our regulatory models, Internal Rating Based Approach (IRB) e Internal Model Approach (IMA), to comply with Basel Committee's requirements. Our main priority for the year ahead will be to focus on the implementation of the EBA Repair Programme. We have submitted several model changes to the ECB during 2021 and 2022 that will require formal approval, prior to implementation. This approval will follow a thorough review process by the ECB that will require full input from Model Risk function.

Model risk management and monitoring are structured into what's known as the 'model life cycle'. They consist of these phases:



1. Identification

Model risk monitoring must include identified models. For sound management, a complete inventory of models in use is key.

Our centralized inventory system is a single platform with uniform taxonomy and detailed descriptions of all the models that business units use. It enables us to monitor them closely by level of importance and tier.

2. Planning

An internal annual exercise approved by our subsidiaries' governance bodies and ratified by the global team, which formulates strategic measures for models managed by the Model risk area and pinpoints needs for any models to be created, revised or implemented during the year.

3. Development

This is the model development phase. The models & data unit, both at corporate and local level, is responsible for the development of the models according to the needs of each subsidiary. Development by a specialized team guarantees a



More detail see section [2.5 'Models & Data Unit'](#) of this chapter.



higher, more efficient and centralised execution, while taking advantage of the synergies resulting from the combination of models and data. In addition, we have common Group methodological standards that promotes the quality of the models.

4. Internal validation

Independent model validation is a regulatory requirement and key feature of our model risk management and control.

A specialist unit that is totally independent from developers and users issues technical assessments of internal model suitability. Each model is validated with a rating that summarizes the model risk associated to it. Validation intensity and frequency are well-defined and risk-driven.

Validation covers theory, methodology, technological systems and data quality to ensure effectiveness. It also involves detailed analysis of model performance as well as controls, reporting, uses, senior management involvement and other components of risk management.

Our model risk management is robust and consistent across our footprint. We have a single model inventory, a model risk team in 13 markets with a common way of working and the same internal policies, and a unique validation approach led by the Single Validation Office, which supports the second line of defence.

5. Approval

Before we can use a model, internal governing bodies must approve it through a governance circuit in place for our model inventory, based on its level of importance.

6. Deployment and use

In this phase, we add new models to our systems. Because this is another source of model risk, technical teams and model managers test proper model integration based on methodology and expectations.

7. Monitoring and control

We regularly review models to ensure that they function correctly or, otherwise, adapt and redesign them. Monitoring teams must make sure models are managed according to the general model risk framework and other internal rules.

8.3 Model key metrics

Group and subsidiary risk appetite uses thresholds based on models' average rating and the monitoring of changes in ratings distribution.

Model risk appetite metrics focus on the quality of models according to internal validation scores. Appetite varies based on models' importance. For instance, regulatory models are more demanding.

We monitor metrics monthly and have action plans to keep to set levels. We also monitor recommendations from the Internal validation team and include impact on metrics in our planning to keep model quality consistent with the appetite roadmap.



9. Strategic risk

9.1 Introduction

Strategic risk is the threat of loss due to poor strategic decisions or deficient strategy implementation, which can affect our core stakeholders' medium-to-long-term interests; or due to an inability to adapt to a changing environment.

Because Grupo Santander's business model is pivotal to strategic risk, it has to be viable and sustainable and produce results that are consistent with the board's annual targets (particularly for the next three years) and with the Group's long-term outlook.

Strategic risk has three components:

- 1 **Business model risk**, which includes the possibility that the Group's model will become outdated or irrelevant; or lose value to produce desired results.
- 2 **Strategy design risk**, which relates to the strategy and assumptions set out in the Grupo's long-term plan (including the risk that the plan will not be up to par), which could result in a failure to deliver expected results.
- 3 **Strategy execution risk**, which involves the three-year financial plan, internal and external impacts, the inability to react to changes in the business environment, and risks associated with corporate development transactions.

9.2 Strategic risk management

Santander views strategic risk as cross-sectional. Subsidiaries refer to our operating model that covers governance, procedures and necessary tools for robust monitoring and control within board-approved risk appetite.

We constantly monitor changes in competition, regulation, market conditions and our organization to determine if we need to revise strategy and verify mitigating factors and resolution plans. The Strategic Risk area engages key first- and second-line teams to make sure measures are primed to implement immediately.

In 2022, our strategic risk management focused on the macroeconomic uncertainty in view of the war in Ukraine, inflationary pressure, monetary policy, and our strategic objectives and transformation initiatives. While our long-term strategy remains valid, success depends increasingly on our customer focus (i.e. 'Customer first'). Boosting our revenue, profitability and value hinge on increasing customer numbers, loyalty and satisfaction.

Our strategic risk model is based on:

- Challenging strategic plans: With the support of other specialized areas within the Risk division, the Strategic Risk area challenges the three-year financial plan and long-term strategic plan, including a specific chapter in both that identifies potential threats and changes in the environment that could undermine strategic objectives. In 2022, we closely

monitored One Transformation and other key initiatives that underpin our strategic digitalization and common operating model.

- Top risks: Under stressed scenarios, Santander proactively identifies, measures, monitors and manages risks that could have a significant impact on profitability, liquidity and solvency. (For more details on top risks, see section [1.3 'Santander Top and emerging risks'](#) of this chapter.)
- Business model analysing: To identify and measure major threats to our business plan and strategic objectives in four areas:
 - Strategy execution: Measurement of the risk of deviation from plans, targets, and strategic and transformation initiatives.
 - Viability and sustainability: Measurement of the risk that the business model will fail to create shareholder value. We also compare our position against competitors.
 - Business plan volatility: Measurement of the risk that our planning will be unstable and profits will not be recurrent in the long term.
 - Likelihood of meeting strategic objectives: Risk of failing to achieve the strategic objectives in the three-year financial plan, based on potential losses under stressed scenarios.
- The Strategic Risk and Strategy areas prepare the Strategic risk report to review and challenge strategy and associated risk. Presented regularly to senior management, it includes an update on strategy execution, top risks, business model performance, corporate development transactions, product marketing and strategic projects.
- Commercialization of new products: Assessing and validating new product and service proposals before Santander launches them, ensuring they are consistent with the strategy.
- Corporate development transactions: Ensuring risk assessments of these transactions' impact on our risk profile and risk appetite.
- Monitoring strategic projects: The Strategic Risk area works with area heads on drawing up and monitoring strategic projects that fall within its domain. Twice a year, it reviews performance, targets, indicators and potential risks, which is key to assessing strategic risk. The 2LoD independently challenges the area's status reviews and project performance. This is included in the Strategic risk report.

Our subsidiaries made significant headway in developing strategic risk control in 2022, and we strengthened our monitoring of strategic projects and top risks, business model performance reviews and other key components of strategic risk. We also optimized reporting to senior management on strategic risk.



10. Climate and environmental risk

10.1 Introduction

Climate-related and environmental risk management is key to fulfilling our objectives and the commitments in our climate strategy sustainably.

Climate change and environmental factors could affect existing risks in different time horizons. These factors include those derived from the physical effects of climate change generated by acute events or chronic changes in the environment, as well as those stemming from the transition to a low-carbon economy that includes changes in legislation, technology or market trends. Grupo Santander assesses how both transition and physical risks can affect the economy, our customers and our business (the table below shows the potential impacts arising from climate matters).

In this regard, Grupo Santander takes aiding customers' transition to a low-carbon economy seriously, and offers financial products and services for environmentally and socially responsible businesses.

In 2022, regulators and supervisors were keen for banks to continue embedding ESG factors (especially Environmental) into key risk management processes. As part of the regulatory exercises, in 2022 Grupo Santander also took part in the ECB's climate risk stress test, Pillar III ESG disclosure and Thematic Review on climate and environmental risks.

Regarding the Thematic Review, Grupo Santander assessed its alignment with the ECB's November 2020 Guide on climate-related and environmental risks for banks and submitted its action plans and implementation timelines according to the regulatory and supervisory framework.

In addition, during 2022 Grupo Santander has temporarily increased its overall exposure to the energy sector (oil and gas) due to the liquidity needs arising from the volatility of energy commodities prices; exchange rates; and the energy crisis. However, our long-term climate ambition remains and a significant part of our lending exposure has a short-term maturity.



For more details, see the ['Responsible Banking'](#) chapter.



Climate risk type	Climate drivers	Most affected time horizon
Transition risk	Market and customers <ul style="list-style-type: none"> → Growing consumer demand for more sustainable products → Potential loss of competitive advantage due to our green product proposition → Rising market volatility and costs, restrictions on sourcing carbon-heavy raw materials 	Short/midterm
	Policymaking <ul style="list-style-type: none"> → Stricter policy environment that affects our customer's business operations → Rising greenhouse gas (GHG) emissions pricing to foster transition to renewable sources 	Short-mid-long term
	Technology and data <ul style="list-style-type: none"> → Investment in technology to reduce emissions or improve energy efficiency ratings → Lack of procedures and systems to obtain and store reliable data for risk assessments and disclosure 	Midterm
	Regulatory pressure <ul style="list-style-type: none"> → New public disclosures that raise risk of misrepresentation; more regulatory requirements that increase the risk of non-compliance; and more reliance on external analysts, which increases the potential of a data privacy breach. This could lead to fines, compensation for damages and voided contracts → Stricter banking regulation (disclosure, stress testing, taxonomies, etc.) → Inefficiencies as consequence of different climate regulations, especially for international banks 	Short/midterm
	Reputational <ul style="list-style-type: none"> → Risk of disregard or a slow or inadequate response from banks, which could tarnish their reputation; harmful extreme events that could cast doubt over banks' ability to restore service quickly and provide care to customers in difficult situations if planned responses fail → More scrutiny from supervisors, regulators, the media, NGO's, shareholders, investors and other stakeholders towards commitments, performance, and regulatory compliance of financial entities → Perception that banks are failing to meet, make progress with, or be transparent reporting on climate-related commitments and transition → Liability as an intermediary in data, products, financial services and other value chains → Reputational damage if certain portfolios do not reach emissions reduction targets 	Short-mid-long term
Physical risk	Acute <ul style="list-style-type: none"> → More frequent and severe climate events such as flooding, drought and other climate phenomena that could depreciate financed assets and collateral 	Short-mid-long term
	Chronic <ul style="list-style-type: none"> → Alterations in weather and ecosystems affecting food production, living environment and population health. → Rising temperatures affecting working and living conditions and local infrastructure → Rising sea levels affecting local ecosystems, increasing subsidence and flood risks 	Long term

Climate-related time horizons have been aligned with our main strategic processes. Hence, we define short term as 1 year; medium term as 3 years; long term as 5 years; and longer term as beyond 5 years.

It should be noted that above we depict the most affected time horizons, albeit this does not imply that others may be affected to a lesser extent.



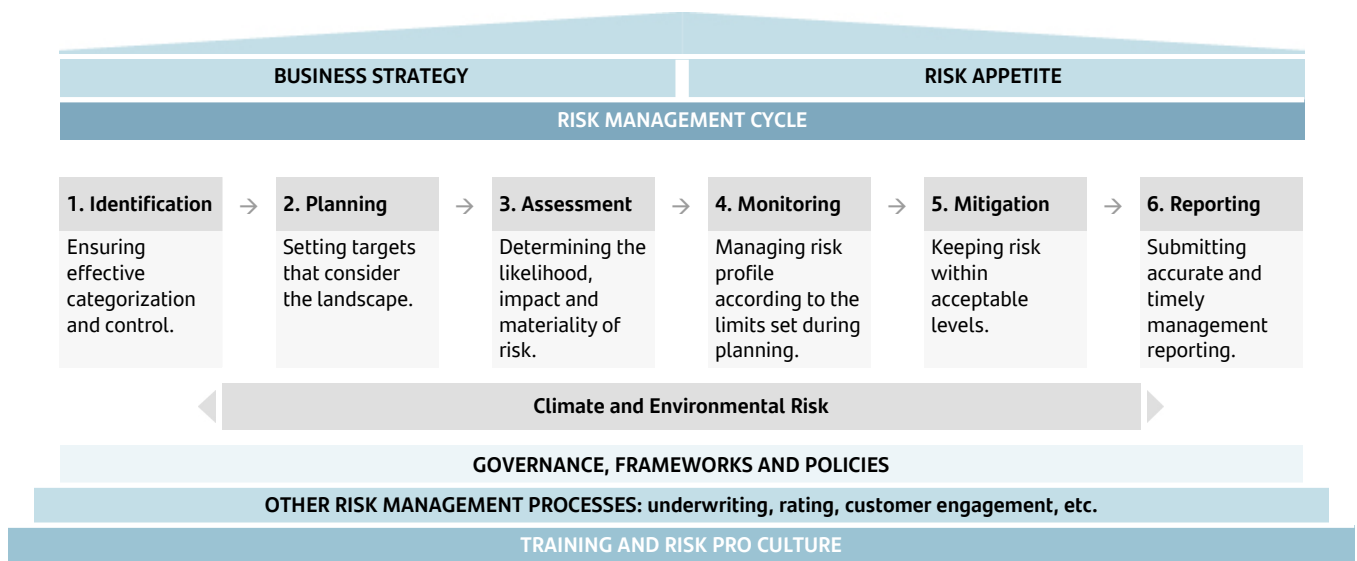
10.2 Climate-related and environmental risk management

We continue to embed climate and environmental risk in our risk management model according to regulation and growing supervisory demands.

The risk and compliance & conduct function is working to measure, manage and reduce the potential impact of climate

change on our loan book. In addition, it participates along with other areas in the design of the decarbonization roadmap for investment and financing portfolios, as well as in the assessment of the risks arising from its implementation.

The chart below explains how our risk management cycle accounts for climate change and environmental risk.



Each stage of the risk management cycle is described in detail below.

1. Identification

The main risk identification process within Grupo Santander is the top and emerging risk identification.



For more details, see section [1.3 'Santander's top risks & emerging risks'](#)

In identifying emerging and top risks, we measure internal and external threats to profitability, capital adequacy and strategy. Since 2018, our process has included a climate subcategory. More recently, it includes biodiversity loss. Risk analysis covers qualitative and quantitative factors and informs our internal capital and liquidity adequacy assessment processes (ICAAP and ILAAP).



Biodiversity

There has been a general rise in interest in environmental matters other than climate change in recent years. Some examples are the new frameworks on Nature and Biodiversity, and initiatives such as the Taskforce on Nature-related Financial Disclosures (TNFD) and the Kunming-Montreal Global Biodiversity Framework (GBF) passed at the UN Biodiversity Conference (COP15). Supervisors and other stakeholders are working harder to understand and assess banks' environmental practices. In addition to the measures and initiatives explained in other sections of this report, the Group is assessing the materiality of natural aspects in terms of impact and dependence for the most relevant portfolios. It's a key step in our assessment and management of environmental risk and opportunity.

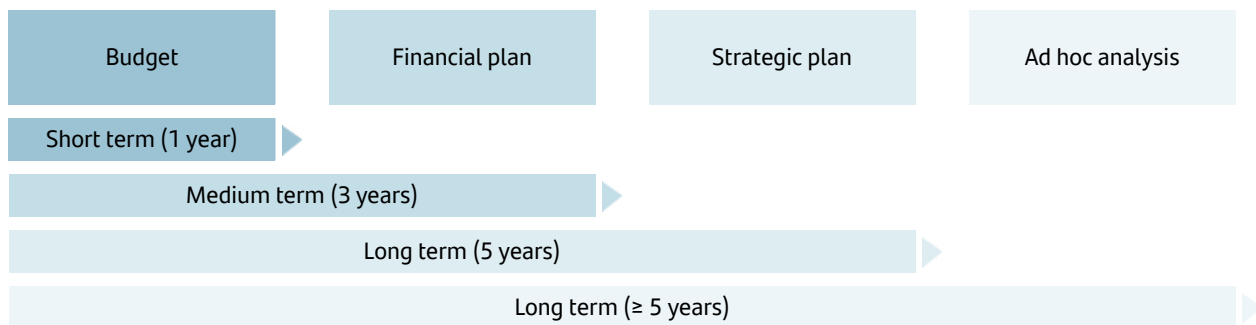


Moreover, a specific questionnaire related to climate risk was implemented in 2021 as part of the risk profile assessment process, which Grupo Santander regularly conducts to cover all risk types and reveals any threat to its business plan.

During 2022, we evolved the questionnaire related to climate risk taking into account the latest regulatory and management developments, as well as industry best practices. We seek to assess the progress made by the Corporate Center and subsidiaries to integrate climate risk into management. It helped us identify gaps and areas for improvement.

2. Planning

We have included our decarbonization targets in strategic planning as part of our public sustainability commitments. We run these exercises with separate time horizons:



These exercises enable the risk function to identify threats to our targets and support the transition to a low-carbon economy according to our policies and risk appetite.

3. Assessment

Santander runs a quarterly materiality assessment to determine climate- and environmentally-material credit risk portfolios. It proves fundamental for decision-making and defining our strategic priorities on selected industries, customers and regions. It covers climate and environmental risk in the Group's markets over different time horizons. Therefore, we can address them in risk appetite, top risk identification, credit analysis, stress testing and other management processes.

Our risk taxonomy, qualitative and quantitative heatmaps and scenario analyses, determine how we categorize portfolios by industry, region, time horizon regarding their exposure to physical or transition risk. Santander's materiality assessment follows the guidelines of the Task Force on Climate-related Financial Disclosures (TCFD) and the United Nations Environmental Programme Finance Initiative (UNEP-FI) to understand industry and regional trends.

Our taxonomy of industries and sub-industries is based on the EU's NACE codes (statistical classification of economic activities in the European Community), we consistently compile exposure data that serve as a starting point, along with a five-tier heatmap for physical and transition-based risks, to measure highly material climate change risks. The next table shows the 5 levels classified by colours, from low to very high risk.

Our 2022 materiality assessment covered climate risk c.a.80% of our balance sheet items. We expanded its scope to cover most portfolio segments and other business such as SCF Auto (Santander Consumer Finance Auto).

The graph below shows the Group's last materiality assessment at the end of Q3 2022.

Materiality assessment - Climate risk analysis and heat mapping of portfolios

September 2022- Billion EUR

	TR	PR	SCIB	Other segments
Power (conventional)	High	Medium	27	2
of which power generation clients with > 10% of revenues coming from coal	Very High	Medium	4	0
Power (renewables)	Low	Medium	11	0
Oil & Gas	Very High	Medium	25	1
Mining y metals	Very High	Medium	15	8
of which clients with thermal coal mining	Very High	Medium	3	0
Transport	High	Medium	30	105
Real Estate	Low	Medium	8	398
Agriculture	Low	Medium	3	8
Construction	Low	Medium	18	14
Manufacturing	Low	Medium	50	29
Water supply	Low	Medium	3	1
Climate sectors			190	566
Other sectors			55	224
Total portfolio			245	790

Low Moderately low Medium High Very High

TR: transition risk; PR: physical risk.

SCIB: REC (on and off-balance sheet lending + guarantees + derivatives PFE: Potential Future Exposure),

Other segments: drawn amount.

Other sectors: SCIB and Corporate NACE outside of risk taxonomy perimeter // Individuals and SCF: cards and other consumer.

Other segments include Individuals, SCF, Corporates and Institutions and, since 2022, some SMEs.

0 exposure amounts to exposures below EUR 500 mn.



Throughout 2022, we updated our materiality assessment to reflect the latest industry developments, along with regulatory requirements. In this sense, we have made progress in updating the risk taxonomy, extending the scope as well as in the analysis of impact through more granular heatmaps, incorporating scenario analysis techniques.

In addition, the scope of the assessment has been broadened, incorporating other segments such as SMEs. For this reason, in general, the volume of information is greater, particularly impacting the increase in sectors of lesser concern, such as Manufacturing, Transportation and Real Estate. The current macroeconomic context of war in Ukraine and the energy crisis, has affected, albeit to a lesser extent, the increase in the volume of sectors such as Oil & Gas and Mining & Metal, with no significant effect on the final distribution by sector of the Group's portfolio.

To strengthen materiality assessment, we updated Klima, an in house tool to spot, qualify, quantify and manage climate and environmental risk. The common standards it applies help manage physical and transition risks. It includes our risk taxonomy and heatmaps to assess short-, mid- and long-term exposure and draws on the same calculation methodology for all business lines.

Its modules include 'Materiality Assessment', 'Scenarios', 'Risk Management' and 'Sensitivities' in a multi-stage implementation model. The exposure data it provides on each business line is qualitative and quantitative, by sector and geography, with advanced analysis models to project impacts in different horizons and scenarios.

4. Monitoring

Santander uses risk appetite and scenario analyses to monitor climate and environmental risk.

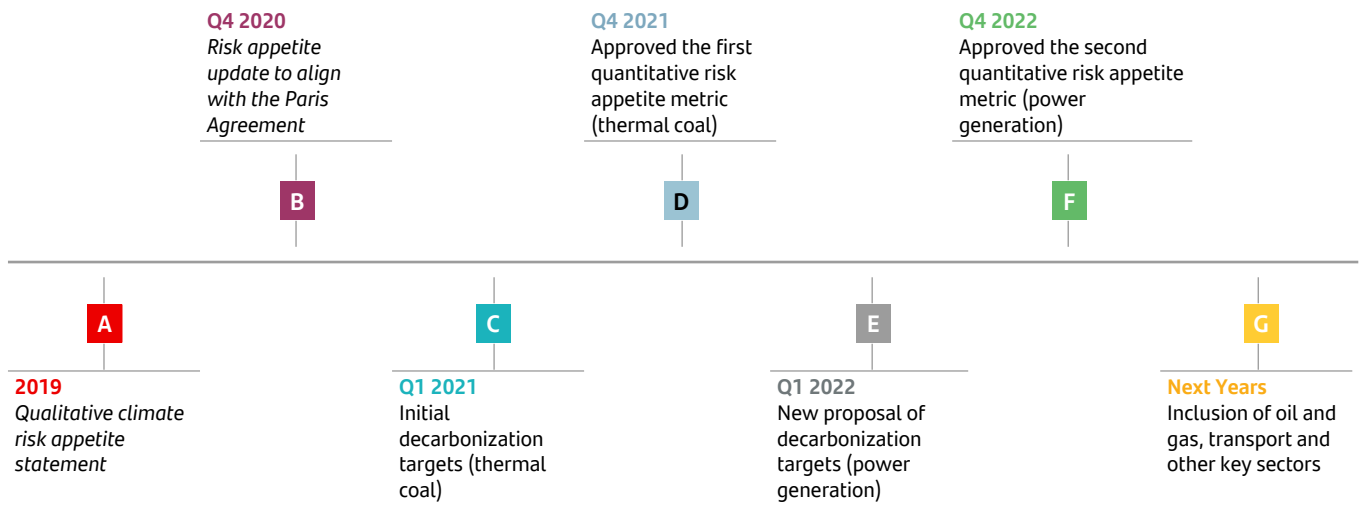
Risk appetite sets the volume and type of risks we deem prudent for our business strategy. In 2019, the board approved a qualitative risk appetite statement that links climate risk management to our sector-based policies.

We announced our first decarbonization commitments for the thermal coal sector in February 2021 in line with our ambition to be net zero by 2050. Accordingly, by 2030 we will end financial services to electricity generating customers if 10% of their revenues rely on thermal coal, and we will eliminate our exposure to thermal coal mining worldwide.

We supported our qualitative risk appetite statement with a quantitative metric the board had approved in November 2021. The metric imposes limits on thermal coal counterparties concerning our commitments, and sets a pathway that is consistent with our objectives for 2030. We are in permanent contact with affected customers to understand and support their transition planning.

Santander continues to set alignment targets for key climate-related industries to meet its commitments. In 2022, the Risk, SCIB and Responsible Banking areas launched initiatives to achieve the Group's decarbonization target for power generation, which will be included in risk appetite. In this regard, we announced our first decarbonization target for power generation (0.11 tCO₂e/MWh by 2030) as part of the NZBA (Net-Zero Banking Alliance) in our Climate finance report.

We are gradually defining metrics and limits for agriculture, aluminium, cement, commercial and residential real estate, iron and steel, oil and gas, transport and other material sectors in risk appetite, with a view to having them fully adopted in the coming years. This chart shows the Group's progress as well as targets for next years.



Scenario analyses are useful to monitor the Group’s climate and environmental risk as well as regulatory and supervisory stress tests. We use scenarios determined by the NGFS (Network for Greening the Financial System), the ECB (as part of its stress test) and others designed by our Research department to analyse the impact on climate under adverse circumstances.

In 2022, the ECB tightened its supervision with a thematic review, stress testing and on-site inspections. Overall, these exercises have been completed satisfactorily, and action plans were implemented to cover the improvement points detected. We expect the regulatory and supervisory agenda to continue to get increased.

In the first half of 2022, Grupo Santander underwent the ECB’s climate stress test for the banking sector. It comprised several modules; a qualitative questionnaire, revenue and emissions metrics, scenarios and time horizons. It was a big step to integrate advanced risk management models that cover portfolio forecasts under different scenarios and time horizons.

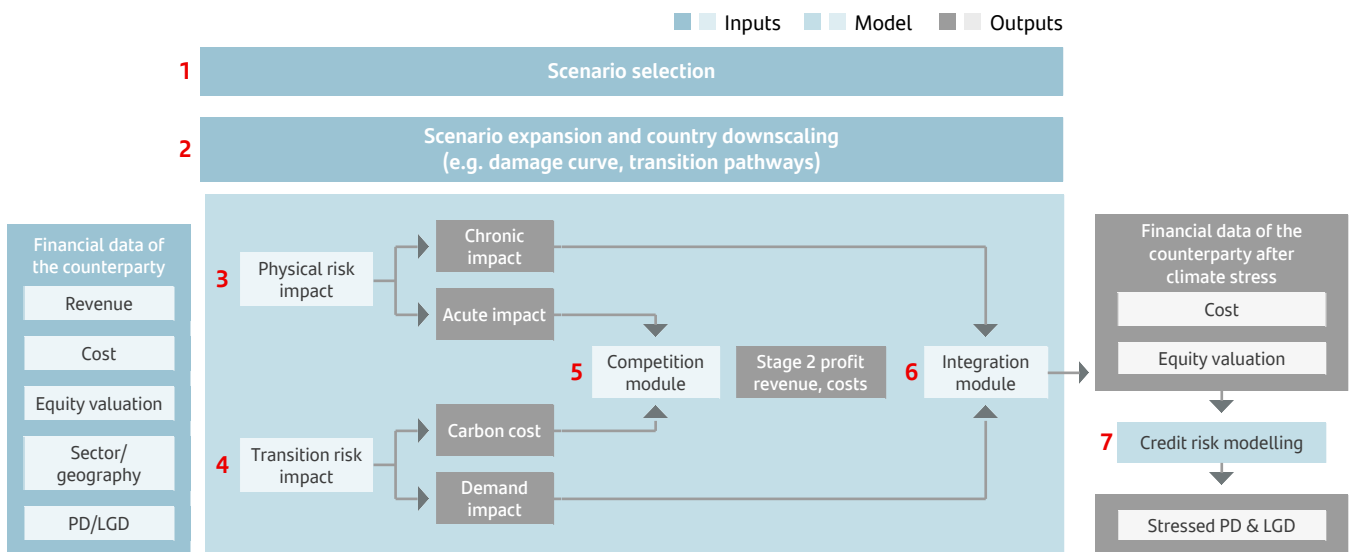
Moreover, it served as a learning exercise for banks to introduce climate risk into risk management as a qualitative part of the Supervisory Review and Evaluation Process (SREP).

The following table breaks down each module:

1 QUALITATIVE QUESTIONNAIRE	2 CLIMATE RISK METRICS	3 BOTTOM-UP STRESS TEST PROJECTIONS
<p>11 sections (78 questions):</p> <ol style="list-style-type: none"> Existence and use of ST exercises Governance and inclusion in risk appetite Integration into strategy Methodology used Scenarios Data and sources of information Inclusion on the ICAAP Future development plan Role of Internal Audit EU subsidiaries of non-EU institutions Methodological assumptions and choices 	<p>Non-financial corporates 22 sectors (NACE¹ code level 2)</p> <p>2 metrics:</p> <p>1) Income from GHG² intensive sectors</p> <p>2) Financed GHG emissions (scopes 1, 2, 3) Top 15 companies per sector</p> <p>Additional documentation:</p> <ul style="list-style-type: none"> Actions previously carried out by the bank Methodological approach 	<p>It covers credit, market, operational and reputational risk.</p> <p>Transition risk:</p> <ul style="list-style-type: none"> EU/Non-EU 2 time horizons 3y: static balance sheet (BS) 30y: dynamic BS (2030, 2040, 2050) <p>Physical risk:</p> <ul style="list-style-type: none"> EU, 1y time horizon 2 hazards: drought & heat + flood <p>Operational and Reputational Risks based on qualitative assessment (no projections)</p>

1. NACE: Statistical classification of economic activities in the European Community.
2. GHG: Green House Gas.

Santander used internal models, the Planetrics platform and vendors' databases to quantify the financial impact of physical and transition risk for each counterparty. The platform has seven modules (see chart below), based on the United Nations Environmental Programme Finance Initiative's (UNEP FI) methodology and other sources of information. The exercises we conduct entail both a bottom-up analysis of the customer and a top-down analysis of portfolios by industry and geography. We embedded scenario analysis methodology in our credit risk management using Klima's 'Sensitivities' and 'Materiality Assessment' modules to obtain a forward-looking overview of the portfolios that include sector forecasts and quantitative heatmaps.



PD: Probability of default. LGD: Loss given default.

The ECB published its aggregated results in the second half of 2022. Coupled with our own analysis, it has helped us enhance our internal climate risk stress testing. We also used it in our 2022 ICAAP.

In addition, Santander UK took part in the Bank of England's Climate Biennial Exploratory Scenario (CBES). In 2022, it began the Climate Internal Scenario Analysis (CISA) programme to create new climate risk scenarios and conduct quantitative stress tests.

5. Mitigation

In mitigation, we updated our environmental, social and climate change (ESCC) policy, which sets out our public commitments and aims to support our strategy for sensitive, special-attention and prohibited industries. The ESCC policy sets out Santander's standards for identifying, measuring, monitoring and managing environmental and social risk, especially in oil and gas, power generation, mining and metals and soft commodities. It is consistent with our policies on responsible banking and sustainability.

We follow special procedures to analyse environmental, social and climate change risk as a required part of risk management,

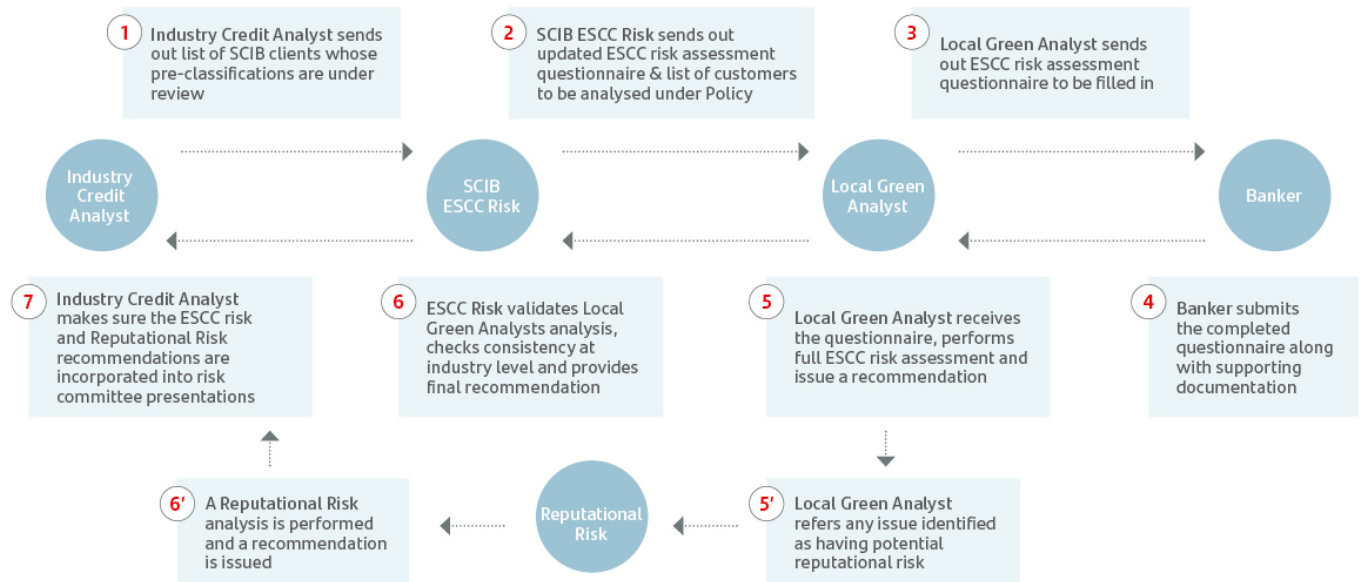
control and governance. Sanctioning bodies make sure decisions consider environmental, social and climate change risks and policy.

Our internal taxonomy also qualifies as a mitigating instrument since it helps us inform our customers of the need for credible plans to ensure an orderly transition to a low-carbon economy. The sustainable finance classification system (SFCS) is our internal guide to identify sustainable activities and ensures a blanket approach to monitoring operations, supporting the development of solutions for customers and mitigating the risk of greenwashing.

Furthermore, the first line of defence runs due diligence with several special questionnaires to grant credit. If the process reveals a reputational issue, it will be escalated to the Reputational risk function for providing an opinion. SCIB's project finance transactions must be checked against the Equator Principles.

This table summarizes SCIB's risk analysis:

SCIB's ESCC Risk analysis workflow



For more details on the Equator Principles, see ['3.2 Conduct and ethical behaviour'](#) in the Responsible Banking chapter.

In 2022, we continued to embed climate and environmental factors in credit approval through credit committees to inquire about ESCC factors along with customer ratings in SCIB (spreading scope to Corporates).

The Credit risk area is launching a target operating model (TOM) called 'The Climate Race', which includes environmental and climate risk in all stages of the credit granting process. Thus, encompass climate and environmental risk throughout the entire credit granting process, so that both our strategic priorities and regulatory requirements are homogeneously embedded in the admission processes of the Group, based on the materiality of portfolios, sectors, green business initiatives, and related deadlines in 2023 and 2024.

Additionally, a corporate multidisciplinary working group monitors the most significant claims and controversies, especially regarding climate change management and Santander's reputation. This involves identification, assessment, management, mitigation plans and escalations according to the established governance.

In 2022, the Risk area bolstered employee training on climate matters through certifications for teams directly involved in climate risk management (internal Santander ESG Commitment

Fundamentals certification and external International Sustainable Finance Specialist – IASE), as well as general coursework for most employees. Our Risk pro culture will remain an essential component of that. In 2023, we expect to further our policy on climate risk-based incentives and remuneration.

6. Reporting

Reports to senior managers and stakeholders on climate and environmental risk are transparent and accurate and comply with the law and supervisors' expectations. Our Annual Report and Climate Finance Report highlight our progress with climate and environmental risk.

Santander is also working on the Pillar 3 ESG disclosure regulation. In January 2022, the EBA published final Pillar 3 ESG risk templates for disclosing meaningful, contrastable information on how ESG risk (in particular, climate change) may exacerbate other balance sheet risks. The Pillar 3 ESG disclosure will enable the Group to compare its sustainability performance with other banks' and be transparent on its mitigation of risk and support for customers' green transition.

The Group completed the first official Pillar 3 ESG disclosure. Since the report covers the whole Group, we remained in permanent contact with subsidiaries to guarantee that requirements were fulfilled.



10.3 Summary by risk type

Grupo Santander continues to boost its capacity to identify climate and environmental risk drivers and integrate them into risk management processes. This table summarizes the impact of climate and environmental risk on the different typology of existing risks, our response, and our plans for the coming years.

Risk type	Potential impact on climate risk factors	What we're doing to manage climate risk	Next steps
Credit	<ul style="list-style-type: none"> → Extreme weather can lead to higher retail and corporate loan default and lower collateral value. → Credit risk can also rise if borrowers' business models do not consider the transition to a low-carbon economy (greater risk of revenue decline and business interruption, which can lead to higher default or a loss of business value). 	<ul style="list-style-type: none"> → Materiality assessment to spot physical and transition risk in the Group's credit portfolios. → Analysis on short-, mid- and long-term risk concentration per sector and region. Heatmaps that follow orderly, disorderly and HHW scenarios up to 2050. Scenario analyses and sensitivities to forecast changes in ratings, PD and LGD in view of physical and transition risk. → ESCC factor measurement in customer and transaction analysis, and ratings. Setting of risk appetite limits and alerts to manage climate-related sectors. 	<ul style="list-style-type: none"> → Launch of 'The climate race' Environmental & Climate change credit risk TOM. → Inclusion of climate factors in internal physical and transition risk models. Development of tools to monitor physical risk in all the Group's markets.
Market & Liquidity	<ul style="list-style-type: none"> → Growing consumer demand for sustainable products and a short supply of certain resources can affect the value of shares, bonds and other assets. → More frequent extreme weather can have stifle the economic growth of countries susceptible to climate change, increase their sovereign debt and reduce their access to capital markets. → Cash outflows from companies trying to boost their reputation in the market or solve problems with climate scenarios. 	<ul style="list-style-type: none"> → Qualitative analysis of climate risk scenarios' impact on market and liquidity risk (highly liquid assets and impact of financing of exposed companies). → Materiality assessment to spot physical and transition risk in the Group's trading portfolios, under climate stress scenarios that cover liquidity. 	<ul style="list-style-type: none"> → Enhance analysis of material climate impact on trading portfolios to help with future sector-based stress testing. → Enrich stress testing and review new scenarios to include. → Adapt stress testing to emerging market practices. → Include new liquidity scenarios to measure the materiality of their impact.

Risk type	Potential impact on climate risk factors	What we're doing to manage climate risk	Next steps
Operational	<ul style="list-style-type: none"> → Serious climate events can affect business continuity, infrastructure, processes and headcount at branches and offices. → If energy, water and insurance prices soar, so will operational costs. 	<ul style="list-style-type: none"> → Climate risk was a mandatory addition to our scenario analyses. → We updated our operational risk database with a new climate and environmental risk metric. → We're updating our continuity plan with more details on the threats of climate risk. 	<ul style="list-style-type: none"> → Embed climate risk in the annual operational and control risk self-assessment. → Enhance the operational risk that considers climate risk data. → Study external data sources.
Reputational	<ul style="list-style-type: none"> → Customers, investors and other stakeholders who believe banks aren't doing enough to meet low-carbon targets or their own public commitments can pose reputational risk. → The Group's climate information is considered insufficient or misleading, or product announcements appear to be "greenwashing". 	<ul style="list-style-type: none"> → Updated climate and environmental risk policies and procedures. → Corporate credit committees address reputational risk when assessing sensitive transactions that involve climate and environmental risk. → Strengthen climate and environmental risk governance, which the Reputational risk forum addresses. Formal meetings scheduled to review reputational issues (including climate matters), involving the legal, responsible banking, investor relations, risk and other teams. → Proactive measures that show Santander supports companies' green transition and decarbonization. 	<ul style="list-style-type: none"> → Methodology to quantify the reputational impact of climate and environmental risk.
Strategic	<ul style="list-style-type: none"> → The Group's net-zero financing and operations strategy fails to bring about enough change and undermines our strategy. 	<ul style="list-style-type: none"> → Regular monitoring of the strategic 'Climate change' project, including KPIs that relate to the Group's net zero objectives. → Our top risk identification includes a climate change risk event. We analyse the potential impact of low-probability stress scenarios on the Group's strategic plans and draw up action plans accordingly, or budget tracking for inclusion in the strategic risk profile. → Monitoring of ESG initiatives presented at the CPGF and investors' forum. 	<ul style="list-style-type: none"> → Increase granularity of stressed event impacts as part of the top risk identification. → Update key ESG metrics according to the Group's strategy. → Include more ESG factors in our business model performance review. → Continue to include ESG factors in comparisons with peers.

Glossary

2022 AGM	Annual general shareholders' meeting of Banco Santander held on 1 April 2022 at second call
2023 AGM	Annual general shareholders' meeting of Banco Santander called for 30 or 31 March 2023 at first or second call, respectively
Act 10/2014	Act 10/2014, of 26 June, on the organization, supervision and solvency of credit institutions.
Active customer	Those customers who comply with balance, income and/or transactionality demanded minimums defined according to the business area
ADR	American Depositary Receipts
ADS	American Depositary Shares
AEOI	Automatic Exchange of Information Standard
ALCO	Asset-Liability Committee
ALM	Asset and Liability Management
AML	Anti-Money Laundering
API	Application Programming Interface
APM	Alternative Performance Measure
APS	Amherst Pierpont Securities
Banesto	Banco Español de Crédito, S.A.
bn	Billion
BNPL	Buy Now Pay Later. Short-term financing that allows consumers to make purchases and pay for them at a future date.
bps	Basis points
BRRD	Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms, as amended from time to time
Bylaws	Bylaws of Banco Santander, S.A.
CAE	Chief Audit Executive
CAO	Chief Accounting Officer
CARF	<i>Conselho Administrativo de Recursos Fiscais (Administrative Council for Tax Appeals)</i>
CCO	Chief Compliance Officer
CCPS	Contingent Convertible Preferred Securities
CCR	Counterparty Credit Risk
CCSM	Code of Conduct in Securities Markets
CDI	CREST Depositary Interests
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHF	Swiss franc
CIO	Chief Information Officer
CNBV	<i>Comisión Nacional Bancaria y de Valores (National Banking and Securities Commission)</i>
CNMV	<i>Comisión Nacional del Mercado de Valores (Spanish stock market authority)</i>
COFINS	<i>Contribuição para Financiamento da Seguridade Social (Contribution for Social Security Financing)</i>
Constant euros	Excluding exchange rates' impact
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CRE	Credit Risk Equivalent
CRO	Chief Risk Officer
CRR	Regulation (EU) 575/2013 on prudential requirements for credit institutions and investment firms, as amended from time to time
CSLL	<i>Contribuição Social sobre o Lucro Líquido (Social Contribution on Net Profit)</i>



CVA	Credit Valuation Adjustments
DCB	Digital Consumer Bank
Digital customer	Every consumer of a commercial bank's services who has logged on to their personal online banking and/or mobile banking in the last 30 days
DTA	Deferred Tax Asset
DVA	Debt Valuation Adjustments
EAD	Exposure at default
EBA	European Banking Authority
ECB	European Central Bank
eNPS	Employee Net Promoter Score
EOIR	Exchange Of Information on Request standard
EPC	Energy Performance Certificate
EPS	Earnings Per Share
ESG	Environment, Social and Governance
ESMA	European Securities and Markets Authority
EU	European Union
EVA	Economic Value Added
EVP	Employee Value Proposition
FCA	Financial Conduct Authority
FCC	Financial Crime Compliance
First 2022 Buyback Programme	First buyback programme carried out within the 2022 shareholder remuneration policy
FL CET1	Fully-Loaded Common Equity Tier 1
FRTB	Fundamental Review of the Trading Book
FX	Foreign Exchange
GBP	Pound Sterling
GCC	General Code of Conduct
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GHG	Greenhouse Gas
GSGM	Group-Subsidiary governance model
G-SIB	Global Systemically Important Bank
GTB	Global Transactional Banking
ICAAP	Internal Capital Adequacy Assessment Process
ICAC	<i>Instituto de Contabilidad y Auditoría de Cuentas</i> (Institute of accounting and auditing)
ICFR	Internal Control over Financial Reporting
ICO	<i>Instituto Oficial de Crédito</i> (Spanish public credit institution)
ICS	Internal Control System
Identified staff	Other executives whose activities may have a significant impact on the Group's risk profile
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
IMF	International Monetary Fund
IRB	Internal Ratings-Based
IRC	Incremental Risk Charge
IRPJ	<i>Imposto sobre a Renda das Pessoas Jurídicas</i>
JPY	Japanese Yen
LCR	Liquidity Coverage Ratio
LGD	Loss given default
LLP	Loan-Loss Provisions

Loyal customer	Active customers who receive most of their financial services from the Group according to the commercial segment to which they belong. Various engaged customer levels have been defined taking profitability into account
LTD	Loan-To-Deposit ratio
LTV	Loan to value
LTV	Loan-To-Value ratio
M/LT	Medium-and long-term
Material Risk Taker	Other executives whose activities could have a significant impact on the Group's risk profile
MREL	Minimum Requirements for own funds and Eligible Liabilities which is required to be met under the BRRD
NACE	Nomenclature of Economic Activities of the European Union
NFR	Non-financial risk
NGO	Non-governmental organization
NII	Net Interest Income
NPL	Non-performing loan
NPS	Net Promoter Score
NSFR	Net Stable Funding Ratio
NYSE	New York Stock Exchange
NZAMi	Net Zero Asset Managers initiative
NZBA	Net Zero Banking Alliance
OECD	Organization for Economic Cooperation and Development
OEM	Original Equipment Manufacturer
One FCC	One Financial Crime Compliance
OTC	Over-The-Counter
P&L	Profit and Loss statement
PCAF	Partnership for Carbon Accounting Financials
PCAOB	Public Company Accounting Oversight Board
PD	Probability of Default
PIS	<i>Programa de Integração Social</i>
PP	Percentage point
PwC	PricewaterhouseCoopers Auditores, S.L.
RCSA	Risk Control Self-Assessment
RoA	Return on Assets
RoE	Return on Equity
RoRWA	Return (net of tax) on Risk Weighted Assets for a particular business. Grupo Santander uses RoRWA to establish strategies to allocate regulatory capital for maximum returns
RoTE	Return on Tangible Equity
RWA	Risk-Weighted Assets
S&P 500	The S&P 500 index maintained by S&P Dow Jones Indices LLC
SAM	Santander Asset Management
SC USA	Santander Consumer US
SCF	Santander Consumer Finance
SCIB	Santander Corporate & Investment Banking
SEC	Securities and Exchange Commission
Second 2022 Buyback Programme	Second share Buyback programme charged against 2022 results
SFCS	Sustainable Finance Classification System
SHUSA	Santander Holding USA, Inc
SMEs	Small and Medium Enterprises
SOX	Sarbanes-Oxley Act of 2002



Spanish Corporate Governance Code	CNMV's Good Governance Code for Listed Companies
Spanish Securities Markets Act	Consolidated text of the Spanish Securities Markets Act approved by Royal Legislative Decree 4/2015, of 23 October as amended from time to time
SPF	Simple, Personal and Fair
SRB	European Single Resolution Board
SREP	Supervisory Review and Evaluation Process
SRI	Socially Responsible Investment
SRT	Significant Risk Transfer
SSM	Single Supervisory Mechanism. The system of banking supervision in Europe. It is composed of the ECB and the competent supervisory authorities of the participating EU countries
STEM	Science, Technology, Engineering, Mathematics
T&O	Technology & Operations
TCFD	Task Force on Climate-related Financial Disclosures
TLAC	The Total Loss-Absorbing Capacity requirement which is required to be met under the CRD V package
TLTRO	Targeted Longer-Term Refinancing Operations
TNFD	Taskforce on Nature-related Financial Disclosure
TPV	Total Payments Volume
TSR	Total Shareholder Return
UK	United Kingdom
UNEP FI	United Nations Environmental Programme Finance Initiative
US	United States of America
USD	United States dollar
VaR	Value at Risk
VAT	Value Added Tax
WBCSD	World Business Council for Sustainable Development
WM&I	Wealth Management and Insurance
YoY	Year-on-Year



Auditor's report and consolidated financial statements





Auditor's report	504	25. Provisions	632
		26. Other liabilities	648
Consolidated financial statements	515	27. Tax matters	649
Consolidated balance sheets as of 31 December 2022, 2021 and 2020	515	28. Non-controlling interests	655
Consolidated income statements for the years ended 31 December 2022, 2021 and 2020	519	29. Other comprehensive income	656
Consolidated statements of recognised income and expense for the years ended 31 December 2022, 2021 and 2020	521	30. Shareholders' equity	662
Consolidated statements of changes in total equity for the years ended 31 December 2022, 2021 and 2020	522	31. Issued capital	662
Consolidated statements of cash flows for the years ended 31 December 2022, 2021 and 2020	528	32. Share premium	663
		33. Accumulated retained earnings	663
		34. Other equity instruments and own shares	665
		35. Memorandum items	665
		36. Hedging derivatives	666
		37. Discontinued operations	689
		38. Interest income	689
		39. Interest expense	689
		40. Dividend income	690
		41. Commission income	690
		42. Commission expense	690
		43. Gains or losses on financial assets and liabilities	690
		44. Exchange differences, net	691
		45. Other operating income and expenses	692
		46. Staff costs	692
		47. Other general administrative expenses	698
		48. Gains or losses on non financial assets, net	699
		49. Gains or losses on non-current assets held for sale not classified as discontinued operations	699
		50. Other disclosures	700
		51. Main and secondary segments reporting	711
		52. Related parties	726
		53. Risk management	753
		54. Explanation added for translation to English	765
Notes to the consolidated financial statements	530	Appendix	766
1. Introduction, basis of presentation of the consolidated financial statements (consolidated annual accounts) and other information	531	Appendix I. Subsidiaries of Banco Santander, S.A.	767
2. Accounting policies	536	Appendix II. Societies of which the Group owns more than 5%, entities associated with Grupo Santander and jointly controlled entities	791
3. Santander Group	581	Appendix III. Issuing subsidiaries of shares and preference shares	797
4. Distribution of the Bank's profit, shareholder remuneration scheme and earnings per share	584	Appendix IV. Notifications of acquisitions and disposals of investments in 2022	798
5. Remuneration and other benefits paid to the Bank's directors and senior managers	586	Appendix V. Other information on the Group's banks	799
6. Loans and advances to central banks and credit institutions	600	Appendix VI. Annual banking report	805
7. Debt instruments	601		
8. Equity instruments	603		
9. Trading Derivatives (assets and liabilities) and short positions	604		
10. Loans and advances to customers	604		
11. Trading derivatives	610		
12. Non-current assets	610		
13. Investments	610		
14. Insurance contracts linked to pensions	612		
15. Liabilities and assets under insurance contracts and reinsurance assets	613		
16. Tangible assets	614		
17. Intangible assets – Goodwill	617		
18. Intangible assets - Other intangible assets	620		
19. Other assets	621		
20. Deposits from central banks and credit institutions	622		
21. Customer deposits	622		
22. Marketable debt securities	623		
23. Subordinated liabilities	629		
24. Other financial liabilities	631		

Auditor's report





This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Independent auditor's report on the consolidated annual accounts

To the shareholders of Banco Santander, S.A.:

Report on the consolidated annual accounts

Opinion

We have audited the consolidated annual accounts of Banco Santander, S.A. (the Parent company) and its subsidiaries (the Group or Grupo Santander), which comprise the balance sheet as at December 31, 2022, and the income statement, statement of recognised income and expense, statement of changes in total equity, statement of cash flows and related notes, all consolidated, for the year then ended.

In our opinion, the accompanying consolidated annual accounts present fairly, in all material respects, the equity and financial position of the Group as at December 31, 2022, as well as its financial performance and cash flows, all consolidated, for the year then ended, in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU) and other provisions of the financial reporting framework applicable in Spain.

Basis for opinion

We conducted our audit in accordance with legislation governing the audit practice in Spain. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated annual accounts* section of our report.

We are independent of the Group in accordance with the ethical requirements, including those relating to independence, that are relevant to our audit of the consolidated annual accounts in Spain, in accordance with legislation governing the audit practice. In this regard, we have not rendered services other than those relating to the audit of the accounts, and situations or circumstances have not arisen that, in accordance with the provisions of the aforementioned legislation, have affected our necessary independence such that it has been compromised.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated annual accounts of the current period. These matters were addressed in the context of our audit of the consolidated annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

PricewaterhouseCoopers Auditores, S.L., Torre PwC, Pº de la Castellana 259 B, 28046 Madrid, España
Tel.: +34 915 684 400 / +34 902 021 111, Fax: +34 915 685 400, www.pwc.es

1



Banco Santander, S.A. and its subsidiaries

Key audit matters**Estimation of impairment of financial assets at amortised cost - loans and advances to customers – for credit risk**

The models used to estimate the expected credit losses along with the adaptations made in the context of the current environment, imply a high complexity by incorporating new estimates and judgments, especially those related to the management overlays made to the models to determine the expected credit loss in the current uncertain macroeconomic environment. These estimates require an elevated component of judgement by management and are one of the most significant and complex estimates in the preparation of the consolidated annual accounts as at December 31, 2022 included herein, therefore they have been considered one of the key audit matters.

The main judgements and assumptions used by management are the following:

- The estimation of the Probability of Default (PD) and Loss Given Default (LGD) parameters.
- Identification and classification of the staging criteria of loans and advances to customers.
- The definition and evaluation of management overlays to adapt the parameters estimated by the models to the conditions and current environment.
- The main assumptions used in the determination of provisions for expected credit losses estimated individually.

The Group's business is focused on commercial banking products and is concentrated in nine key markets (Brazil, Chile, Spain, United States, Mexico, Poland, Portugal, United Kingdom and the consumer finance business in Europe).

How our audit addressed the key audit matters

We have obtained, in collaboration with our credit risk and economic forecasting experts, an understanding of management's process to estimate the impairment of financial assets at amortised cost - loans and advances to customers - over the estimation of impairment of financial assets assessed collectively and individually. In addition, and as a part of our audit procedures, we have made inquiries to management to understand the extent of the potential impact of climate change on credit risk.

In regards with the internal control, we have focused on testing the design and operating effectiveness of key controls over the following processes:

- Calculation methodologies, calibrations, monitoring and back-testing performed by management.
- Compliance with internal policies and functionality of the internal models approved by management.
- Reliability of the data sources used in the calculations and the suitability of the models taking into account the circumstances.
- Periodic review process of borrower to determine proper staging criteria.
- Review process over the calculation of the principal models and portfolios.
- Review process of the management overlays to the expected credit loss models made by management due to the conditions and current uncertain environment.
- Loan collateral assignment and valuation process associated with mortgage collateral operations, including collateral recovery process.



Banco Santander, S.A. and its subsidiaries

Key audit matters

As a result, for the year ended 2022 the Group has recognised an amount of EUR 10,856 million of impairment of financial assets at amortised cost.

Please refer to Notes 2, 10 and 53 of the consolidated annual accounts as at December 31, 2022.

How our audit addressed the key audit matters

In addition, we performed the following tests of details:

- Tests of principal models with respect to: i) calculation and segmentation methods; ii) methodology used for the estimation of the expected loss parameters; iii) data and main assumptions used, iv) staging criteria and v) scenario information and assumptions.
- Evaluation of the management overlays to the expected credit loss models made by management due to the conditions and current environment, if applicable.
- Verification of the correct assignment of the loan collaterals, especially those that are classified as doubtful.
- Reperformance of collective impairment losses based on the expected credit loss models parameters.
- On a sample basis, evaluating individual credit files to determine the adequacy of their accounting and classification, discounted cash flows and, where appropriate, corresponding impairment.

We have not identified exceptions outside of a reasonable range in the procedures outlined above.

Goodwill impairment assessment

Goodwill impairment assessment is an exercise that requires a high degree of judgement and estimation therefore it has been considered one of the key audit matters.

Due to their relevance to Grupo Santander, management monitors goodwill, particularly the Santander Bank Polska Cash Generating Unit (CGU) and assesses goodwill for impairment at the end of each annual reporting period or whenever there is any indication of impairment.

The assumptions used by management to estimate the value in use of the Cash-Generating Units (CGUs) includes financial projections, discount rates and perpetual growth rates. Such valuations, and some of these assumptions, are performed by management's experts.

We have obtained, in collaboration with our valuation experts, an understanding of the process performed by management to assess the recoverable amount.

In regards with the internal control, we have focused on testing the design and operating effectiveness of key controls over the following processes:

- Definition of the Group's CGUs.
- Methodology used by management for the goodwill impairment assessment, including the controls in place to supervise the process and the related approvals.
- Management's capability of reliable prediction through the comparison of previous years' estimations and impairment assessments with the actual results.



Banco Santander, S.A. and its subsidiaries

Key audit matters	How our audit addressed the key audit matters
<p>The amount of the Group's consolidated goodwill balance as at December 31, 2022 is EUR 13,741 million.</p> <p>Please refer to Notes 2 and 17 of the consolidated annual accounts as at December 31, 2022.</p>	<ul style="list-style-type: none"> • Review process of the reasonableness of the discount rates and perpetual growth rates used by management's experts. • Review process of the mathematical accuracy of the valuation models used by management experts. <p>We also conducted tests of details to evaluate the discounted cash flow projections used by management in their estimation, including the budgetary compliance of the main CGUs and the evaluation of the reasonableness of the assumptions, such as discount rates and perpetual growth rates.</p> <p>In addition, we have performed, among other, the following tests of details:</p> <ul style="list-style-type: none"> • Verifying the mathematical accuracy of the goodwill impairment test, including the discounted cash flow projections. • Comparing the fair value of the listed CGUs to their recoverable amount. • Obtain and evaluate the valuation reports regarding the goodwill impairment test performed by management's internal and external experts. • Verifying the adequacy of the information disclosed in the consolidated annual accounts in accordance with applicable regulations. <p>We have not identified exceptions outside of a reasonable range in the procedures outlined above.</p>

Litigation provisions and contingencies

The Group is party to a range of tax, labour and legal proceedings - administrative and judicial - which primarily arose in the ordinary course of its operations. Also, there are other situations not yet subject to any judicial process that, however, have required the recognition of provisions, such as aspects of conduct with clients and the possible compensations that could be derived.

These proceedings generally take a long period of time to run their course, giving rise to complex processes in accordance with the applicable legislation, therefore it has been considered one of the key audit matters.

We have obtained, in collaboration with our experts, an understanding of the estimation process performed by management for litigation provisions and contingencies.

In regards with the internal control, we have focused on testing the design and operating effectiveness of key controls over the following processes:

- Additions, logs and updates over the completeness of the legal matters in the systems.



Banco Santander, S.A. and its subsidiaries

Key audit matters

Management decides when to recognize a provision for these contingent liabilities, based on an estimate using certain procedures consistent with the nature of the uncertainty of the obligations.

Among these provisions, the most significant are those that cover the tax and labour proceedings in Brazil and those that cover the legal proceedings in Brazil, Spain, Poland, Mexico and United Kingdom.

The amount of the litigation provisions and contingencies as at December 31, 2022 is EUR 3,432 million.

Please refer to Notes 2 and 25 of the consolidated annual accounts as at December 31, 2022.

How our audit addressed the key audit matters

- Accuracy of the key data, maintained in the systems, used in the calculation of the litigations provisions and contingencies.
- Assessment of the criteria used to estimate the expected losses from litigation provisions and contingencies and evaluation of the adequacy over the calculation of the provisions for regulatory, legal or tax procedures and their recognition.
- Reconciliation between the minutes of the inspections and the amounts accounted for.

In addition, we have performed the following tests of details:

- Analysis for reasonableness of the expected outcomes of the most significant tax, labour and legal proceedings.
- Assessment of possible contingencies relating to compliance with the tax obligations for all the years open to inspection, of the communications with the regulatory bodies and analysis of the ongoing regulatory inspections.
- Sending, obtaining and analysing, if any, audit confirmation letters from external and internal lawyers and external tax advisors who work with the Group or performing alternative procedures if confirmations are not received.
- Analysis of the recognition and reasonableness of the provisions recorded.
- Verifying the adequacy of the information disclosed in the consolidated annual accounts in accordance with applicable regulations.

In the procedures described above, no exceptions were identified outside of a reasonable range.

Information systems

The Group's financial information is highly dependent on information technology (IT) systems in the geographies where it operates, therefore an adequate control of these systems is crucial to ensuring correct data processing.

We have evaluated, in collaboration with our IT system specialists, the internal controls over the IT systems, databases and applications that support the Group's financial reporting.



Banco Santander, S.A. and its subsidiaries

Key audit matters

In this context, it is vital to evaluate aspects such as the organization of the Group's Technology and Operations department, controls over software maintenance and development, physical and logical security controls, and controls over computer operations, therefore it has been considered one of the key audit matters.

In this respect, management continues monitoring the internal controls over IT systems, including the access controls that support the Group's technology processes.

How our audit addressed the key audit matters

For this purpose, we have performed procedures over the design and operating effectiveness of key controls and test of details related to:

- The function of the IT governance framework.
- Access and logical security controls over the applications, operating systems and databases that support the relevant financial information.
- Application development and change management.
- Maintenance of computer operations.

In addition, considering the monitoring carried out by management over its internal controls over IT systems, our approach and audit plan included the following aspects:

- Evaluation of the monitoring made by management as part of its internal control environment of the Group.
- Testing of the design and operating effectiveness of the controls implemented by management, including access controls.

In the procedures described above, no relevant exceptions were identified related to this matter

Other information: Consolidated Directors' report

Other information comprises only the consolidated Directors' report for the 2022 financial year, the formulation of which is the responsibility of the Parent company's directors and does not form an integral part of the consolidated annual accounts.

Our audit opinion on the consolidated annual accounts does not cover the consolidated Directors' report. Our responsibility regarding the consolidated Directors' report, in accordance with legislation governing the audit practice, is to:

- a) Verify only that the consolidated statement of non-financial information, certain information included in the Annual Corporate Governance Report and the Annual Report on Directors' Remuneration, as referred to in the Auditing Act, have been provided in the manner required by applicable legislation and, if not, we are obliged to disclose that fact.
- b) Evaluate and report on the consistency between the rest of the information included in the consolidated Directors' report and the consolidated annual accounts as a result of our knowledge of the Group obtained during the audit of the aforementioned financial statements, as well as to evaluate and report on whether the content and presentation of this part of the consolidated Directors' report is in accordance with applicable regulations. If, based on the work we have performed, we conclude that material misstatements exist, we are required to report that fact.



Banco Santander, S.A. and its subsidiaries

On the basis of the work performed, as described above, we have verified that the information mentioned in section a) above has been provided in the manner required by applicable legislation and that the rest of the information contained in the consolidated Directors' report is consistent with that contained in the consolidated annual accounts for the 2022 financial year, and its content and presentation are in accordance with applicable regulations.

Responsibility of the directors and the audit committee for the consolidated annual accounts

The Parent company's directors are responsible for the preparation of the accompanying consolidated annual accounts, such that they fairly present the consolidated equity, financial position and financial performance of the Group, in accordance with IFRS-EU and other provisions of the financial reporting framework applicable to the Group in Spain, and for such internal control as the aforementioned directors determine is necessary to enable the preparation of consolidated annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated annual accounts, the Parent company's directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the aforementioned directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Parent company's audit committee is responsible for overseeing the process of preparation and presentation of the consolidated annual accounts.

Auditor's responsibilities for the audit of the consolidated annual accounts

Our objectives are to obtain reasonable assurance about whether the consolidated annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with legislation governing the audit practice in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated annual accounts.

As part of an audit in accordance with legislation governing the audit practice in Spain, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Parent company's directors.



Banco Santander, S.A. and its subsidiaries

- Conclude on the appropriateness of the Parent company's directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated annual accounts, including the disclosures, and whether the consolidated annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated annual accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Parent company's audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Parent company's audit committee with a statement that we have complied with relevant ethical requirements, including those relating to independence, and we communicate with the aforementioned those matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Parent company's audit committee, we determine those matters that were of most significance in the audit of the consolidated annual accounts of the current period and are therefore the key audit matters.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Report on other legal and regulatory requirements

European single electronic format

We have examined the digital files of the European single electronic format (ESEF) of Banco Santander, S.A. and its subsidiaries for the 2022 financial year that comprise an XHTML file which includes the consolidated annual accounts for the financial year and XBRL files with tagging performed by the entity, which will form part of the annual financial report.

The directors of Banco Santander, S.A. are responsible for presenting the annual financial report for 2022 financial year in accordance with the formatting and markup requirements established in the Delegated Regulation (EU) 2019/815 of December 17, 2018 of the European Commission (hereinafter the ESEF Regulation).

Our responsibility is to examine the digital files prepared by the Parent company's directors, in accordance with legislation governing the audit practice in Spain. This legislation requires that we plan and execute our audit procedures in order to verify whether the content of the consolidated annual accounts included in the aforementioned digital files completely agrees with that of the consolidated annual accounts that we have audited, and whether the format and markup of these accounts and of the aforementioned files has been affected, in all material respects, in accordance with the requirements established in the ESEF Regulation.



Banco Santander, S.A. and its subsidiaries

In our opinion, the digital files examined completely agree with the audited consolidated annual accounts, and these are presented and have been marked up, in all material respects, in accordance with the requirements established in the ESEF Regulation.

Report to the audit committee of the Parent company

The opinion expressed in this report is consistent with the content of our additional report to the audit committee of the Parent company dated February 27, 2023.

Appointment period

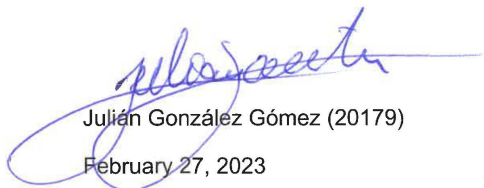
The General Ordinary Shareholders' Meeting held on April 1, 2022 appointed us as auditors of the Group for a period of one year, for the year ended December 31, 2022.

Previously, we were appointed by resolution of the General Ordinary Shareholders' Meeting for a period of three years and we have audited the accounts continuously since the year ended December 31, 2016.

Services provided

Services provided to the Group for services other than the audit of the accounts are disclosed in note 47 to the consolidated annual accounts.

PricewaterhouseCoopers Auditores, S.L. (S0242)



Julián González Gómez (20179)
February 27, 2023

Consolidated financial statements



Translation of the consolidated annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to the Group in Spain (see Notes 1 and 54). In the event of a discrepancy, the Spanish- version prevails.

Grupo Santander

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022, 2021 AND 2020

EUR million

ASSETS	Note	2022	2021 ^A	2020 ^A
CASH, CASH BALANCES AT CENTRAL BANKS AND OTHER DEPOSITS ON DEMAND		223,073	210,689	153,839
FINANCIAL ASSETS HELD FOR TRADING		156,118	116,953	114,945
Derivatives	9 and 11	67,002	54,292	67,137
Equity instruments	8	10,066	15,077	9,615
Debt securities	7	41,403	26,750	37,894
Loans and advances		37,647	20,834	299
Central banks	6	11,595	3,608	—
Credit institutions	6	16,502	10,397	3
Customers	10	9,550	6,829	296
NON-TRADING FINANCIAL ASSETS MANDATORILY AT FAIR VALUE THROUGH PROFIT OR LOSS		5,713	5,536	4,486
Equity instruments	8	3,711	4,042	3,234
Debt securities	7	1,134	957	700
Loans and advances		868	537	552
Central banks	6	—	—	—
Credit institutions	6	—	—	—
Customers	10	868	537	552
FINANCIAL ASSETS DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS		8,989	15,957	48,717
Debt securities	7	2,542	2,516	2,979
Loans and advances		6,447	13,441	45,738
Central banks	6	—	—	9,481
Credit institutions	6	673	3,152	12,136
Customers	10	5,774	10,289	24,121
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		85,239	108,038	120,953
Equity instruments	8	1,941	2,453	2,783
Debt securities	7	75,083	97,922	108,903
Loans and advances		8,215	7,663	9,267
Central banks	6	—	—	—
Credit institutions	6	—	—	—
Customers	10	8,215	7,663	9,267
FINANCIAL ASSETS AT AMORTIZED COST		1,147,044	1,037,898	958,378
Debt securities	7	73,554	35,708	26,078
Loans and advances		1,073,490	1,002,190	932,300
Central banks	6	15,375	15,657	12,499
Credit institutions	6	46,518	39,169	37,838
Customers	10	1,011,597	947,364	881,963
HEDGING DERIVATIVES	36	8,069	4,761	8,325
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK	36	(3,749)	410	1,980

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022, 2021 AND 2020

EUR million

ASSETS	Note	2022	2021 ^A	2020 ^A
INVESTMENTS	13	7,615	7,525	7,622
Joint venture entities		1,981	1,692	1,492
Associated entities		5,634	5,833	6,130
ASSETS UNDER INSURANCE OR REINSURANCE CONTRACTS	15	308	283	261
TANGIBLE ASSETS		34,073	33,321	32,735
Property, plant and equipment	16	33,044	32,342	31,772
For own-use		13,489	13,259	13,213
Leased out under an operating lease		19,555	19,083	18,559
Investment properties	16	1,029	979	963
<i>Of which leased out under an operating lease</i>		804	839	793
INTANGIBLE ASSETS		18,645	16,584	15,908
Goodwill	17	13,741	12,713	12,471
Other intangible assets	18	4,904	3,871	3,437
TAX ASSETS		29,987	25,196	24,586
Current tax assets		9,200	5,756	5,340
Deferred tax assets	27	20,787	19,440	19,246
OTHER ASSETS		10,082	8,595	11,070
Insurance contracts linked to pensions	14	104	149	174
Inventories		11	6	5
Other	19	9,967	8,440	10,891
NON-CURRENT ASSETS HELD FOR SALE	12	3,453	4,089	4,445
TOTAL ASSETS		1,734,659	1,595,835	1,508,250

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated balance sheet as of 31 December 2022.

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022, 2021 AND 2020

EUR million

LIABILITIES	Note	2022	2021^A	2020^A
FINANCIAL LIABILITIES HELD FOR TRADING		115,185	79,469	81,167
Derivatives	9 and 11	64,891	53,566	64,469
Short positions	9	22,515	12,236	16,698
Deposits		27,779	13,667	—
Central banks	20	5,757	1,038	—
Credit institutions	20	9,796	6,488	—
Customers	21	12,226	6,141	—
Marketable debt securities	22	—	—	—
Other financial liabilities	24	—	—	—
FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS		55,947	32,733	48,038
Deposits		50,520	27,279	43,598
Central banks	20	1,740	607	2,490
Credit institutions	20	1,958	1,064	6,765
Customers	21	46,822	25,608	34,343
Marketable debt securities	22	5,427	5,454	4,440
Other financial liabilities	24	—	—	—
<i>Memorandum items: subordinated liabilities</i>	23	—	—	—
FINANCIAL LIABILITIES AT AMORTIZED COST		1,423,858	1,349,169	1,248,188
Deposits		1,111,887	1,078,587	990,391
Central banks	20	76,952	139,757	112,804
Credit institutions	20	68,582	52,235	62,620
Customers	21	966,353	886,595	814,967
Marketable debt securities	22	274,912	240,709	230,829
Other financial liabilities	24	37,059	29,873	26,968
<i>Memorandum items: subordinated liabilities</i>	23	25,926	26,196	21,880
HEDGING DERIVATIVES	36	9,228	5,463	6,869
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK	36	(117)	248	286
LIABILITIES UNDER INSURANCE OR REINSURANCE CONTRACTS	15	747	770	910
PROVISIONS	25	8,149	9,583	10,852
Pensions and other post-retirement obligations		2,392	3,185	3,976
Other long term employee benefits		950	1,242	1,751
Taxes and other legal contingencies		2,074	1,996	2,200
Contingent liabilities and commitments		734	733	700
Other provisions		1,999	2,427	2,225
TAX LIABILITIES		9,468	8,649	8,282
Current tax liabilities		3,040	2,187	2,349
Deferred tax liabilities	27	6,428	6,462	5,933
OTHER LIABILITIES	26	14,609	12,698	12,336
LIABILITIES ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE		—	—	—
TOTAL LIABILITIES		1,637,074	1,498,782	1,416,928

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022, 2021 AND 2020

EUR million

EQUITY	Note	2022	2021 ^A	2020 ^A
SHAREHOLDERS' EQUITY	30	124,732	119,649	114,620
CAPITAL	31	8,397	8,670	8,670
Called up paid capital		8,397	8,670	8,670
Unpaid capital which has been called up		—	—	—
SHARE PREMIUM	32	46,273	47,979	52,013
EQUITY INSTRUMENTS ISSUED OTHER THAN CAPITAL	34	688	658	627
Equity component of the compound financial instrument		—	—	—
Other equity instruments issued		688	658	627
OTHER EQUITY	34	175	152	163
ACCUMULATED RETAINED EARNINGS	33	66,702	60,273	65,583
REVALUATION RESERVES	33	—	—	—
OTHER RESERVES	33	(5,454)	(4,477)	(3,596)
Reserves or accumulated losses in joint venture investments		1,553	1,572	1,504
Others		(7,007)	(6,049)	(5,100)
(-) OWN SHARES	34	(675)	(894)	(69)
PROFIT OR LOSS ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT		9,605	8,124	(8,771)
(-) INTERIM DIVIDENDS	4	(979)	(836)	—
OTHER COMPREHENSIVE INCOME OR LOSS	29	(35,628)	(32,719)	(33,144)
Items that will not be reclassified to profit or loss		(4,635)	(4,241)	(5,328)
Items that may be reclassified to profit or loss		(30,993)	(28,478)	(27,816)
NON-CONTROLLING INTEREST	28	8,481	10,123	9,846
Other comprehensive income or loss		(1,856)	(2,104)	(1,800)
Other items		10,337	12,227	11,646
TOTAL EQUITY		97,585	97,053	91,322
TOTAL LIABILITIES AND EQUITY		1,734,659	1,595,835	1,508,250
MEMORANDUM ITEMS: OFF BALANCE SHEET AMOUNTS	35			
Loan commitments granted		274,075	262,737	241,230
Financial guarantees granted		12,856	10,758	12,377
Other commitments granted		92,672	75,733	64,538

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated balance sheet as of 31 December 2022.

CONSOLIDATED INCOME STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

EUR million

	Note	(Debit) Credit		
		2022	2021 ^A	2020 ^A
Interest income	38	71,430	46,463	45,741
<i>Financial assets at fair value through other comprehensive income</i>		5,479	2,582	2,840
<i>Financial assets at amortized cost</i>		59,214	40,471	40,365
<i>Other interest income</i>		6,737	3,410	2,536
Interest expense	39	(32,811)	(13,093)	(13,747)
Interest income/(charges)		38,619	33,370	31,994
Dividend income	40	488	513	391
Income from companies accounted for using the equity method	13	702	432	(96)
Commission income	41	15,867	13,812	13,024
Commission expense	42	(4,077)	(3,310)	(3,009)
Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net	43	149	628	1,107
<i>Financial assets at amortized cost</i>		34	89	(31)
<i>Other financial assets and liabilities</i>		115	539	1,138
Gain or losses on financial assets and liabilities held for trading, net	43	842	1,141	3,211
<i>Reclassification of financial assets at fair value through other comprehensive income</i>		—	—	—
<i>Reclassification of financial assets at amortized cost</i>		—	—	—
<i>Other gains (losses)</i>		842	1,141	3,211
Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss	43	162	132	82
<i>Reclassification of financial assets at fair value through other comprehensive income</i>		—	—	—
<i>Reclassification of financial assets at amortized cost</i>		—	—	—
<i>Other gains (losses)</i>		162	132	82
Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net	43	968	270	(171)
Gain or losses from hedge accounting, net	43	74	(46)	51
Exchange differences, net	44	(542)	(562)	(2,093)
Other operating income	45	1,510	2,255	1,920
Other operating expenses	45	(2,803)	(2,442)	(2,342)
Income from assets under insurance and reinsurance contracts	45	2,698	1,516	1,452
Expenses from liabilities under insurance and reinsurance contracts	45	(2,540)	(1,305)	(1,242)

**CONSOLIDATED INCOME STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020**

EUR million

	Note	(Debit) Credit		
		2022	2021 ^A	2020 ^A
Total income		52,117	46,404	44,279
Administrative expenses		(20,918)	(18,659)	(18,320)
<i>Staff costs</i>	46	(12,547)	(11,216)	(10,783)
<i>Other general administrative expenses</i>	47	(8,371)	(7,443)	(7,537)
Depreciation and amortisation cost	16 and 18	(2,985)	(2,756)	(2,810)
Provisions or reversal of provisions, net	25	(1,881)	(2,814)	(2,378)
Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes		(10,863)	(7,407)	(12,382)
<i>Financial assets at fair value through other comprehensive income</i>		(7)	(19)	(19)
<i>Financial assets at amortized cost</i>	10	(10,856)	(7,388)	(12,363)
Impairment or reversal of impairment of investments in subsidiaries, joint ventures and associates, net	17 and 18	—	—	—
Impairment or reversal of impairment on non-financial assets, net		(239)	(231)	(10,416)
<i>Tangible assets</i>	16	(140)	(150)	(174)
<i>Intangible assets</i>	17 and 18	(75)	(71)	(10,242)
<i>Others</i>		(24)	(10)	—
Gain or losses on non-financial assets and investments, net	48	12	53	114
Negative goodwill recognized in results		—	—	8
Gains or losses on non-current assets held for sale not classified as discontinued operations	49	7	(43)	(171)
Operating profit/(loss) before tax		15,250	14,547	(2,076)
Tax expense or income from continuing operations	27	(4,486)	(4,894)	(5,632)
Profit/(loss) from continuing operations		10,764	9,653	(7,708)
Profit/(loss) after tax from discontinued operations	37	—	—	—
Profit/(loss) for the year		10,764	9,653	(7,708)
Profit/(loss) attributable to non-controlling interests	28	1,159	1,529	1,063
Profit/(loss) attributable to the parent		9,605	8,124	(8,771)
Earnings/(losses) per share				
Basic	4	0.539	0.438	(0.538)
Diluted	4	0.537	0.436	(0.538)

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated income statement for the year ended 31 December 2022.

CONSOLIDATED STATEMENTS OF RECOGNISED INCOME AND EXPENSE FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

EUR million

	Note	2022	2021 ^A	2020 ^A
CONSOLIDATED PROFIT/(LOSS) FOR THE YEAR		10,764	9,653	(7,708)
OTHER RECOGNISED INCOME AND EXPENSE		(2,660)	(220)	(9,794)
Items that will not be reclassified to profit or loss	29	(399)	754	(1,018)
Actuarial gains and losses on defined benefit pension plans		(56)	1,567	(25)
Non-current assets held for sale		—	—	—
Other recognised income and expense of investments in subsidiaries, joint ventures and associates		17	(1)	(4)
Changes in the fair value of equity instruments measured at fair value through other comprehensive income		(497)	(171)	(917)
Gains or losses resulting from the accounting for hedges of equity instruments measured at fair value through other comprehensive income, net	36	—	—	—
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedged item)</i>		18	117	4
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedging instrument)</i>		(18)	(117)	(4)
Changes in the fair value of financial liabilities at fair value through profit or loss attributable to changes in credit risk		88	(99)	31
Income tax relating to items that will not be reclassified		49	(542)	(103)
Items that may be reclassified to profit or loss	29	(2,261)	(974)	(8,776)
Hedges of net investments in foreign operations (effective portion)	36	(2,467)	(1,159)	2,340
<i>Revaluation gains (losses)</i>		(2,467)	(1,159)	2,340
<i>Amounts transferred to income statement</i>		—	—	—
<i>Other reclassifications</i>		—	—	—
Exchanges differences		3,658	3,082	(11,040)
<i>Revaluation gains (losses)</i>		3,658	3,082	(11,040)
<i>Amounts transferred to income statement</i>		—	—	—
<i>Other reclassifications</i>		—	—	—
Cash flow hedges (effective portion)	36	(3,016)	(938)	(53)
<i>Revaluation gains (losses)</i>		(1,762)	(1,739)	799
<i>Amounts transferred to income statement</i>		(1,254)	801	(852)
<i>Transferred to initial carrying amount of hedged items</i>		—	—	—
<i>Other reclassifications</i>		—	—	—
Hedging instruments (items not designated)	36	—	—	—
<i>Revaluation gains (losses)</i>		—	—	—
<i>Amounts transferred to income statement</i>		—	—	—
<i>Other reclassifications</i>		—	—	—
Debt instruments at fair value with changes in other comprehensive income		(2,086)	(3,250)	(100)
<i>Revaluation gains (losses)</i>	29	(2,591)	(3,063)	692
<i>Amounts transferred to income statement</i>		(99)	(545)	(1,165)
<i>Other reclassifications</i>		604	358	373
Non-current assets held for sale		—	—	—
<i>Revaluation gains (losses)</i>		—	—	—
<i>Amounts transferred to income statement</i>		—	—	—
<i>Other reclassifications</i>		—	—	—
Share of other recognised income and expense of investments		85	19	(151)
Income tax relating to items that may be reclassified to profit or loss		1,565	1,272	228
Total recognised income and expenses for the year		8,104	9,433	(17,502)
Attributable to non-controlling interests		1,410	1,255	245
Attributable to the parent		6,694	8,178	(17,747)

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated statement of recognised income and expense for the year ended 31 December 2022.

CONSOLIDATED STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

EUR million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings
Balance at 31 December 2021^A	8,670	47,979	658	152	60,273
Adjustments due to errors	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—
Opening balance at 1 January 2022^A	8,670	47,979	658	152	60,273
Total recognised income and expense	—	—	—	—	—
Other changes in equity	(273)	(1,706)	30	23	6,429
Issuance of ordinary shares	—	—	—	—	—
Issuance of preferred shares	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—
Conversion of financial liabilities into equity	—	—	—	—	—
Capital reduction	(273)	(1,706)	—	—	—
Dividends	—	—	—	—	(869)
Purchase of equity instruments	—	—	—	—	—
Disposal of equity instruments	—	—	—	—	—
Transfer from equity to liabilities	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—
Transfers between equity items	—	—	—	—	7,298
Increases (decreases) due to business combinations	—	—	—	—	—
Share-based payment	—	—	—	(49)	—
Others increases or (-) decreases in equity	—	—	30	72	—
Balance at 31 December 2022	8,397	46,273	688	175	66,702

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated statement of changes in total equity for the year ended 31 December 2022.

Revaluation reserves	Other reserves	(-) Own shares	Profit attributable to shareholders of the parent	(-) Interim dividends	Other comprehensive income	Non-controlling interest		Total
						Other comprehensive income	Other items	
—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053
—	—	—	9,605	—	(2,911)	251	1,159	8,104
—	(977)	219	(8,124)	(143)	2	(3)	(3,049)	(7,572)
—	—	—	—	—	—	—	9	9
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	(756)	(756)
—	—	—	—	—	—	—	—	—
—	273	1,706	—	—	—	—	—	—
—	—	—	—	(979)	—	—	(500)	(2,348)
—	—	(2,050)	—	—	—	—	—	(2,050)
—	7	563	—	—	—	—	—	570
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	(12)	—	(8,124)	836	2	(3)	3	—
—	—	—	—	—	—	—	31	31
—	—	—	—	—	—	—	—	(49)
—	(1,245)	—	—	—	—	—	(1,836)	(2,979)
—	(5,454)	(675)	9,605	(979)	(35,628)	(1,856)	10,337	97,585

CONSOLIDATED STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

EUR million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings
Balance at 31 December 2020^A	8,670	52,013	627	163	65,583
Adjustments due to errors	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—
Opening balance at 1 January 2021^A	8,670	52,013	627	163	65,583
Total recognised income and expense	—	—	—	—	—
Other changes in equity	—	(4,034)	31	(11)	(5,310)
Issuance of ordinary shares	—	—	—	—	—
Issuance of preferred shares	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—
Conversion of financial liabilities into equity	—	—	—	—	—
Capital reduction	—	—	—	—	—
Dividends	—	(477)	—	—	—
Purchase of equity instruments	—	—	—	—	—
Disposal of equity instruments	—	—	—	—	—
Transfer from equity to liabilities	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—
Transfers between equity items	—	(3,557)	—	—	(5,310)
Increases (decreases) due to business combinations	—	—	—	—	—
Share-based payment	—	—	—	(62)	—
Others increases or (-) decreases in equity	—	—	31	51	—
Balance at 31 December 2021	8,670	47,979	658	152	60,273

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated statement of changes in total equity for the year ended 31 December 2022.

Revaluation reserves	Other reserves	(-) Own shares	Profit attributable to shareholders of the parent	(-) Interim dividends	Other comprehensive income	Non-controlling interest		Total
						Other comprehensive income	Other items	
—	(3,596)	(69)	(8,771)	—	(33,144)	(1,800)	11,646	91,322
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	(3,596)	(69)	(8,771)	—	(33,144)	(1,800)	11,646	91,322
—	—	—	8,124	—	54	(274)	1,529	9,433
—	(881)	(825)	8,771	(836)	371	(30)	(948)	(3,702)
—	—	—	—	—	—	—	17	17
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	(836)	—	—	(648)	(1,961)
—	—	(1,645)	—	—	—	—	—	(1,645)
—	23	820	—	—	—	—	—	843
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	(275)	—	8,771	—	371	(30)	30	—
—	—	—	—	—	—	—	(5)	(5)
—	—	—	—	—	—	—	—	(62)
—	(629)	—	—	—	—	—	(342)	(889)
—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053

CONSOLIDATED STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

EUR million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings
Balance at 31 December 2019^A	8,309	52,446	598	146	61,028
Adjustments due to errors	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—
Opening balance at 1 January 2020^A	8,309	52,446	598	146	61,028
Total recognised income and expense	—	—	—	—	—
Other changes in equity	361	(433)	29	17	4,555
Issuance of ordinary shares	361	(72)	—	—	—
Issuance of preferred shares	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—
Conversion of financial liabilities into equity	—	—	—	—	—
Capital reduction	—	—	—	—	—
Dividends	—	(361)	—	—	—
Purchase of equity instruments	—	—	—	—	—
Disposal of equity instruments	—	—	—	—	—
Transfer from equity to liabilities	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—
Transfers between equity items	—	—	—	—	4,555
Increases (decreases) due to business combinations	—	—	—	—	—
Share-based payment	—	—	—	(53)	—
Others increases or (-) decreases in equity	—	—	29	70	—
Balance at 31 December 2020	8,670	52,013	627	163	65,583

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated statement of changes in total equity for the year ended 31 December 2022.

Revaluation reserves	Other reserves	(-) Own shares	Profit attributable to shareholders of the parent	(-) Interim dividends	Other comprehensive income	Non-controlling interest		Total
						Other comprehensive income	Other items	
—	(3,110)	(31)	6,515	(1,662)	(24,168)	(982)	11,570	110,659
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	(3,110)	(31)	6,515	(1,662)	(24,168)	(982)	11,570	110,659
—	—	—	(8,771)	—	(8,976)	(818)	1,063	(17,502)
—	(486)	(38)	(6,515)	1,662	—	—	(987)	(1,835)
—	70	—	—	—	—	—	5	364
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	(465)	(826)
—	—	(758)	—	—	—	—	—	(758)
—	1	720	—	—	—	—	—	721
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	298	—	(6,515)	1,662	—	—	—	—
—	—	—	—	—	—	—	(54)	(54)
—	—	—	—	—	—	—	—	(53)
—	(855)	—	—	—	—	—	(473)	(1,229)
—	(3,596)	(69)	(8,771)	—	(33,144)	(1,800)	11,646	91,322

CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED 2022, 2021 AND 2020

EUR million

	Note	2022	2021 ^A	2020 ^A
A. CASH FLOWS FROM OPERATING ACTIVITIES		27,706	56,691	66,153
Profit or loss for the year		10,764	9,653	(7,708)
Adjustments made to obtain the cash flows from operating activities		23,970	21,363	37,836
Depreciation and amortisation cost		2,985	2,756	2,810
Other adjustments		20,985	18,607	35,026
Net increase/(decrease) in operating assets		108,774	27,258	51,385
Financial assets held-for-trading		30,837	2,064	12,390
Non-trading financial assets mandatorily at fair value through profit or loss		218	969	(275)
Financial assets at fair value through profit or loss		(7,083)	(32,746)	(10,314)
Financial assets at fair value through other comprehensive income		(22,358)	(9,152)	6,549
Financial assets at amortized cost		105,618	73,181	43,541
Other operating assets		1,542	(7,058)	(506)
Net increase/(decrease) in operating liabilities		107,244	56,945	90,356
Financial liabilities held-for-trading		29,533	(1,386)	7,880
Financial liabilities designated at fair value through profit or loss		25,595	(14,316)	(10,907)
Financial liabilities at amortized cost		55,595	79,114	96,561
Other operating liabilities		(3,479)	(6,467)	(3,178)
Income tax recovered/(paid)		(5,498)	(4,012)	(2,946)
B. CASH FLOWS FROM INVESTING ACTIVITIES		(3,898)	(3,715)	(7,220)
Payments		11,776	11,669	11,976
Tangible assets	16	9,066	10,015	7,386
Intangible assets	18	1,774	1,388	1,134
Investments	13	152	126	525
Subsidiaries and other business units		784	140	2,931
Non-current assets held for sale and associated liabilities		—	—	—
Other payments related to investing activities		—	—	—
Proceeds		7,878	7,954	4,756
Tangible assets	16	5,558	6,382	2,014
Intangible assets	18	—	—	—
Investments	13	533	672	182
Subsidiaries and other business units		734	6	1,775
Non-current assets held for sale and associated liabilities	12	1,053	894	785
Other proceeds related to investing activities		—	—	—
C. CASH FLOW FROM FINANCING ACTIVITIES		(9,964)	(1,322)	(1,909)
Payments		10,665	7,741	6,978
Dividends	4	1,848	1,313	—
Subordinated liabilities	23	2,291	2,684	3,780
Redemption of own equity instruments		—	—	—
Acquisition of own equity instruments		2,050	1,645	758
Other payments related to financing activities		4,476	2,099	2,440
Proceeds		701	6,419	5,069
Subordinated liabilities	23	119	5,340	4,095
Issuance of own equity instruments		—	—	—
Disposal of own equity instruments		573	854	721
Other proceeds related to financing activities		9	225	253

CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED 2022, 2021 AND 2020

EUR million

	Note	2022	2021 ^A	2020 ^A
D. EFFECT OF FOREIGN EXCHANGE RATE DIFFERENCES		(1,460)	5,196	(4,252)
E. NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS		12,384	56,850	52,772
F. CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR		210,689	153,839	101,067
G. CASH AND CASH EQUIVALENTS AT END OF THE YEAR		223,073	210,689	153,839
COMPONENTS OF CASH AND CASH EQUIVALENTS AT END OF THE YEAR				
<i>Cash</i>		8,929	8,142	7,817
<i>Cash equivalents at central banks</i>		200,830	193,102	137,047
<i>Other financial assets</i>		13,314	9,445	8,975
<i>Less, bank overdrafts refundable on demand</i>		—	—	—
TOTAL CASH AND CASH EQUIVALENTS AT END OF THE YEAR		223,073	210,689	153,839
<i>In which, restricted cash</i>		—	—	—

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 54 and appendices are an integral part of the consolidated statement of cash flows for the year ended 31 December 2022.

Notes to the consolidated financial statements





Banco Santander, S.A., and Companies composing Grupo Santander

Notes to the consolidated financial statements (consolidated annual accounts) for the year ended 31 December 2022

1. Introduction, basis of presentation of the consolidated financial statements (consolidated annual accounts) and other information

a) Introduction

Banco Santander, S.A. ('the parent' or 'Banco Santander'), is a private-law entity subject to the rules and regulations applicable to banks operating in Spain, where it was constituted and currently maintains its legal domicile, which is paseo de Pereda, numbers 9 to 12, 39004, Santander, Spain.

The principal headquarters of Banco Santander are located in Ciudad Grupo Santander, Avenida Cantabria s/n, 28660, Boadilla del Monte, Madrid, Spain.

The corporate purpose of Banco Santander, S.A., mainly entails carrying out all kinds of activities, operations and services inherent to the banking business in general and permitted by current legislation, and the acquisition, holding, enjoyment and disposal of all kinds of securities.

In addition to the operations carried on directly by it, Banco Santander is the head of a group of subsidiaries that engage in various business activities and which compose, together with it, Grupo Santander ('Santander' or 'the Group'). Therefore, Banco Santander is obliged to prepare, in addition to its own separate financial statements, the Group's consolidated financial statements, which also include the interests in joint ventures and investments in associates.

At 31 December 2022, Grupo Santander consisted of 743 subsidiaries of Banco Santander, S.A. In addition, other 170 companies are associates of the Group, joint ventures or companies of which the Group holds more than 5% (excluding the Group companies of negligible interest with respect to the fair presentation that the annual accounts must express).

Grupo Santander consolidated financial statements for 2020 were approved by the shareholders at the group's annual general meeting on 26 March 2021. Grupo Santander consolidated financial statements for 2021 were approved by the shareholders at the group's annual general meeting on 1 April 2022. The Group's 2022 consolidated financial statements, the financial statements of the parent and of substantially all the Group companies have not been approved yet by their shareholders at the respective annual general meetings. However, Banco Santander board of directors considers that the aforementioned financial statements will be approved without any significant changes.

b) Basis of presentation of the consolidated financial statements

Under Regulation (EC) n.º 1606/2002 of the European Parliament and of the Council of 19 July 2002 all companies governed by the law of an EU Member State and whose securities are admitted to trading on a regulated market of any Member State must prepare their consolidated financial statements for the years beginning on or after 1 January, 2005 in conformity with the International Financial Reporting Standards ('IFRS') previously adopted by the European Union ('EU-IFRS').

In order to adapt the accounting system of Spanish credit institutions with the principles and criteria established by the IFRS adopted by the European Union ('EU-IFRS'), the Bank of Spain published circular 4/2017, dated 27 November 2017, on Public and Confidential Financial Reporting Standards and Financial Statement Formats.

During 2021 and 2020, the Bank of Spain published Circulars 6/2021 of 22 December, 2/2020 and 3/2020 of 11 June, amending Circular 4/2017 of 27 November to credit institutions on Public and Confidential Financial Reporting Standards and Financial Statement Formats.

Grupo Santander consolidated financial statements for 2022 were authorised by the Bank's directors (at the board meeting on 27 February 2023) in accordance with International Financial Reporting Standards as adopted by the European Union and with Bank of Spain circular 4/2017 and subsequent modifications, and Spanish corporate and commercial law applicable to the Group, using the basis of consolidation, accounting policies and measurement bases set forth in note 2, accordingly, they present fairly the Group's equity and financial position at 31 December 2022, 2021 and 2020 and the consolidated results of its operations and the consolidated cash flows in 2022, 2021 and 2020. These consolidated annual accounts have been prepared on the basis of the accounting records held by Banco Santander and by each of the other companies of the Group, and include the adjustments and reclassifications required to standardise the accounting policies and valuation criteria applied by Grupo Santander.

The notes to the consolidated financial statements contain additional information to that presented in the consolidated balance sheet, consolidated income statement, consolidated statement of recognised income and expense, consolidated statement of changes in total equity and consolidated statement of cash flows. The notes provide, in a clear, relevant, reliable and comparable manner, narrative descriptions and breakdowns of these statements.

The figures of the consolidated annual accounts are presented in millions of euros unless another alternative monetary unit is indicated, rounded to the nearest million unit.

**Adoption of new standards and interpretations issued**

The following modifications came into force and were adopted by the European Union in 2022:

- Amendment to IFRS 3 Business Combinations: to update the references to the Conceptual Framework for Financial Reporting and add an exception for the recognition of liabilities and contingent liabilities within the scope of IAS 37 Provisions, Contingent Liabilities and Contingent Assets and IFRIC 21 Levies. The amendments also confirm that an acquirer should not recognize contingent assets acquired in a business combination. Applicable from 1 January 2022.
- Amendment to IAS 16 Property, Plant and Equipment: prevents an entity from deducting from the cost of an item of property, plant and equipment any revenue from the sale of finished goods while the entity is preparing the item for its intended use. It is also clear that an entity is "testing whether the asset is functioning properly" when evaluating the technical and physical performance of the asset. The financial performance of the asset should not be taken into account for this evaluation. Additionally, entities should disclose separately the amounts of income and expenses related to finished goods that are not the product of the entity's ordinary activities. Applicable from 1 January 2022.
- Amendment to IAS 37 Provisions, Contingent Liabilities and Contingent Assets: clarifies that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts. Before recognising a separate provision for an onerous contract, the entity recognises any impairment loss that has occurred on assets used in fulfilling the contract. Applicable from 1 January 2022.
- Amendment to IFRS Cycle (2018-2020): introduces minor amendments, applicable from 1 January 2022, to the following standards:
 - IFRS 9 Financial Instruments: clarifies which rates must be included in the 10% test for derecognition of financial liabilities.
 - IFRS 16 Leases: amendment to remove possible confusion regarding the treatment of leasing incentives in the application of IFRS 16 Leases.
 - IFRS 1, in relation to the first-time adoption of International Financial Reporting Standards, allows entities that have measured their assets and liabilities at the carrying amounts recorded in their parent's books to also measure any cumulative translation differences using the amounts reported by the parent. This amendment also applies to associates and joint ventures that have adopted the same exemption from IFRS 1.

The application of the aforementioned amendments to accounting standards and interpretations did not have any material effects on Grupo Santander consolidated financial statements.

Likewise, at the date of approval of these consolidated annual accounts, the following standards which effectively came into force have effective dates after 31 December 2022:

- IFRS 17 Insurance Contracts and amendments to IFRS 17: new general accounting standard for insurance contracts, which includes the recognition, measurement, presentation and disclosure of information. Insurance contracts combine financial and service provision features that, in many cases, generate variable long-term cash flows. To properly reflect these characteristics, IFRS 17 combines the measurement of future cash flows with the recording of the contract result during the period in which the service is provided, presents separately the financial results from the results for the provision of the service and allows entities, through the choice of an accounting policy option, to recognize the financial results in the income statement or in other comprehensive income. In accordance with current regulations, it will be applicable retrospectively from 1 January, 2023.

The Group has carried out a project to implement IFRS 17 with all the Group entities affected and has prepared an accounting policy that establishes the accounting criteria for insurance contracts.

Grupo Santander has concluded the analysis of the effects of this new standard without having identified any material impact on its consolidated financial statements due to its application, except for a balance sheet reclassification, recorded at 1 January 2023, amounting to EUR 16,025 million, from the heading 'Financial liabilities at amortized cost' to 'Liabilities under insurance or reinsurance contracts', related to the different treatment that this new standard establishes for the components of an insurance contract.

- The amendments to IAS 1 Presentation of Financial Statements require companies to disclose material information about their accounting policies rather than their significant accounting policies. It will be applicable from 1 January 2023.
- The amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors clarifies how to distinguish changes in accounting policies, which are generally applied retrospectively, from changes in accounting estimates, which are generally applied prospectively. It will be applicable from 1 January 2023.
- The amendments to IAS 12 Income Taxes require companies to recognise deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences. In addition, entities should recognise deferred tax assets (to the extent that it is probable that they can be utilised) and deferred tax liabilities at the beginning of the earliest comparative period for all deductible and taxable temporary differences associated with:
 - Right-of-use assets and lease liabilities.
 - Decommissioning, restoration and similar liabilities, and the corresponding amounts recognised as part of the cost of the related assets.



The cumulative effect of recognising these adjustments is recognised in retained earnings, or another component of equity, as appropriate. It will be applicable from 1 January 2023.

Finally, at the date of approval of these consolidated annual accounts, the following standards which effectively come into force after 31 December 2022 had not yet been adopted by the European Union:

- Classification of Liabilities, amendments to IAS 1 Presentation of Financial Statements, considering non-current liabilities those in which the entity has the possibility of deferring payment for more than 12 months from the closing date of the reporting period.

Likewise, during 2022, an additional amendment to IAS 1 on the classification of liabilities with covenants as current or non-current has been included, specifying that covenants that must be complied with after the reporting date do not affect the classification of liabilities and require additionally their respective breakdowns.

It must be applied retrospectively in accordance with the normal requirements in IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors. It will apply from 1 January 2024.

- Amendment to IFRS 16 Lease Liability in a Sale and Leaseback requires a seller-lessee to subsequently measure lease liabilities arising from a leaseback without recognising any amount of the gain or loss that relates to the right of use retained. This new requirement does not prevent a seller-lessee from recognising in profit or loss any gain or loss relating to the partial or full termination of a lease. It will be applied retrospectively from 1 January 2024.

Grupo Santander is currently analyzing the possible effects of these new standards and interpretations, and unless expressly indicated otherwise, no significant impacts are expected from their application.

All accounting policies and measurement bases with a material effect on the consolidated financial statements for 2022 were applied in the preparation of these consolidated annual accounts.

c) Use of critical estimates

The consolidated results and the determination of consolidated equity are sensitive to the accounting policies, measurement bases and estimates used by the directors of Banco Santander in preparing the consolidated financial statements.

The main accounting policies and measurement bases are set forth in note 2.

In the consolidated financial statements estimates were occasionally made by the senior management of Grupo Santander in order to quantify certain of the assets, liabilities, income, expenses and obligations reported herein. These estimates, which were made on the basis of the best information available, relate basically to the following:

- The impairment losses on certain assets: it applies to financial assets at fair value through other comprehensive income, financial assets at amortised cost, non-current assets held for sale, investments, tangible assets and intangible assets (see notes 6, 7, 10, 12, 13, 16, 17, 18 and 53).
- The assumptions used in the actuarial calculation of the post-employment benefit liabilities and commitments and other obligations (see note 25).
- The useful life of the tangible and intangible assets (see notes 16 and 18).
- The measurement of goodwill arising on consolidation (see note 17).
- The calculation of provisions and the consideration of contingent liabilities (see note 25).
- The fair value of certain unquoted assets and liabilities (see notes 6, 7, 8, 9, 10, 11, 20, 21 and 22).
- The recoverability of deferred tax assets (see note 27).
- The fair value of the identifiable assets acquired and the liabilities assumed in business combinations in accordance with IFRS 3 (see note 17).

To update the previous estimates, the Group's management has taken into account the current macroeconomic scenario resulting from the Ukrainian war, as well as the growing level of inflation and the difficulties in the supply chains, which is having a certain impact on the economic evolution and is being closely monitored, and which generates uncertainty in the Group's estimates. For this reason, the Management of the Group has carried out an evaluation of the current situation in accordance with the best information available to date, developing in the notes the main estimates made and the potential impacts of the Ukrainian war and the macroeconomic situation on them during the period ended December 31, 2022 (see notes 17 and 53).

Although these estimates have been made on the basis of the best information available at the end of the year 2022, and considering information updated at the date of preparation of these consolidated annual accounts, it is possible that events that may take place in the future may make it necessary to modify them (upwards or downwards) in the coming years, which would be done, if appropriate, in a prospective manner, recognising the effects of the change in estimate in the corresponding consolidated income statement.



d) Information relating to 2021 and 2020

The segment information corresponding to the year ended 31 December 2021 and 2020 were restated for comparative purposes in accordance with the Group's new organizational structure, as required by IFRS 8 (see note 51).

Additionally, the information in notes 46 and 47.c for December 2021 and 2020 corresponding to the staff and branches, respectively, has been restated in accordance with the Group's standardization criteria (see notes 46 and 47.c).

In order to interpret the changes in the balances with respect to 31 December 2022, it is necessary to take into consideration the exchange rate effect arising from the volume of foreign currency balances held by Grupo Santander in view of its geographic diversity (see note 51.b) and the impact of the appreciation/depreciation of the various currencies against the euro in 2022, based on the exchange rates at the end of 2022: Mexican peso (11.28%), US dollar (6.07%), Brazilian real (11.85%), Argentine peso (-38.50%), Sterling pound (-5.26%), Chilean peso (6.08%), and Polish zloty (-1.86%); as well as the evolution of the comparable average rates: Mexican peso (13.48%), US dollar (12.45%), Brazilian real (17.55%), Sterling pound (0.82%), Chilean peso (-2.13%) and Polish zloty (-2.54%).

e) Capital management

i. Regulatory and economic capital

Credit institutions must meet a number of minimum capital and liquidity requirements. These minimum requirements are governed by the European Capital Requirements Regulation (hereinafter CRR) and the Capital Requirements Directive (hereinafter CRD). In June 2019, these regulations were significantly amended.

As the Directives need to be transposed into the legal systems of the different Member States in order to be applicable, in the case of Spain, Royal Legislative Decree 7/2021 and Royal Decree 970/2021 were published for this purpose in 2021. In 2022, the transposition of the CRD into Spanish law has been completed with the publication of Bank of Spain Circular 3/2022, which amends Circular 2/2016, on supervision and solvency; Circular 2/2014, on the exercise of various regulatory options of the CRR and Circular 5/2012, addressed to credit institutions and payment service providers, on transparency of banking services and responsibility in the granting of loans.

The CRD introduced important modifications such as Pillar 2G regulation ('P2 Guidance' supervisory recommendation on Pillar 2 requirements). On 27 October 2021, the European Commission published the draft review of the European banking legislation: CRR and CRD.

This review completes the implementation of the Basel III reform, which was agreed at the end of 2017 and aims to reduce the variability of risk-weighted assets and improve comparability between banks.

Progress was made in 2022 on discussions about the new texts and the final proposal is expected to be approved in 2023.

The banking package consists of the following elements: 1) Implementation of the final Basel III reforms, 2) Contribution to sustainability and green transition and 3) Stronger supervision: ensuring sound management of EU banks and better protection of financial stability.

The first element is reflected in the Commission's proposal to amend the text of the CRR. This proposal contains changes concerning, among other things, key risk factors, standardised credit risk, internal models, the output floor and operational risk.

The second element, relating to the contribution to sustainability and green transition, is reflected in the fact that the legislative proposals continue to incorporate ESG (environmental, social and governance) factors into the various areas of prudential regulation: governance, supervision, risk management, reporting obligations to competent authorities and disclosure requirements, among other topics. In this regard, it is important to note the Commission's mandate to the European Banking Authority (EBA) to assess whether specific prudential treatment is required for environmental and social risks. In line with this mandate, in 2022, the EBA issued the first consultation on the role of environmental risks within the prudential framework. Based on the feedback received in said consultation, and depending on the final wording of the CRR/CRD, the EBA shall publish a report on the matter.

Finally, the third element, which refers to stronger supervision and protection of financial stability, is expressed in a series of provisions concerning: fit-and-proper requirements, the extension of the scope by revising certain definitions that would cover groups managed by fintechs, and the establishment of third-country branches in the EU in order to achieve greater harmonisation of rules and better supervision of this type of entity.

The European Council's proposal on CRR and CRD was published on 8 November 2022. During 2023, it is expected that the Parliament makes its position text public, which will be followed by the beginning of the dialogues process that will eventually result in the final versions of the regulations.

The new CRR/CRD regulations are expected to enter into force from 1 January 2025.

With regard to the resolution framework, institutions must have an adequate funding structure to ensure that, in the event of financial distress, the institution has sufficient liabilities to absorb losses in order to recover its position or be resolved, while ensuring the protection of depositors and financial stability. The entities must therefore meet several minimum loss-absorbing requirements, named Total Loss-Absorbing Capacity (TLAC) and Minimum Requirement for own funds and Eligible Liabilities (MREL), which are regulated by the CRR and by the Bank Recovery and Resolution Directive (BRRD).



In June 2019, the CRR introduced the minimum TLAC requirement, which only applies to global systemically important banks (G-SIBs). This requirement involves two metrics, the first is a minimum requirement for own funds and eligible liabilities in terms of a percentage of the total risk exposure amount (TREA), set at 18% from 1 January 2022 once the transition period ended. The second is a metric to set a minimum requirement for own funds and eligible liabilities in terms of a percentage of the average exposure to the Basel III Tier I leverage ratio of 6.75% from 1 January 2022 once the transition period ended.

For large banks (defined as banks with total assets of more than EUR 100 billion) or banks deemed to be systemically important by the resolution authority, the BRRD sets a minimum subordination requirement that will be higher between a 13.5% of risk-weighted assets and 5% of the leverage ratio. For the remaining institutions, the subordination requirement is set by the resolution authority on a case-by-case basis.

On 25 October 2022, the regulation on prudential treatment for global systemically important banks was published. This modifies both the CRR and the BRRD as regards prudential treatment of global systemically important banks (G-SIBs) with a multiple point of entry (MPE) resolution strategy, as well as methodologies for the indirect subscription of instruments (Daisy Chains) eligible for meeting the minimum requirement for own funds and eligible liabilities.

This Regulation, known as the 'Quick Fix', covers the following objectives:

- Inclusion in the BRRD and CRR of references to third countries that allow adjustment of the deduction applied for the TLAC holding instruments issued by subsidiaries in third countries based on excess TLAC/MREL at the said subsidiaries, as well as the adjustment where the sum of the requirements for own funds and eligible liabilities of G-SIBs under an MPE strategy exceed the theoretical requirements for the same group under a single point of entry (SPE) strategy. In other words, the latter adjustment is based on a comparison between the two possible resolution strategies.

For subsidiaries in jurisdictions without a resolution regime in place, the Regulation provides for a transitional period until 31 December 2024. During this transitional period the entities may adjust the deductions based on excess above capital requirements in subsidiaries in third countries, if they meet certain requirements.

- Inclusion of a deduction scheme for MREL instrument holdings through entities of the same resolution group other than the resolution entity. This Regulation sets a deduction for the intermediate entity (Daisy Chains) that buy instruments issued by another entity as a result of this the deduction. The intermediate entity is obligated to issue the same amount that is repurchasing to the Resolution Entity, transferring internal MREL needs to the Resolution Entity, which will finally cover the required amount with external MREL.

This Regulation is applicable since 14 November 2022, except for the provisions relating to Daisy Chains, which apply since 1 January 2024.

Finally, Deposit Guarantee Schemes (DGSs) are regulated by the Deposit Guarantee Schemes Directive (DSGD), which has not undergone any significant changes since its publication in 2014. It aims to harmonise the deposit guarantee schemes of the Member States, thus ensuring stability and balance in different countries. It creates an appropriate framework for depositors to have better access to DGSs than was the case before the publication of this Directive through clear coverage, shorter repayment periods, better information and robust funding requirements. This Directive is transposed into Spanish law by Royal Decree 2606/1996, with its amendments set forth in Royal Decree 1041/2021.

To ensure that depositors' funds are secured, the DGSs collect funds available through contributions that must be made by their members at least once a year; a target level of 0.8% of the guaranteed deposits total must be met by 3 July 2024. These annual collections are set depending on the guaranteed deposits total and the degree of risk faced by the entities involved in the DGS. The method for calculating contributions is stated in the EBA Guidelines (EBA/GL/2015/10). A review and evaluation process was opened for these Guidelines by the EBA in 2022 (EBA/CP/2022/10).

Additionally, recent market developments have caused substantial increases in energy prices, which have consequently generated increases in the margins required by central counterparty entities (CCPs) to cover exposures. In response to this issue, Delegated Regulation (EU) 2022/2311 was published in November this year, amending Delegated Regulation (EU) 153/2013, which sets forth regulatory technical standards on the requirements that CCPs must meet. The new Regulation broadens the catalogue of guarantees that CCPs can accept as eligible collateral until November 2023.

At 31 December 2022 Grupo Santander met the minimum capital requirements established by current legislation (see note 53.d).



ii. Plan for the roll-out of advanced approaches and authorisation from the supervisory authorities

Grupo Santander remains committed to adopting the Basel II advanced internal ratings-based (AIRB) approach for its banks, increasing the amount of exposure managed using internal models. This approach will be applied progressively over the coming years. The commitment to the supervisory authority means adapting the advanced approaches in the Group's core markets.

This objective of covering IRB models in the group should be seen in the context of the current supervisory focus on the robustness and adequacy of existing models, as well as the simplification strategy recently agreed with ECB.

Grupo Santander has supervisory approval to use advanced approaches for calculating regulatory capital for credit risk for the parent and its main subsidiaries in Spain, the United Kingdom and Portugal, and for some portfolios in Germany, Mexico, Brazil, Chile, Nordic countries (Sweden, Finland and Norway), France and the United States.

f) Environmental impact

In view of the business activities carried on by the Group entities, the Group does not have any environmental liability, expenses, assets, provisions or contingencies that might be material with respect to its consolidated equity, financial position or results (see note 53.a.).

g) Events after the reporting period

On 28 December 2022 the Law establishing a new temporary levy on credit institutions and financial credit institutions was published in Spain (see note 27 for additional information). On 1 January 2023 an estimated amount of EUR 225 million has been accounted for in accordance with IFRIC 21 due to this new levy.

In accordance with the agreement reached by the April 2022 general shareholders' meeting, on 1 February 2023 the board of directors approved a capital reduction, subject to corresponding regulatory authorization from the ECB, of EUR 170,203,286 through the redemption of 340,406,572 shares, representing 2.03% of the capital, acquired in the first share buyback program.

2. Accounting policies

The accounting policies applied in preparing the consolidated financial statements were as follows:

a) Foreign currency transactions

i. Presentation currency

Banco Santander's functional and presentation currency is the euro. Also, the presentation currency of the Group is the euro.

ii. Translation of foreign currency balances

Foreign currency balances are translated to euros in two consecutive stages:

- Translation of foreign currency to the functional currency (currency of the main economic environment in which the entity operates).
- Translation to euros of the balances held in the functional currencies of entities whose functional currency is not the euro.

Translation of foreign currency to the functional currency

Foreign currency transactions performed by consolidated entities (or entities accounted for using the equity method) not located in European Monetary Union ("EMU") countries are initially recognised in their respective currencies. Monetary items in foreign currency are subsequently translated to their functional currencies using the closing rate.

Furthermore:

- Non-monetary items measured at historical cost are translated to the functional currency at the exchange rate at the date of acquisition.
- Non-monetary items measured at fair value are translated at the exchange rate at the date when the fair value was determined.
- Income and expenses are translated at the average exchange rates for the year for all the transactions performed during the year. When applying this criterion, the Group considers whether there have been significant changes in the exchange rates in the year which, in view of their materiality with respect to the consolidated financial statements taken as a whole, would make it necessary to use the exchange rates at the transaction date rather than the aforementioned average exchange rates.
- The balances arising from non-hedging forward foreign currency/foreign currency and foreign currency/euro purchase and sale transactions are translated at the closing rates prevailing in the forward foreign currency market for the related maturity.

**Translation of functional currencies to euros**

The balances in the financial statements of consolidated entities (or entities accounted for using the equity method) whose functional currency is not the euro are translated to euros as follows:

- Assets and liabilities, at the closing rates.
- Income and expenses, at the average exchange rates for the year.
- Equity items, at the historical exchange rates.

iii. Recognition of exchange differences

The exchange differences arising on the translation of foreign currency balances to the functional currency are generally recognised at their net amount under 'Exchange differences, net' in the consolidated income statement, except for exchange differences arising on financial instruments at fair value through profit or loss, which are recognised in the consolidated income statement without distinguishing them from other changes in fair value, and for exchange differences arising on non-monetary items measured at fair value through equity, which are recognised under 'Other comprehensive income—Items that may be reclassified to profit or loss—Exchange differences' except for exchange differences on equity instruments, where the option to irrevocably elect to be measured at fair value through changes in accumulated other comprehensive income, which are recognised in accumulated 'Other Comprehensive Income - Items not to be reclassified to profit or loss - Changes in fair value of equity instruments measured at fair value' through other comprehensive income (see note 29).

The exchange differences arising on the translation to euros of the financial statements denominated in functional currencies other than the euro are recognised in 'Other comprehensive income—Items that may be reclassified to profit or loss—Exchange differences' in the consolidated balance sheet, whereas those arising on the translation to euros of the financial statements of entities accounted for using the equity method are recognised in equity under 'Other comprehensive income—Items that may be reclassified to profit or loss and Items not reclassified to profit or loss—Other recognised income and expense' of investments in subsidiaries, joint ventures and associates (see note 29), until the related item is derecognised, at which time they are recognised in profit or loss.

Exchange differences arising on actuarial gains or losses when converting to euros the financial statements denominated in the functional currencies of entities whose functional currency is different from the euro are recognised under equity 'Other comprehensive income—Items not reclassified to profit or loss—Actuarial gains or (-) losses' on defined benefit pension plans (see note 29).

iv. Entities located in hyperinflationary economies

When a subsidiary operates in a country with hyperinflationary economy, IAS 29 Financial Information in Hyperinflationary Economies is applied, which means that:

- Historical cost of non-monetary assets and liabilities and of the various items of equity have to be adjusted to reflect the changes in the purchasing power of the currency due to inflation from their date of acquisition or incorporation into the consolidated balance sheet.

- The different items of the income statement are adjusted by the inflationary index since their generation, with a balancing entry in 'Other comprehensive income'.
- The loss on the net monetary position is recorded in the income for the year against 'Accumulated Other comprehensive income'.
- All components of the financial statements of the subsidiary are translated at the closing exchange rate.

The deterioration of the economic situation in Argentina over the last years caused, among other impacts, a significant increase in inflation, which by the end of 2018 had reached 48% per year (147% accumulated in three years). This led the Group to conclude that it was necessary to apply IAS 29 Financial Information in Hyperinflationary Economies to its activities in the country in question in its consolidated financial statements from that year on.

At that moment, according with Group's accounting policies, exchange differences arising on the translation to the Group's presentation currency of financial statements denominated in functional currencies other than euro for subsidiaries located in countries with high inflation rates were recorded in the consolidated statement of changes in total 'Equity-Other reserves'.

However, on the basis of the meeting held on 3 March 2020 by the International Financial Reporting Standards Committee (IFRIC), in 2020 Grupo Santander changed its accounting policy with regard to the presentation of exchange differences and the effects of hyperinflation in the operations generated in Argentina. This change in accounting policy and its consequent restatement between different equity items has no impact on the total equity of Grupo Santander.

In accordance with the provisions of the Argentine Federation of Professional Councils in Economic Sciences (Fcpce), which is the organization that issues the professional accounting standards in said country, the inflation indexes applied are the wholesale internal price index (WPI) until 30 November 2016 and the National Consumer Price Index published by the National Institute of Statistics and Censuses (Indec) from 1 December 2016 on. Inflation during 2022 was 94.8% for the year (50.9% at 31 December 2021). The exchange rate at 31 December 2021 has been of 189.12 Argentine pesos per euro (116.30 Argentine pesos per euro at 31 December 2021).

At 31 December 2022, no other country in which the consolidated and associated entities of Grupo Santander are located is considered to have a hyperinflationary economy in accordance with the criteria established in this regard by the International Financial Reporting Standards adopted by the European Union.

v. Exposure to foreign currency risk

Grupo Santander hedges a portion of its long-term foreign currency positions using foreign exchange derivative financial instruments (see note 36). Also, the Group manages foreign exchange risk dynamically by hedging its short-term position (with a potential impact on profit or loss) in order to limit the impact of currency depreciations while optimising the cost of financing the hedges.



The following tables show the sensitivity of the consolidated income statement and consolidated equity to percentage changes of $\pm 1\%$ in the foreign exchange rate positions arising from investments in Grupo Santander companies with currencies other than the euro (with its hedges) and in their results (with its hedges), in which the Group maintains significant balances.

The estimated effect on the consolidated equity attributable to Grupo Santander and on consolidated profit and loss account of a 1% appreciation of the euro against the corresponding currency is as follows:

EUR million						
Currency	Effect on consolidated equity			Effect on consolidated profit		
	2022	2021	2020	2022	2021	2020
US dollar	(146.0)	(133.3)	(123.6)	(4.4)	(8.6)	(4.1)
Chilean peso	(14.8)	(11.4)	(20.4)	(2.0)	(2.4)	(4.4)
Pound sterling	(94.7)	(105.9)	(107.9)	(1.5)	(2.3)	(1.2)
Mexican peso	(27.7)	(23.1)	(21.7)	(2.0)	(0.9)	(2.0)
Brazilian real	(100.1)	(80.8)	(75.0)	(5.9)	(15.4)	(12.6)
Polish zloty	(19.8)	(27.5)	(26.7)	(1.3)	(1.1)	(2.2)
Argentine peso	(17.1)	(10.7)	(7.9)	(2.1)	(2.5)	(1.8)

Similarly, the estimated effect on the Group's consolidated equity and on consolidated profit and loss account of a 1% depreciation of the euro against the corresponding currency is as follows:

EUR million						
Currency	Effect on consolidated equity			Effect on consolidated profit		
	2022	2021	2020	2022	2021	2020
US dollar	148.9	136.0	126.1	4.5	8.8	4.2
Chilean peso	15.1	11.6	20.8	2.1	2.4	4.5
Pound sterling	96.7	108.0	110.1	1.5	2.3	1.2
Mexican peso	28.2	23.6	22.1	2.0	0.9	2.0
Brazilian real	102.1	82.4	76.5	6.0	15.7	12.8
Polish zloty	20.2	28.0	27.2	1.4	1.1	2.2
Argentine peso	17.4	11.0	8.0	2.2	2.6	1.8

The above data were obtained as follows:

a) Effect on consolidated equity: in accordance with the accounting policy detailed in note 2.a.iii, foreign exchange rate impact arising on the translation to euros of the financial statements in the functional currencies of the Group entities whose functional currency is not the euro are recognised in consolidated equity. The potential effect that a change in the exchange rates of the related currency would have on the Group's consolidated equity was therefore determined by applying the aforementioned change to the net value of each unit's assets and liabilities -including, where appropriate, the related goodwill- and by taking into consideration the offsetting effect of the hedges of net investments in foreign operations.

b) Effect on consolidated profit: the effect was determined by applying the up and down movements in the average exchange rates of the year, as indicated in note 2.a.ii (except in the case of Argentina, which is a hyperinflationary economy and has applied the closing exchange rate), to translate to euros the income and expenses of the consolidated entities whose functional currency is not the euro, taking into consideration, where appropriate, the offsetting effect of the various hedging transactions in place.

The estimates used to obtain the foregoing data were performed considering the effects of the changes in the exchange rate in standalone basis not considering the effect of the performance of other variables whose changes would affect equity and profit or loss, such as variations in the interest rates of the reference currencies or other market factors. Accordingly, all variables other than the exchange rate variations were kept constant with respect to their positions at 31 December 2022, 2021 and 2020.

b) Basis of consolidation

i. Subsidiaries

Subsidiaries are defined as entities over which the Bank has the capacity to exercise control. The Bank controls an entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

The financial statements of the subsidiaries are fully consolidated with those of the Bank. Accordingly, all balances and effects of the transactions between consolidated companies are eliminated on consolidation.

On acquisition of control of a subsidiary, its assets, liabilities and contingent liabilities are recognised at their acquisition-date fair values. Any positive differences between the acquisition cost and the fair values of the identifiable net assets acquired are recognised as goodwill (see note 17). Negative differences are recognised in profit or loss on the date of acquisition.

Additionally, the share of third parties of Grupo Santander equity is presented under 'Non-controlling interests' in the consolidated balance sheet (see note 28). Their share of the profit for the year is presented under 'Profit attributable to non-controlling interests' in the consolidated income statement.

The results of subsidiaries acquired during the year are included in the consolidated income statement from the date of acquisition to year-end. Similarly, the results of subsidiaries for which control is lost during the year are included in the consolidated income statement from the beginning of the year to the date of disposal.

At 31 December 2022, apart from the structured consolidated entities, Grupo Santander does not control any company in which it maintains a percentage of direct participation in its share capital of less than 50%.

The appendices contain significant information on the subsidiaries.

**ii. Interests in joint ventures**

Joint ventures are deemed to be entities that are not subsidiaries but which are jointly controlled by two or more unrelated entities. This is evidenced by contractual arrangements whereby two or more parties have interests in entities so that decisions about the relevant activities require the unanimous consent of all the parties sharing control.

In the consolidated financial statements, investments in joint ventures are accounted for using the equity method, i.e. at the Group's share of net assets of the investee, after taking into account the dividends received therefrom and other equity eliminations. The profits and losses resulting from transactions with a joint venture are eliminated to the extent of the Group's interest therein.

The appendices contain relevant information on the joint ventures.

iii. Associates

Associates are entities over which Banco Santander is in a position to exercise significant influence, but not control or joint control. It is presumed that Banco Santander exercises significant influence if it holds 20% or more of the voting power of the investee.

In the consolidated financial statements, investments in associates are accounted for using the equity method, i.e. at the Group's share of net assets of the investee, after taking into account the dividends received therefrom and other equity eliminations. The profits and losses resulting from transactions with an associate are eliminated to the extent of the Group's interest in the associate.

There are certain investments in entities which, although Grupo Santander owns 20% or more of their voting power, are not considered to be associates because the Group is not in a position to exercise significant influence over them. At 31 December 2022, 2021 and 2020 this was the situation of the investment in Project Quasar Investments 2017, S.L., despite maintaining a 49% interest in its share capital (see appendix II). The remaining investments are not significant for the Group.

There are also certain investments in associates where the Group owns less than 20% of the voting rights, as it is determined that it has the capacity to exercise significant influence over them. The impact of these companies is immaterial in the Group's consolidated financial statements.

The appendices contain significant information on the associates.

iv. Structured entities

When Grupo Santander incorporates entities, or holds ownership interests therein, to enable its customers to access certain investments, or for the transfer of risks or other purposes, also called structured entities since the voting, or similar power is not a key factor in deciding who controls the entity, the Group determines, using internal criteria and procedures and taking into consideration the applicable legislation, when control, as defined above, exists and, therefore, whether these entities should be consolidated. Specifically, for those entities to which this policy applies (mainly investment funds and pension funds), the Group analyses the following factors:

- Percentage of ownership held by Grupo Santander; 20% is established as the general threshold.
- Identification of the fund manager, and verification as to whether it is a company controlled by the Group since this could affect Grupo Santander ability to direct the relevant activities.
- Existence of agreements between investors that might require decisions to be taken jointly by the investors, rather than by the fund manager.
- Existence of currently exercisable removal rights (possibility of removing the manager from his position), since the existence of such rights might limit the manager's power over the fund, and it may be concluded that the manager is acting as an agent of the investors.
- Analysis of the fund manager's remuneration regime, taking into consideration that a remuneration regime that is proportionate to the service rendered does not, generally, create exposure of such importance as to indicate that the manager is acting as the principal. Conversely, if the remuneration regime is not proportionate to the service rendered, this might give rise to an exposure that would lead the Group to a different conclusion.

These structured entities also include the securitisation special purpose vehicles, which are consolidated in the case of the Special Purpose Vehicles (SPVs) over which, being exposed to variable yield, it is considered that the Group continues to exercise control.

The exposure associated with unconsolidated structured entities, additional to investments in the equity of investment funds (note 8), are not material with respect to the Group's consolidated financial statements.

v. Business combinations

A business combination is the bringing together of two or more separate entities or economic units into one single entity or group of entities.



Business combinations whereby Grupo Santander obtains control over an entity or a business are recognised for accounting purposes as follows:

- Grupo Santander measures the cost of the business combination, which is normally the consideration transferred, defined as the acquisition-date fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity instruments issued, if any, by the acquirer. In cases where the amount of the consideration to be transferred has not been definitively established at the acquisition date, but rather depends on future events, any contingent consideration is recognised as part of the consideration transferred and measured at its acquisition-date fair value. Moreover, acquisition-related costs do not for these purposes form part of the cost of the business combination.
- The fair values of the assets, liabilities and contingent liabilities of the acquired entity or business, including any intangible assets identified in the business combination which might not have been recognised by the acquiree, are estimated and recognised in the consolidated balance sheet; the Group also estimates the amount of any non-controlling interests and the fair value of the previously held equity interest in the acquiree.
- Any positive difference between the aforementioned items is recognised as discussed in note 2.m. Any negative difference is recognised under 'Negative Goodwill' recognised in the consolidated income statement.

Goodwill is only calculated and recognised once, when control of a business or an entity is obtained.

vi. Changes in the levels of ownership interests in subsidiaries

Acquisitions and disposals not giving rise to a change in control are recognised as equity transactions, and no gain or loss is recognised in the income statement and the initially recognised goodwill is not remeasured. The difference between the consideration transferred or received and the decrease or increase in non-controlling interests, respectively, is recognised in reserves.

Similarly, when control over a subsidiary is lost, the assets, liabilities and non-controlling interests and any other items recognised in 'Other Comprehensive income' of that company are derecognised from the consolidated balance sheet, and the fair value of the consideration received and of any remaining equity interest is recognised. The difference between these amounts is recognised in profit or loss.

vii. Acquisitions and sales

Note 3 provides information on the most significant acquisitions and sales in the last three years.

c) Definitions and classification of financial instruments

i. Definitions

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

An equity instrument is a contract that evidences a residual interest in the assets of the issuing entity after deducting all of its liabilities.

A financial derivative is a financial instrument whose value changes in response to the change in an observable market variable (such as an interest rate, foreign exchange rate, financial instrument price, market index or credit rating), whose initial investment is very small compared with other financial instruments with a similar response to changes in market factors, and which is generally settled at a future date.

Hybrid financial instruments are contracts that simultaneously include a non-derivative host contract together with a derivative, known as an embedded derivative, that is not separately transferable and has the effect that some of the cash flows of the hybrid contract vary in a way similar to a stand-alone derivative.

Compound financial instruments are contracts that simultaneously create for their issuer a financial liability and an own equity instrument (such as convertible bonds, which entitle their holders to convert them into equity instruments of the issuer).

The preference shares contingently convertible into ordinary shares eligible as Additional Tier 1 capital (CCPSs) -perpetual shares, which may be repurchased by the issuer in certain circumstances, the interest on which is discretionary, and would convert into variable number of newly issued ordinary shares if the capital ratio of the Bank or its consolidated group falls below a given percentage (trigger event), as those two terms are defined in the related issue prospectuses are recognised for accounting purposes by the Group as compound instruments. The liability component reflects the issuer's obligation to deliver a variable number of shares and the equity component reflects the issuer's discretion in relation to the payment of the related coupons. In order to effect the initial allocation, the Group estimates the fair value of the liability as the amount that would have to be delivered if the trigger event were to occur immediately and, accordingly, the equity component, calculated as the residual amount, is zero. In view of the aforementioned discretionary nature of the payment of the coupons, they are deducted directly from equity.

Capital perpetual preference shares (CPPS), with the possibility of purchase by the issuer in certain circumstances, whose remuneration is discretionary, and which will be amortised permanently, totally or partially, in the event that the bank or its consolidated group submits a capital ratio lesser than a certain percentage (trigger event), as defined in the corresponding prospectuses, are accounted for by the Group as equity instruments.



The following transactions are not treated for accounting purposes as financial instruments:

- Investments in associates and joint ventures (see note 13).
- Rights and obligations under employee benefit plans (see note 25).
- Rights and obligations under insurance contracts (see note 15).
- Contracts and obligations relating to employee remuneration based on own equity instruments (see note 34).

ii. Classification of financial assets for measurement purposes

Financial assets are initially classified into the various categories used for management and measurement purposes, unless they have to be presented as 'Non-current assets held for sale' or they relate to 'Cash, cash balances at central banks and other deposits on demand', 'Changes in the fair value of hedged items in portfolio hedges of interest rate risk (asset side)', 'Hedging derivatives and Investments', which are reported separately.

Classification of financial instruments: the classification criteria for financial assets depends on the business model for their management and the characteristics of their contractual flows.

Grupo Santander business models refer to the way in which it manages its financial assets to generate cash flows. In defining these models, the Group takes into account the following factors:

- How key management staff are assessed and reported on the performance of the business model and the financial assets held in the business model.
- The risks that affect the performance of the business model (and the financial assets held in the business model) and, specifically, the way in which these risks are managed.
- How business managers are remunerated.
- The frequency and volume of sales in previous years, as well as expectations of future sales.

The analysis of the characteristics of the contractual flows of financial assets requires an assessment of the congruence of these flows with a basic loan agreement. The Group determines if the contractual cash flows of its financial assets that are only principal and interest payments on the outstanding principal amount at the beginning of the transaction. This analysis takes into consideration four factors (performance, clauses, contractually linked products and currencies). Furthermore, among the most significant judgements used by the Group in carrying out this analysis, the following ones are included:

- The return on the financial asset, in particular in cases of periodic interest rate adjustments where the term of the reference rate does not coincide with the frequency of the adjustment. In these cases, an assessment is made to determine whether or not the contractual cash flows differ significantly from the flows without this change in the time value of money, establishing a tolerance level of 5%.
- The contractual clauses that may modify the cash flows of the financial asset, for which the structure of the cash flows before and after the activation of such clauses is analysed.

- Financial assets whose cash flows have different priority for payment due to a contractual link to underlying assets (e.g. securitisations) require a look-through analysis by the Group so as to review that both the financial asset and the underlying assets are only principal and interest payments and that the exposure to credit risk of the set of underlying assets belonging to the tranche analysed is less than or equal to the exposure to credit risk of the set of underlying assets of the instrument.

Depending on these factors, the asset can be measured at amortised cost, at fair value with changes in other comprehensive income, or at fair value with changes through profit and loss. IFRS 9 also establishes an option to designate an instrument at fair value with changes in profit or loss, when doing so eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'accounting asymmetry') that would otherwise arise from measuring assets or liabilities or recognising gains and losses on different bases.

Grupo Santander uses the following criteria for the classification of financial debt instruments:

- Amortised cost: financial instruments under a business model whose objective is to collect principal and interest flows, over which there is no significant unjustified sales and fair value is not a key element in the management of these assets and contractual conditions they give rise to cash flows on specific dates, which are only payments of principal and interest on the outstanding principal amount. In this sense, unjustified sales are considered to be those other than those related to an increase in the credit risk of the asset, unanticipated funding needs (stress case scenarios). Additionally, the characteristics of its contractual flows represent substantially a 'basic financing agreement'.
- Fair value with changes in other comprehensive income: financial instruments held in a business model whose objective is to collect principal and interest cash flows and the sale of these assets, where fair value is a key factor in their management. Additionally, the contractual cash flow characteristics substantially represent a 'basic financing agreement'.
- Fair value with changes in profit or loss: financial instruments included in a business model whose objective is not obtained through the above mentioned models, where fair value is a key factor in managing of these assets, and financial instruments whose contractual cash flow characteristics do not substantially represent a 'basic financing agreement'. In this section it can be enclosed the portfolios classified under 'Financial assets held for trading', 'Non-trading financial assets mandatorily at fair value through profit or loss' and 'Financial assets at fair value through profit or loss'. In this regard, most of the financial assets presented in the category of 'Financial assets designated at value reasonable with change in results' are instruments financial services that, not being part of the portfolio of negotiation, are contracted jointly with other financial instruments that are recorded in the category of 'held for trading', and that by both are recorded at fair value with changes in results, so your record in any other category would produce accounting asymmetries.



Equity instruments will be classified at fair value under IFRS 9, with changes in profit or loss, unless the Group decides, for non-trading assets, to classify them at fair value with changes in other comprehensive income (irrevocably) at initial recognition.

iii. Classification of financial assets for presentation purposes

Financial assets are classified by nature into the following items in the consolidated balance sheet:

- Cash, cash balances at Central Banks and other deposits on demand: cash balances and balances receivable on demand relating to deposits with central banks and credit institutions.
- Loans and advances: includes the debit balances of all credit and loans granted by the Group, other than those represented by securities, as well as finance lease receivables and other debit balances of a financial nature in favour of the Group such as cheques drawn on credit institutions, balances receivable from clearing houses and settlement agencies for transactions on the stock exchange and organised markets, bonds given in cash, capital calls, fees and commissions receivable for financial guarantees and debit balances arising from transactions not originating in banking transactions and services, such as the collection of rentals and similar items. They are classified, on the basis of the institutional sector to which the debtor belongs, into:
 - Central banks: credit of any nature, including deposits and money market transactions received from the Bank of Spain or other central banks.
 - Credit institutions: credit of any nature, including deposits and money market transactions, in the name of credit institutions.
 - Customers: includes the remaining credit, including money market transactions through central counterparties.
- Debt securities: bonds and other securities that represent a debt for their issuer, that generate an interest return, and that are in the form of certificates or book entries.
- Equity instruments: financial instruments issued by other entities, such as shares, which have the nature of equity instruments for the issuer, other than investments in subsidiaries, joint ventures or associates. Investment fund units are included in this item.
- Derivatives: includes the fair value in favour of the Group of derivatives which do not form part of hedge accounting, including embedded derivatives separated from hybrid financial instruments.
- Changes in the fair value of hedged items in portfolio hedges of interest rate risk: this item is the balancing entry for the amounts credited to the consolidated income statement in respect of the measurement of the portfolios of financial instruments which are effectively hedged against interest rate risk through fair value hedging derivatives.
- Hedging derivatives: Includes the fair value in favour of the Group of derivatives, including embedded derivatives separated from hybrid financial instruments, designated as hedging instruments in hedge accounting.

iv. Classification of financial liabilities for measurement purposes

Financial liabilities are initially classified into the various categories used for management and measurement purposes, unless they have to be presented as 'Liabilities associated with non-current assets held for sale' or they relate to 'Hedging derivatives' or changes in the fair value of hedged items in portfolio hedges of interest rate risk (liability side), which are reported separately.

In most cases, changes in the fair value of financial liabilities designated at fair value through profit or loss, caused by the entity's credit risk, are recognized in other comprehensive income.

Financial liabilities are included for measurement purposes in one of the following categories:

- Financial liabilities held for trading (at fair value through profit or loss): this category includes financial liabilities incurred for the purpose of generating a profit in the near term from fluctuations in their prices, financial derivatives not designated as hedging instruments, and financial liabilities arising from the outright sale of financial assets acquired under reverse repurchase agreements ("reverse repos") or borrowed (short positions).
- Financial liabilities designated at fair value through profit or loss: financial liabilities are included in this category when they provide more relevant information, either because this eliminates or significantly reduces recognition or measurement inconsistencies (accounting mismatches) that would otherwise arise from measuring assets or liabilities or recognising the gains or losses on them on different bases, or because a group of financial liabilities or financial assets and liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided on that basis to the Group's key management personnel.

Liabilities may only be included in this category on the date when they are incurred or originated.

- Financial liabilities at amortised cost: financial liabilities, irrespective of their instrumentation and maturity, not included in any of the above-mentioned categories which arise from the ordinary borrowing activities carried on by financial institutions.



v. Classification of financial liabilities for presentation purposes

Financial liabilities are classified by nature into the following items in the consolidated balance sheet:

- Deposits: includes all repayable balances received in cash by Grupo Santander, other than those instrumented as marketable securities and those having the substance of subordinated liabilities (amount of the loans received, which for credit priority purposes are after common creditors), except for the debt instruments. This item also includes cash bonds and cash consignments received the amount of which may be invested without restriction. Deposits are classified on the basis of the creditor's institutional sector into:
 - Central banks: deposits of any nature, including credit received and money market transactions received from the Bank of Spain or other central banks.
 - Credit institutions: deposits of any nature, including credit received and money market transactions in the name of credit institutions.
 - Customer: includes the remaining deposits, including money market transactions through central counterparties.

During the 2019 financial year, the European Central Bank announced a new program of longer-term financing operations with a specific objective (TLTRO III), which included special conditions, including a reduction in the interest rate applicable between June 2020 and June 2022 subject to compliance with a certain volume of eligible loans.

Grupo Santander chose to accrue interest in accordance with the specific periods of adjustment to market rates, so that the interest corresponding to said period (-1%) has been recorded in the income statement from June 2020 to June 2022, having met the computable loan threshold that gave rise to the extra rate on that date.

Subsequently, and as a result of the modifications introduced by the European Central Bank in the conditions of the program, which include changes in its interest rates, the Group has updated the effective interest rate at which interest accrues on said financial liability, maintaining the criterion adopted in previous years, and considering said modifications a change in the variable interest rate (which affects the EIR) and is applied prospectively.

- Marketable debt securities: includes the amount of bonds and other debt represented by marketable securities, other than those having the substance of subordinated liabilities (amount of the loans received, which for credit priority purposes are after common creditors, and includes the amount of the financial instruments issued by the Group which, having the legal nature of capital, do not meet the requirements to qualify as equity, such as certain preferred shares issued). This item includes the component that has the consideration of financial liability of the securities issued that are compound financial instruments.
- Derivatives: includes the fair value, with a negative balance for the Group, of derivatives, including embedded derivatives separated from the host contract, which do not form part of hedge accounting.

- Short positions: includes the amount of financial liabilities arising from the outright sale of financial assets acquired under reverse repurchase agreements or borrowed.
- Other financial liabilities: includes the amount of payment obligations having the nature of financial liabilities not included in other items (includes, among others, the balance of lease liabilities), and liabilities under financial guarantee contracts, unless they have been classified as non-performing.
- Changes in the fair value of hedged items in portfolio hedges of interest rate risk: this item is the balancing entry for the amounts charged to the consolidated income statement in respect of the measurement of the portfolios of financial instruments which are effectively hedged against interest rate risk through fair value hedging derivatives.
- Hedging derivatives: includes the fair value of the Group's liability in respect of derivatives, including embedded derivatives separated from hybrid financial instruments, designated as hedging instruments in hedge accounting.

d) Measurement of financial assets and liabilities and recognition of fair value changes

In general, financial assets and liabilities are initially recognised at fair value which, in the absence of evidence to the contrary, is deemed to be the transaction price.

In this regard, IFRS 9 states that regular way purchases or sales of financial assets shall be recognised and derecognised on the trade date or on the settlement date. Grupo Santander has opted to make such recognition on the trading date or settlement date, depending on the convention of each of the markets in which the transactions are carried out. For example, in relation to the purchase or sale of debt securities or equity instruments traded in the Spanish market, securities market regulations stipulate their effective transfer at the time of settlement and, therefore, the same time has been established for the accounting record to be made.

The fair value of instruments not measured at fair value through profit and loss is adjusted by transaction costs. Subsequently, and on the occasion of each accounting close, they are valued in accordance with the following criteria:

i. Measurement of financial assets

Financial assets are measured at fair value are valued mainly at their fair value without deducting any transaction cost for their sale.

The fair value of a financial instrument on a given date is taken to be the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The most objective and common reference for the fair value of a financial instrument is the price that would be paid for it on an active, transparent and deep market (quoted price or market price). At 31 December 2022, there were no significant investments in quoted financial instruments that had ceased to be recognised at their quoted price because their market could not be deemed to be active.



If there is no market price for a given financial instrument, its fair value is estimated on the basis of the price established in recent transactions involving similar instruments and, in the absence thereof, of valuation techniques commonly used by the international financial community, taking into account the specific features of the instrument to be measured and, particularly, the various types of risk associated with it.

All derivatives are recognised in the balance sheet at fair value from the trade date. If the fair value is positive, they are recognised as an asset and if the fair value is negative, they are recognised as a liability. The fair value on the trade date is deemed, in the absence of evidence to the contrary, to be the transaction price. The changes in the fair value of derivatives from the trade date are recorded in the consolidated income statement. Specifically, the fair value of financial derivatives traded in organised markets included in the portfolios of financial assets or liabilities held for trading is deemed to be their daily quoted price and if, for exceptional reasons, the quoted price cannot be determined on a given date, these financial derivatives are measured using methods similar to those used to measure derivatives.

The fair value of derivatives is taken to be the sum of the future cash flows arising from the instrument, discounted to present value at the date of measurement (present value or theoretical close) using valuation techniques commonly used by the financial markets: net present value, option pricing models and other methods.

The amount of debt securities and loans and advances under a business model whose objective is to collect the principal and interest flows are valued at their amortised cost, as long as they comply with the 'SPPI' (Solely Payments of Principal and Interest) test, using the effective interest rate method in their determination. Amortised cost refers to the acquisition cost of a corrected financial asset or liability (more or less, as the case may be) for repayments of principal and the part systematically charged to the consolidated income statement of the difference between the initial cost and the corresponding reimbursement value at expiration. In the case of financial assets, the amortised cost includes, in addition, the corrections to their value due to the impairment. In the loans and advances covered in fair value hedging transactions, the changes that occur in their fair value related to the risk or the risks covered in these hedging transactions are recorded.

The effective interest rate is the discount rate that exactly matches the carrying amount of a financial instrument to all its estimated cash flows of all kinds over its remaining life. For fixed rate financial instruments, the effective interest rate coincides with the contractual interest rate established on the acquisition date plus, where applicable, the fees and transaction costs that, because of their nature, form part of their financial return. In the case of floating rate financial instruments, the effective interest rate coincides with the rate of return prevailing in all connections until the next benchmark interest reset date.

Equity instruments and contracts related with these instruments are measured at fair value. However, in certain circumstances the Group estimates cost value as a suitable estimate of the fair value. This can happen if the recent event available information is not enough to measure the fair value or if there is a broad range of possible measures and the cost value represents the best estimates of fair value within this range.

The amounts at which the financial assets are recognised represent, in all material respects, the Group's maximum exposure to credit risk at each reporting date. Also, Grupo Santander has received collateral and other credit enhancements to mitigate its exposure to credit risk, which consist mainly of mortgage guarantees, cash collateral, equity instruments and personal security, assets leased out under finance lease and full-service lease agreements, assets acquired under repurchase agreements, securities loans and credit derivatives.

ii. Measurement of financial liabilities

In general, financial liabilities are measured at amortised cost, as defined above, except for those included under 'Financial liabilities held for trading' and 'Financial liabilities designated at fair value through profit or loss' and financial liabilities designated as hedged items (or hedging instruments) in fair value hedges, which are measured at fair value. The changes in credit risk arising from financial liabilities designated at fair value through profit or loss are recognised in accumulated other comprehensive income, unless they generate or increase an accounting mismatch, in which case changes in the fair value of the financial liability in all respects are recognised in the income statement.



iii. Valuation techniques

The following table summarises the fair values, at the end of each of the years indicated, of the financial assets and liabilities listed below, classified according to the different valuation methodologies used by the Group to determine their fair value:

EUR million

	2022			2021			2020		
	Published price quotations in active markets (level 1)	Internal Models (level 2 and 3)	Total	Published price quotations in active markets (level 1)	Internal Models (level 2 and 3)	Total	Published price quotations in active markets (level 1)	Internal Models (level 2 and 3)	Total
Financial assets held for trading	45,014	111,104	156,118	39,678	77,275	116,953	46,379	68,566	114,945
Non-trading financial assets mandatorily at fair value through profit or loss	1,800	3,913	5,713	2,398	3,138	5,536	1,756	2,730	4,486
Financial assets designated at fair value through profit or loss	1,976	7,013	8,989	2,113	13,844	15,957	2,509	46,208	48,717
Financial assets at fair value through other comprehensive income	64,216	21,023	85,239	77,749	30,289	108,038	91,771	29,182	120,953
Hedging derivatives (assets)	—	8,069	8,069	—	4,761	4,761	—	8,325	8,325
Financial liabilities held for trading	16,237	98,948	115,185	10,379	69,090	79,469	9,863	71,304	81,167
Financial liabilities designated at fair value through profit or loss	212	55,735	55,947	3,620	29,113	32,733	2,118	45,920	48,038
Hedging derivatives (liabilities)	—	9,228	9,228	—	5,463	5,463	—	6,869	6,869
Liabilities under insurance or reinsurance contracts	—	747	747	—	770	770	—	910	910

The financial instruments at fair value determined on the basis of published price quotations in active markets (level 1) include government debt securities, private-sector debt securities, derivatives traded in organised markets, securitised assets, shares, short positions and fixed-income securities issued.

In cases where price quotations cannot be observed, management makes its best estimate of the price that the market would set, using its own internal models. In most cases, these internal models use data based on observable market parameters as significant inputs (level 2) and, in cases, they use significant inputs not observable in market data (level 3). In order to make these estimates, various techniques are employed, including the extrapolation of observable market data. The best evidence of the fair value of a financial instrument on initial recognition is the transaction price, unless the fair value of the instrument can be obtained from other market transactions performed with the same or similar instruments or can be measured by using a valuation technique in which the variables used include only observable market data, mainly interest rates.

Grupo Santander has developed a formal process for the systematic valuation and management of financial instruments, which has been implemented worldwide across all the Group's units. The governance scheme for this process distributes responsibilities between two independent divisions: Treasury (development, marketing and daily management of financial products and market data) and Risk (on a periodic basis, validation of pricing models and market data, computation of risk metrics, new transaction approval policies, management of market risk and implementation of fair value adjustment policies).

The approval of new products follows a sequence of steps (request, development, validation, integration in corporate systems and quality assurance) before the product is brought into production. This process ensures that pricing systems have been properly reviewed and are stable before they are used.

The following subsections set forth the most important products and families of derivatives, and the related valuation techniques and inputs, by asset class:

Fixed income and inflation

The fixed income asset class includes basic instruments such as interest rate forwards, interest rate swaps and cross currency swaps, which are valued using the net present value of the estimated future cash flows discounted taking into account basis (swap and cross currency spreads) determined on the basis of the payment frequency and currency of each leg of the derivative. Vanilla options, including caps, floors and swaptions, are priced using the Black-Scholes model, which is one of the benchmark industry models. More exotic derivatives are priced using more complex models which are generally accepted as standard across institutions.



These pricing models are fed with observable market data such as deposit interest rates, futures rates, cross currency swap and constant maturity swap rates, and basis spreads, on the basis of which different yield curves, depending on the payment frequency, and discounting curves are calculated for each currency. In the case of options, implied volatilities are also used as model inputs. These volatilities are observable in the market for cap and floor options and swaptions, and interpolation and extrapolation of volatilities from the quoted ranges are carried out using generally accepted industry models. The pricing of more exotic derivatives may require the use of non-observable data or parameters, such as correlation (among interest rates and cross-asset), mean reversion rates and prepayment rates, which are usually defined from historical data or through calibration.

Inflation-related assets include zero-coupon or year-on-year inflation-linked bonds and swaps, valued with the present value method using forward estimation and discounting. Derivatives on inflation indices are priced using standard or more complex bespoke models, as appropriate. Valuation inputs of these models consider inflation-linked swap spreads observable in the market and estimations of inflation seasonality, on the basis of which a forward inflation curve is calculated. Also, implied volatilities taken from zero-coupon and year-on-year inflation options are also inputs for the pricing of more complex derivatives.

Equity and foreign exchange

The most important products in these asset classes are forward and futures contracts; they also include vanilla, listed and OTC (Over-The-Counter) derivatives on single underlying assets and baskets of assets. Vanilla options are priced using the standard Black-Scholes model and more exotic derivatives involving forward returns, average performance, or digital, barrier or callable features are priced using generally accepted industry models or bespoke models, as appropriate. For derivatives on illiquid stocks, hedging takes into account the liquidity constraints in models.

The inputs of equity models consider yield curves, spot prices, dividends, asset funding costs (repo margin spreads), implied volatilities, correlation among equity stocks and indices, and cross-asset correlation. Implied volatilities are obtained from market quotes of European and American-style vanilla call and put options. Various interpolation and extrapolation techniques are used to obtain continuous volatility for illiquid stocks. Dividends are usually estimated for the mid and long term. Correlations are implied, when possible, from market quotes of correlation-dependent products. In all other cases, proxies are used for correlations between benchmark underlyings or correlations are obtained from historical data.

The inputs of foreign exchange models include the yield curve for each currency, the spot foreign exchange rate, the implied volatilities and the correlation among assets of this class. Volatilities are obtained from European call and put options which are quoted in markets as of-the-money, risk reversal or butterfly options. Illiquid currency pairs are usually handled by using the data of the liquid pairs from which the illiquid currency can be derived. For more exotic products, unobservable model parameters may be estimated by fitting to reference prices provided by other non-quoted market sources.

Credit

The most common instrument in this asset class is the credit default swap (CDS), which is used to hedge credit exposure to third parties. In addition, models for first-to-default (FTD), n-to-default (NTD) and single-tranche collateralised debt obligation (CDO) products are also available. These products are valued with standard industry models, which estimate the probability of default of a single issuer (for CDS) or the joint probability of default of more than one issuer for FTD, NTD and CDO.

Valuation inputs are the yield curve, the CDS spread curve and the recovery rate. For indices and important individual issuers, the CDS spread curve is obtained in the market. For less liquid issuers, this spread curve is estimated using proxies or other credit-dependent instruments. Recovery rates are usually set to standard values. For listed single-tranche CDO, the correlation of joint default of several issuers is implied from the market. For FTD, NTD and bespoke CDO, the correlation is estimated from proxies or historical data when no other option is available.

Valuation adjustment for counterparty risk or default risk

The Credit valuation adjustment (CVA) is a valuation adjustment to over the counter (OTC) derivatives as a result of the risk associated with the credit exposure assumed to each counterparty.

The CVA is calculated taking into account potential exposure to each counterparty in each future period. The CVA for a specific counterparty is equal to the sum of the CVA for all the periods. The following inputs are used to calculate the CVA:

- Expected exposure: including for each transaction the mark-to-market (MtM) value plus an add-on for the potential future exposure for each period. Mitigating factors such as collateral and netting agreements are taken into account, as well as a temporary impairment factor for derivatives with interim payments.
- Severity: percentage of final loss assumed in a counterparty credit event/default.
- Probability of default: for cases where there is no market information (the CDS quoted spread curve, etc.), proxies based on companies holding exchange-listed CDS, in the same industry and with the same external rating as the counterparty, are used.
- Discount factor curve.

The Debit Valuation Adjustment (DVA) is a valuation adjustment similar to the CVA but, in this case, it arises as a result of the Group's own risk assumed by its counterparties in OTC derivatives.

The CVA at 31 December 2022 amounted to EUR 330 million (resulting in an increase of 39.2% compared to 31 December 2021) and DVA amounted to EUR 309 million (resulting in an increase of 90.7% compared to 31 December 2021). The increase is mainly due to movements in the credit markets, whose spread levels have increased substantially compared to those at the end of 2021.



The CVA at 31 December 2021 amounted to EUR 237 million (decrease of 41.9% compared to 31 December 2020) and DVA amounted EUR 162 million (decrease of 30.4% compared to 31 December 2020). These impacts were mainly due to the continuous improvement in credit markets, the creation of particular credit curves for certain counterparties and the introduction of methodological improvements in the calculation of exposures.

The CVA at 31 December 2020 amounted to EUR 408 million (resulting in an increase of 49.8% compared to 31 December 2019) and DVA amounted to EUR 233 million (resulting in an increase of 36.0% compared to 31 December 2019). These impacts were due to the fact that credit spread levels were at levels above 25% compared to 2019 due to the covid-19 pandemic.

In addition, the Group amounts the funding fair value adjustment (FFVA) is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. This includes the uncollateralised component of collateralised derivatives in addition to derivatives that are fully uncollateralised. The expected future funding exposure is calculated by a simulation methodology, where available. The FFVA impact is not material for the consolidated financial statements as of 31 December 2022, 2021 and 2020.

Grupo Santander has not carried out significant reclassifications of financial instruments between levels other than those disclosed in level 3 movement table during 2022 continuing the trend observed in 2021 and 2020. The main variations over the last few years in the Level 3 volume have been due to purchases/sales of these instruments. There have been no significant variations in the market observability conditions, nor relevant changes in the criteria used for the classification of instruments within the fair value hierarchy.

Valuation adjustments due to model risk

The valuation models described above do not involve a significant level of subjectivity, since they can be adjusted and recalibrated, where appropriate, through internal calculation of the fair value and subsequent comparison with the related actively traded price. However, valuation adjustments may be necessary when market quoted prices are not available for comparison purposes.

The sources of risk are associated with uncertain model parameters, illiquid underlying issuers, and poor quality market data or missing risk factors (sometimes the best available option is to use limited models with controllable risk). In these situations, the Group calculates and applies valuation adjustments in accordance with common industry practice. The main sources of model risk are described below:

- In the stock markets, the sources of model risk include forward skew modelling, the impact of stochastic interest rates, correlation and multi-curve modelling. Other sources of risk arise from managing hedges of digital callable and barrier option payments. Also worthy of consideration as sources of risk are the estimation of market data such as dividends and correlation for quanto and composite basket options.
- For specific financial instruments relating to home mortgage loans secured by financial institutions in the UK (which are regulated and partially financed by the Government) and property asset derivatives, the main input is the Halifax House Price Index (HPI). In these cases, risk assumptions include estimations of the future growth and the volatility of the HPI, the mortality rate and the implied credit spreads.
- Inflation markets are exposed to model risk resulting from uncertainty around modelling the correlation structure among various Consumer Price Index (CPI) rates. Another source of risk may arise from the bid-offer spread of inflation-linked swaps.
- The currency markets are exposed to model risk resulting from forward skew modelling and the impact of stochastic interest rate and correlation modelling for multi-asset instruments. Risk may also arise from market data, due to the existence of specific illiquid foreign exchange pairs.
- The most important source of model risk for credit derivatives relates to the estimation of the correlation between the probabilities of default of different underlying issuers. For illiquid underlying issuers, the CDS spread may not be well defined.
- In the fixed income markets, the sources of model risk include bond index correlations, basis spread modelling, the risk of calibrating model parameters and the treatment of near-zero or negative interest rates. Other sources of risk arise from the estimation of market data, such as volatilities or yield curves, whether used for estimation or cash flow discounting purposes.



Set forth below are the financial instruments at fair value whose measurement was based on internal models (levels 2 and 3) at 31 December 2022, 2021 and 2020:

EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
ASSETS	142,832	8,290		
Financial assets held for trading	110,721	383		
Central banks ^B	11,595	—	Present value method	Yield curves, FX market prices
Credit institutions ^B	16,502	—	Present value method	Yield curves, FX market prices
Customers ^B	9,550	—	Present value method	Yield curves, FX market prices
Debt and equity instruments	6,537	43	Present value method	Yield curves, FX market prices
Derivatives	66,537	340		
Swaps	54,367	139	Present value method, Gaussian Copula	Yield curves, FX market prices, HPI, Basis, Liquidity
Exchange rate options	916	4	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	2,681	39	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate futures	113	—	Present value method	Yield curves, FX market prices
Index and securities options	354	48	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
Other	8,106	110	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX and EQ market prices, Dividends, Correlation, HPI, Credit, Others
Hedging derivatives	8,069	—		
Swaps	6,687	—	Present value method	Yield curves, FX market prices, Basis
Interest rate options	2	—	Black's Model	Yield curves, FX market prices, Volatility surfaces
Other	1,380	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Others
Non-trading financial assets mandatorily at fair value through profit or loss	2,080	1,833		
Equity instruments	643	1,269	Present value method	Market price, Interest rates curves, Dividends and Others
Debt securities	809	325	Present value method	Yield curves
Loans and receivables	628	239	Present value method, swap asset model & CDS	Yield curves and Credit curves
Financial assets designated at fair value through profit or loss	6,586	427		
Credit institutions	673	—	Present value method	Yield curves, FX market prices
Customers ^C	5,769	5	Present value method	Yield curves, FX market prices, HPI
Debt securities	144	422	Present value method	Yield curves, FX market prices
Financial assets at fair value through other comprehensive income	15,376	5,647		
Equity instruments	9	700	Present value method	Market price, Yield curves, Dividends and Others
Debt securities	11,869	229	Present value method	Yield curves, FX market prices
Loans and receivables	3,498	4,718	Present value method	Yield curves, FX market prices and Credit curves



EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
LIABILITIES	163,733	925		
Financial liabilities held for trading	98,533	415		
Central banks ^B	5,759	—	Present value method	FX market prices, Yield curves
Credit institutions ^B	9,796	—	Present value method	FX market prices, Yield curves
Customers	12,226	—	Present value method	FX market prices, Yield curves
Derivatives	64,147	415		
<i>Swaps</i>	51,191	235	Present value method, Gaussian Copula	Yield curves, FX market prices, Basis, Liquidity, HPI
<i>Interest rate options</i>	3,268	19	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Exchange rate options</i>	769	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Index and securities options</i>	591	42	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
<i>Futures on interest rate and variable income</i>	807	—	Present value method	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI
<i>Other</i>	7,521	179	Present value method, Advanced stochastic volatility models	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI, Credit, Others
Short positions	6,605	—	Present value method	Yield curves, FX & EQ market prices, Equity
Hedging derivatives	9,214	14		
<i>Swaps</i>	8,142	14	Present value method	Yield curves, FX & EQ market prices, Basis
<i>Other</i>	1,072	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Other
Financial liabilities designated at fair value through profit or loss^D	55,239	496	Present value method	Yield curves, FX market prices
Liabilities under insurance contracts	747	—	Present Value Method with actuarial techniques	Mortality tables and interest rate curves

A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.

B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase agreements with corporate customers (mainly brokerage and investment companies).

C. Includes, mainly, structured loans to corporate clients.

D. Includes, mainly, short-term deposits that are managed based on their fair value..

EUR million

	Fair values calculated using internal models at 2021 ^A		Fair values calculated using internal models at 2020 ^A		Valuation techniques
	Level 2	Level 3	Level 2	Level 3	
ASSETS	121,640	7,667	146,468	8,543	
Financial assets held for trading	76,738	537	67,826	740	
Central banks ^B	3,608	—	—	—	Present value method
Credit institutions ^B	10,397	—	3	—	Present Value method
Customers ^B	6,829	—	296	—	Present Value method
Debt and equity instruments	2,312	24	1,453	10	Present Value method
Derivatives	53,592	513	66,074	730	
<i>Swaps</i>	43,700	224	54,488	272	Present Value method, Gaussian Copula
<i>Exchange rate options</i>	539	12	696	22	Black-Scholes Model
<i>Interest rate options</i>	2,112	182	3,129	241	Black's Model, advanced multifactor interest rate models
<i>Interest rate futures</i>	409	—	1,069	—	Present Value method
<i>Index and securities options</i>	439	41	554	94	Black's Model, advanced multifactor interest rate models
<i>Other</i>	6,393	54	6,138	101	Present Value method, Advanced stochastic volatility models and other
Hedging derivatives	4,761	—	8,325	—	
<i>Swaps</i>	4,204	—	6,998	—	Present Value method
<i>Interest rate options</i>	9	—	25	—	Black's Model
<i>Other</i>	548	—	1,302	—	Present Value method, Advanced stochastic volatility models and other
Non-trading financial assets mandatorily at fair value through profit or loss	1,273	1,865	1,796	934	
<i>Equity instruments</i>	415	1,231	984	505	Present Value method
<i>Debt securities issued</i>	589	366	555	134	Present Value method
<i>Loans and receivables</i>	269	268	257	295	Present Value method, swap asset model & CDS
Financial assets designated at fair value through profit or loss	13,426	418	45,559	649	
Central banks	—	—	9,481	—	Present Value method
Credit institutions	3,152	—	11,973	163	Present Value method
Customers ^C	10,270	18	24,102	19	Present Value method
Debt securities	4	400	3	467	Present Value method
Equity instruments	—	—	—	—	Present Value method
Financial assets at fair value through other comprehensive income	25,442	4,847	22,962	6,220	
Equity instruments	74	821	75	1,223	Present Value method
Debt securities	21,585	146	18,410	206	Present Value method
Loans and receivables	3,783	3,880	4,477	4,791	Present Value method



EUR million

	Fair values calculated using internal models at		Fair values calculated using internal models at		Valuation techniques
	2021 ^A		2020 ^A		
	Level 2	Level 3	Level 2	Level 3	
LIABILITIES	103,807	629	124,098	905	
Financial liabilities held for trading	68,930	160	71,009	295	
Central banks ^B	1,038	—	0	0	Present Value method
Credit institutions ^B	6,488	—	0	0	Present Value method
Customers	6,141	—	0	0	Present Value method
Derivatives	53,234	160	63,920	295	
Swaps	42,438	44	51,584	81	Present Value method, Gaussian Copula
Interest rate options	2,720	26	4,226	49	Black's Model, advanced multifactor interest rate models
Exchange rate options	658	7	724	1	Black-Scholes Model
Index and securities options	446	67	456	97	Black's Model, advanced multifactor interest rate models
Interest rate and equity futures	184	—	1,054	2	Present Value method
Other	6,788	16	5,876	65	Present Value method, Advanced stochastic volatility models and other
Short positions	2,029	—	7,089	—	Present Value method
Hedging derivatives	5,463	—	6,869	—	
Swaps	4,149	—	5,821	0	Present Value method
Interest rate options	—	—	13	—	Black's Model
Other	1,314	—	1,035	—	Present Value method, Advanced stochastic volatility models and other
Financial liabilities designated at fair value through profit or loss^C	28,644	469	45,310	610	Present Value method
Liabilities under insurance contracts	770	—	910	—	Present Value method with actuarial techniques

A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.

B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase with corporate customers (mainly brokerage and investment companies).

C. Includes, mainly, structured loans to corporate clients.

D. Includes, mainly, short-term deposits that are managed based on their fair value.



Financial Instruments (level 3)

Set forth below are the Group's main financial instruments measured using unobservable market data as significant inputs of the internal models (level 3):

- HTC&S (Held to collect and sale) syndicated loans classified in the fair value category with changes in other comprehensive income, where the cost of liquidity is not directly observable in the market, as well as the prepayment option in favour of the borrower.
- Illiquid equity in non-trading portfolios, classified at fair value through profit or loss and at fair value through equity.
- Instruments in Santander UK's portfolio (loans, debt securities and derivatives) linked to the House Price Index (HPI). Even if the valuation techniques used for these instruments may be the same as those used to value similar products (present value in the case of loans and debt securities, and the Black-Scholes model for derivatives), the main factors used in the valuation of these instruments are the HPI spot rate, the growth and volatility thereof, and the mortality rates, which are not always observable in the market and, accordingly, these instruments are considered illiquid.
- Callable interest rate derivatives (Bermudan-style options) where the main unobservable input is mean reversion of interest rates.
- Trading derivatives on interest rates, taking as an underlying asset titling and with the amortization rate (CPR, Conditional prepayment rate) as unobservable main entry.
- Derivatives from trading on inflation in Spain, where volatility is not observable in the market.
- Equity volatility derivatives, specifically indices and equities, where volatility is not observable in the long term.
- Derivatives on long-term interest rate and FX in some units (mainly South America) where for certain underlyings it is not possible to demonstrate observability to these terms.
- Debt instruments referenced to certain illiquid interest rates, for which there is no reasonable market observability.

The measurements obtained using the internal models might have been different if other methods or assumptions had been used with respect to interest rate risk, to credit risk, market risk and foreign currency risk spreads, or to their related correlations and volatilities. Nevertheless, the Bank's directors consider that the fair value of the financial assets and liabilities recognised in the consolidated balance sheet and the gains and losses arising from these financial instruments are reasonable.

The net amount recognised in profit and loss in 2022 arising from models whose significant inputs are unobservable market data (level 3) amounted to EUR 90 million loss (EUR 73 million and EUR 193 million profit in 2021 and 2020, respectively).



The table below shows the effect, at 31 December 2022, 2021 and 2020 on the fair value of the main financial instruments classified as level 3 of a reasonable change in the assumptions used in the valuation. This effect was determined by applying the probable valuation ranges of the main unobservable inputs detailed in the following table:

2022

Portfolio/Instrument		Impacts (EUR million)				
(Level 3)	Valuation technique	Main unobservable inputs	Range	Weighted average	Unfavourable scenario	Favourable scenario
Financial assets held for trading						
Debt securities						
Corporate debt	Discounted Cash Flows	Credit spread	0%-20%	10.07%	(1.38)	1.40
Corporate debt	Price based	Market price	85%-115%	100.00%	—	—
Government debt	Discounted Cash Flows	Discount curve	0%-10%	4.92%	(8.34)	8.07
Derivatives						
CCS	Discounted Cash Flows	Interest rate	(0.7)% - 0.7%	0.00%	—	—
CCS	Forward estimation	Interest rate	(4)bps - 4bps	0.42bps	(0.06)	0.07
CDS	Discounted Cash flows	Credit Spread	14.9bps - 42.1bps	21.99bps	(0.05)	0.02
EQ Options	EQ option pricing model	Volatility	0% - 90%	61.30%	(0.23)	0.48
EQ Options	Local volatility	Volatility	10% - 90%	50.00%	(1.05)	1.05
FRAs	Asset Swap model	Interest rate	0% - 6%	2.71%	(1.16)	0.95
Fx Swap	Others	Others	n.a.	n.a	(1.37)	1.37
Inflation Derivatives	Asset Swap model	Inflation Swap Rate	0% - 10%	3.41%	(0.21)	0.11
Inflation Derivatives	Volatility option model	Volatility	0% - 40%	17.37%	(0.14)	0.11
IR Options	IR option pricing model	Volatility	0% - 60%	35.82%	(0.30)	0.44
IRS	Asset Swap model	Interest rate	0% - 15.00%	9.20%	(0.05)	0.08
IRS	Discounted Cash Flows	Credit spread	1.25% - 6.29%	3.89%	(2.25)	2.47
IRS	Discounted Cash Flows	Swap rate	8.6% - 9.1%	8.84%	(0.02)	0.03
IRS	Forward estimation	Interest rate	(6)bps - 6.1bps	0.13bps	(0.04)	0.04
IRS	Others	Others	5% - n.a.	n.a	(11.58)	—
IRS	Prepayment modelling	Prepayment rate	2.5% - 6.2%	4.17%	(0.06)	0.05
Others	Forward estimation	Price	0% - 2%	0.62%	(0.53)	0.24
Property derivatives	Option pricing model	Growth rate	(5)% - 5%	0.00%	(5.75)	5.75
Financial assets designated at fair value through profit or loss						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spreads	0.1% - 2%	1.05%	(0.18)	0.18
Mortgage portfolio	Black Scholes model	Growth rate	(5)% - 5%	0.00%	(0.79)	0.79
Debt securities						
Other debt securities	Others	Inflation Swap Rate	0% - 10%	4.74%	(4.25)	3.83



2022

Portfolio/Instrument	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
(Level 3)						
Non-trading financial assets mandatorily at fair value through profit or loss						
Debt securities						
Corporate debt	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	0.01bps	(0.33)	0.33
Property securities	Probability weighting	Growth rate	(5)% - 5%	0.00%	(0.68)	0.68
Equity instruments						
Equities	Price Based	Price	90% - 110%	100.00%	(126.87)	126.87
Financial assets at fair value through other comprehensive income						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spread	n.a.	n.a	(24.1)	—
Loans	Discounted Cash Flows	Interest rate curve	0.8% - 1.0%	0.88%	(0.08)	0.08
Loans	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	0bp	(17.51)	17.51
Loans	Forward estimation	Credit spread	2.56% - 3.4%	2.56%	(0.49)	—
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	(0.4)% - 1.6%	0.63%	(0.01)	0.01
Equity instruments						
Equities	Price Based	Price	90% - 110%	100.00%	(70.04)	70.04
Financial liabilities held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	40.73%	(0.29)	0.18
Financial liabilities designated at fair value through profit or loss						
Loans and advances to customers						
Repos/Reverse repos	Others	Long-term repo spread	n.a.	n.a.	(0.13)	—



2021

Portfolio/Instrument	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
(Level 3)						
Financial assets held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	36.30%	(0.50)	0.43
CCS	Discounted Cash Flows	Interest rate	(0.7)% - 0.7%	0.73%	(0.11)	0.11
CCS	Forward estimation	Interest rate	4bps - (4)bps	(0.09)bps	(0.03)	0.03
Convertibility curve - inputs: NDFs Offshore	Forward estimation	Price	0% - 2%	0.61%	(0.65)	0.28
EQ Options	EQ option pricing model	Volatility	0% - 90%	61.20%	(0.24)	0.52
EQ Options	Local volatility	Volatility	10% - 90%	40.00%	(6.82)	6.82
FRAs	Asset Swap model	Interest rate	0% - 4%	1.78%	(0.91)	0.73
FX Options	FX option pricing model	Volatility	0% - 50%	32.14%	(0.28)	0.50
Inflation Derivatives	Asset Swap model	Inflation Swap Rate	(50)% - 50%	50.00%	(0.56)	0.28
Inflation Derivatives	Volatility option model	Volatility	0% - 40%	13.29%	(0.47)	0.24
IR Futures	Asset Swap model	Interest rate	0% - 15%	5.91%	(1.09)	0.71
IR Options	IR option pricing model	Volatility	0% - 60%	36.28%	(0.20)	0.31
IRS	Asset Swap model	Interest rate	(6)% - 12.80%	10.36%	(0.07)	0.13
IRS	Discounted Cash Flows	Credit spread	1.03% - 3.75%	2.02%	(7.21)	4.16
IRS	Discounted Cash Flows	Inflation Swap Rate	(0.8)% - 6.5%	1.81%	(0.04)	0.01
IRS	Discounted Cash Flows	Swap Rate	7.7% - 8.2%	(2.87%)	(0.23)	0.10
IRS	Forward estimation	Interest rate	TIIE91 (8.98)bps - TIIE91 +11.12bps	n.a.	(0.27)	0.17
IRS	Forward estimation	Prepayment rate	6% - 12%	n.a.	—	—
IRS	Others	Others	0.05%	n.a.	(1.49)	—
IRS	Prepayment modelling	Prepayment rate	2.5% - 6.2%	0.44%	(0.09)	0.05
Property derivatives	Option pricing model	Growth rate	0% - 5%	2.5%	(2.62)	2.62
Swaptions	IR option pricing model	Volatility	0% - 40%	26.67%	(0.13)	0.27
Debt securities						
Corporate debt	Price based	Market price	85% - 115%	100.00 %	—	—
Financial assets designated at fair value through profit or loss						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spreads	0.1% - 1.4%	0.66%	(0.26)	0.26
Mortgage portfolio	Black Scholes model	Growth rate	0% - 5%	2.50%	(1.90)	1.90
Debt securities						
Corporate debt	Discounted Cash Flows	Credit spread	0% - 20%	9.88%	(1.23)	1.20
Government debt	Discounted Cash Flows	Discount curve	0% - 10%	8.33%	(4.14)	20.69
Other debt securities	Others	Inflation Swap Rate	0% - 10%	4.74%	(5.47)	4.92
Non-trading financial assets mandatorily at fair value through profit or loss						
Debt securities						
Corporate debt	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	1bp	(0.56)	0.60
Property securities	Probability weighting	Growth rate	0% - 5%	2.50%	(1.19)	1.19
Equity instruments						
Equities	Price Based	Price	90% - 110%	10.00%	(123.10)	123.10



2021

Portfolio/Instrument	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
(Level 3)						
Financial assets at fair value through other comprehensive income						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spread	n.a.	n.a.	(19.84)	—
Loans	Discounted Cash Flows	Interest rate curve	(0.1)% - 0.1%	0.12%	(0.07)	0.07
Loans	Discounted Cash Flows	Margin of a reference portfolio	(1)bps - 1bps	1bps	(13.12)	13.04
Loans	Forward estimation	Credit spread	0.77% - 2.42%	n.a.	—	—
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	0.6% - 0.8%	0.09%	(0.01)	0.01
Equity instruments						
Equities	Price Based	Price	90% - 110%	10.00%	(82.13)	82.13
Financial liabilities held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	36.30%	(0.50)	0.43
Financial liabilities designated at fair value through profit or loss						
Loans and advances to customers						
Repos/Reverse repos	Asset Swap Repo Model	Long-term repo spread	n.a.	n.a.	(0.36)	—



2020

Portfolio/Instrument	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
Financial assets held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	31.55 %	(0.07)	0.05
CCS	Discounted Cash Flows	Interest rate	(0.30)% - 0.66%	0.66 %	—	0.20
Convertibility curve - NDFs Offshore	Forward estimation	Price	0% - 2%	0.61 %	(0.72)	0.31
EQ Options	EQ option pricing model	Volatility	7.86% - 93.67%	48.37 %	(1.46)	1.81
FRA's	Asset Swap model	Interest rate	0% - 5%	2.22 %	(0.78)	0.63
FX Forward	Discounted Cash Flows	Swap Rate	(0.02)% - (0.30)%	0.11 %	—	—
FX Options	FX option pricing model	Volatility	0% - 50%	32.14 %	(0.39)	0.70
Inflation Derivatives	Asset Swap model	Inflation Swap Rate	(100)% - 50%	83.33 %	(0.63)	0.31
Inflation Derivatives	Volatility option model	Volatility	0% - 50%	16.67 %	(0.47)	0.23
IR Futures	Asset Swap model	Interest rate	0% - 15%	0.94 %	(0.94)	0.06
IR Options	IR option pricing model	Volatility	0% - 100%	19.05 %	(0.27)	0.06
IRS	Asset Swap model	Interest rate	(6)% - 12.50%	10 %	(0.08)	0.13
IRS	Discounted Cash Flows	Swap Rate	5.90% - 6.31%	2.26 %	(0.01)	0.02
IRS	Discounted Cash Flows	Credit spread	0.79% - 2.02%	1.18 %	(2.81)	1.29
IRS	Prepayment modelling	Prepayment rate	2.47%-6.22%	0.06 %	(0.12)	0.05
Property derivatives	Option pricing model	HPI Forward growth rate and HPI Spot rate	0%-5%	2.50 %	(17.82)	17.82
Swaptions	IR option pricing model	Volatility	0%-50%	33.33 %	(0.16)	0.31
Financial assets designated at fair value through profit or loss						
Loans and advances to customers						
Repos / Reverse repos	Asset Swap Repo Model	Long-term repo spread	n/a	n/a	(0.18)	0.23
Mortgage portfolio	Black Scholes model	HPI Forward growth rate	0% - 5%	2.50 %	(2.23)	2.23
Other loans	Present value method	Credit spreads	0.07% - 1.55%	0.74 %	(0.35)	0.35
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	0% - 10%	8.33 %	(0.78)	3.91
Other debt securities	Price based	Market Price	90% - 110%	10 %	(0.15)	0.15
Property securities	Probability weighting	HPI Forward growth rate and HPI Spot rate	0% - 5%	2.50 %	(7.24)	7.24
Non-trading financial assets mandatorily at fair value through profit or loss						
Equity instruments						
Equities	Price Based	Price	90% - 110%	10 %	(50.47)	50.47
Financial assets at fair value through other comprehensive income						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spread	n/a	n/a	(6.72)	—
Loans	Discounted Cash Flows	Interest rate curve	(0.15)% - 0.15%	0.15 %	(0.09)	0.09
Other loans	Present value method	Credit spreads	0.15% - 0.53%	0.19 %	(0.04)	0.04
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	1.1% - 1.3%	0.10 %	—	—
Equity instruments						
Equities	Price Based	Price	90% - 110%	10 %	(122.14)	122.14
Financial liabilities held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	34.61 %	(0.02)	0.01
EQ Options	Option pricing model	HPI Forward growth rate and HPI Spot rate	0% - 5%	2.50 %	(6.35)	6.35



Lastly, the changes in the financial instruments classified as Level 3 in 2022, 2021 and 2020 were as follows:

EUR million	01/01/2022		Changes					31/12/2022	
	Fair value calculated using internal models (Level 3)	Purchases/ Issuances	Sales/ Settlements	Changes in fair value recognised in profit or loss	Changes in fair value recognised in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)	
Financial assets held for trading	537	91	(99)	(116)	—	(15)	(15)	383	
Debt securities	22	2	(2)	15	—	2	3	42	
Equity instruments	2	—	—	—	—	(1)	—	1	
Trading derivatives	513	89	(97)	(131)	—	(16)	(18)	340	
Swaps	224	1	(47)	(20)	—	4	(23)	139	
Exchange rate options	12	—	(9)	2	—	—	(1)	4	
Interest rate options	182	—	—	(142)	—	(1)	—	39	
Index and securities options	41	27	(28)	29	—	(26)	5	48	
Other	54	61	(13)	—	—	7	1	110	
Financial assets at fair value through profit or loss	418	—	(9)	(31)	—	—	49	427	
Credit entities	—	—	—	—	—	—	—	—	
Loans and advances to customers	18	—	(9)	(5)	—	—	1	5	
Debt securities	400	—	—	(26)	—	—	48	422	
Non-trading financial assets mandatorily at fair value through profit or loss	1,865	521	(579)	98	—	(22)	(50)	1,833	
Customers	268	276	(280)	(25)	—	—	—	239	
Debt instruments	366	51	(33)	(31)	—	(27)	(1)	325	
Equity instruments	1,231	194	(266)	154	—	5	(49)	1,269	
Financial assets at fair value through other comprehensive income	4,847	8,564	(8,029)	—	(172)	417	20	5,647	
Loans and advances	3,880	8,471	(7,988)	—	1	349	5	4,718	
Debt securities	146	91	(23)	—	—	—	15	229	
Equity instruments	821	2	(18)	—	(173)	68	—	700	
TOTAL ASSETS	7,667	9,176	(8,716)	(49)	(172)	380	4	8,290	
Financial liabilities held for trading	160	328	(97)	35	—	(2)	(9)	415	
Trading derivatives	160	328	(97)	35	—	(2)	(9)	415	
Swaps	44	32	(16)	189	—	9	(23)	235	
Exchange rate options	7	6	(14)	1	—	—	—	—	
Interest rate options	26	56	(44)	(19)	—	—	—	19	
Index and securities options	67	23	(19)	(32)	—	(11)	14	42	
Securities and interest rate futures	—	—	—	—	—	—	—	—	
Others	16	211	(4)	(104)	—	—	—	119	
Hedging derivatives (Liabilities)	—	—	—	14	—	—	—	14	
Swaps	—	—	—	14	—	—	—	14	
Financial liabilities designated at fair value through profit or loss	469	—	(3)	(8)	—	—	38	496	
TOTAL LIABILITIES	629	328	(100)	41	—	(2)	29	925	



EUR million	01/01/2021	Changes							31/12/2021
	Fair value calculated using internal models (level 3)	Purchases /Issuances	Sales/ Settlements	Changes in fair value recognized in profit or loss	Changes in fair value recognized in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)	
Financial assets held for trading	740	136	(124)	(181)	—	(15)	(19)	537	
Debt securities	7	20	(2)	(2)	—	—	(1)	22	
Equity instruments	3	—	(1)	—	—	—	—	2	
Trading derivatives	730	116	(121)	(179)	—	(15)	(18)	513	
<i>Swaps</i>	272	5	(33)	(35)	—	33	(18)	224	
<i>Exchange rate options</i>	22	14	(27)	3	—	—	—	12	
<i>Interest rate options</i>	241	7	(39)	(27)	—	—	—	182	
<i>Index and securities options</i>	94	18	(12)	(51)	—	(8)	—	41	
<i>Other</i>	101	72	(10)	(69)	—	(40)	—	54	
Financial assets at fair value through profit or loss	649	59	(120)	(11)	—	(163)	4	418	
Credit entities	163	—	—	—	—	(163)	—	—	
Loans and advances to customers	19	—	(2)	—	—	—	1	18	
Debt securities	467	59	(118)	(11)	—	—	3	400	
Non-trading financial assets mandatorily at fair value through profit or loss	934	534	(251)	127	—	485	36	1,865	
Customers	295	122	(149)	—	—	(3)	3	268	
Debt securities	134	206	(28)	28	—	17	9	366	
Equity instruments	505	206	(74)	99	—	471	24	1,231	
Financial assets at fair value through other comprehensive income	6,220	5,681	(6,588)	—	(228)	(241)	3	4,847	
Loans and advances	4,791	5,597	(6,298)	—	(37)	(173)	—	3,880	
Debt securities	206	75	(25)	—	(43)	(68)	1	146	
Equity instruments	1,223	9	(265)	—	(148)	—	2	821	
TOTAL ASSETS	8,543	6,410	(7,083)	(65)	(228)	66	24	7,667	
Financial liabilities held for trading	295	85	(42)	(138)	—	(21)	(19)	160	
Trading derivatives	295	85	(42)	(138)	—	(21)	(19)	160	
<i>Swaps</i>	81	4	(10)	(36)	—	3	2	44	
<i>Exchange rate options</i>	1	2	—	4	—	—	—	7	
<i>Interest rate options</i>	49	26	(19)	(8)	—	—	(22)	26	
<i>Index and securities options</i>	97	23	(5)	(27)	—	(22)	1	67	
<i>Securities and interest rate futures</i>	2	—	(2)	—	—	—	—	—	
<i>Others</i>	65	30	(6)	(71)	—	(2)	—	16	
Financial liabilities designated at fair value through profit or loss	610	143	0	0	—	(289)	5	469	
TOTAL LIABILITIES	905	228	(42)	(138)	—	(310)	(14)	629	



EUR million	01/01/2020	Changes						31/12/2020
	Fair value calculated using internal models (level 3)	Purchases/ Issuances	Sales/ Settlements	Changes in fair value recognised in profit or loss	Changes in fair value recognised in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)
Financial assets held for trading	598	52	(98)	330	—	(45)	(97)	740
Debt securities	65	7	(27)	1	—	—	(39)	7
Equity instruments	—	3	—	—	—	—	—	3
Trading derivatives	533	42	(71)	329	—	(45)	(58)	730
<i>Swaps</i>	182	—	(8)	116	—	(8)	(10)	272
<i>Exchange rate options</i>	8	—	—	15	—	—	(1)	22
<i>Interest rate options</i>	177	15	(12)	61	—	—	—	241
<i>Index and securities options</i>	95	25	(43)	85	—	(38)	(30)	94
<i>Other</i>	71	2	(8)	52	—	1	(17)	101
Financial assets at fair value through profit or loss	664	280	(45)	17	—	(91)	(176)	649
Credit entities	50	164	—	(1)	—	(50)	—	163
Loans and advances to customers	32	—	(15)	3	—	—	(1)	19
Debt securities	582	116	(30)	15	—	(41)	(175)	467
Non-trading financial assets mandatorily at fair value through profit or loss	1,601	120	(292)	(36)	—	(119)	(340)	934
Loans and advances to customers	376	104	(136)	12	—	(30)	(31)	295
Debt securities	675	—	(144)	(63)	—	2	(336)	134
Equity instruments	550	16	(12)	15	—	(91)	27	505
Financial assets at fair value through other comprehensive income	3,788	8,795	(7,616)	—	(390)	571	1,072	6,220
TOTAL ASSETS	6,651	9,247	(8,051)	311	(390)	316	459	8,543
Financial liabilities held for trading	290	40	(14)	130	—	(96)	(55)	295
Trading derivatives	290	40	(14)	130	—	(96)	(55)	295
<i>Swaps</i>	115	8	—	(7)	—	(26)	(9)	81
<i>Exchange rate options</i>	1	—	—	2	—	—	(2)	1
<i>Interest rate options</i>	34	11	(2)	6	—	—	—	49
<i>Index and securities options</i>	88	21	(8)	95	—	(70)	(29)	97
<i>Securities and interest rate futures</i>	2	—	—	—	—	—	—	2
<i>Others</i>	50	—	(4)	34	—	—	(15)	65
Financial liabilities designated at fair value through profit or loss	784	4	(3)	(12)	—	(32)	(131)	610
TOTAL LIABILITIES	1,074	44	(17)	118	—	(128)	(186)	905

**iv. Recognition of fair value changes**

As a general rule, changes in the carrying amount of financial assets and liabilities are recognised in the consolidated income statement. A distinction is made between the changes resulting from the accrual of interest and similar items, (which are recognised under Interest income or Interest expense, as appropriate), and those arising for other reasons, which are recognised at their net amount under 'Gains/losses on financial assets and liabilities'.

Adjustments due to changes in fair value arising from:

- 'Financial assets at fair value with changes in other comprehensive income' are recorded temporarily, in the case of debt instruments in 'Other comprehensive income - Elements that can be reclassified to profit or loss - Financial assets at fair value with changes in other comprehensive income', while in the case of equity instruments are recorded in 'other comprehensive income - Elements that will not be reclassified to line item - Changes in the fair value of equity instruments valued at fair value with changes in other comprehensive income'.

Exchange differences on debt instruments measured at fair value with changes in other comprehensive income are recognised under 'Exchange Differences, net' of the consolidated income statement. Exchange differences on equity instruments, in which the irrevocable option of being measured at fair value with changes in other comprehensive income has been chosen, are recognised in 'Other comprehensive income - Items that will not be reclassified to profit or loss - Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income'.

- Items charged or credited to 'Items that may be reclassified to profit or loss - Financial assets at fair value through other comprehensive income' and 'Other comprehensive income - Items that may be reclassified to profit or loss - Exchange differences in equity' remain in the Group's consolidated equity until the asset giving rise to them is impaired or derecognised, at which time they are recognised in the consolidated income statement.
- Unrealized capital gains on financial assets at fair value through other comprehensive income classified as 'Non-current assets held for sale' because they form part of a disposal group or a discontinued operation that are recorded in the equity balancing entry 'Other accumulated comprehensive income - Items that can be reclassified in income - Non-current assets as held for sale'.

v. Hedging transactions

The consolidated entities use financial derivatives for the following purposes: i) to facilitate these instruments to customers who request them in the management of their market and credit risks; ii) to use these derivatives in the management of the risks of the Group entities' own positions and assets and liabilities (hedging derivatives); and iii) to obtain gains from changes in the prices of these derivatives (derivatives).

Financial derivatives that do not qualify for hedge accounting are treated for accounting purposes as trading derivatives.

A derivative qualifies for hedge accounting if all the following conditions are met:

1. The derivative hedges one of the following three types of exposure:
 - a. Changes in the fair value of assets and liabilities due to fluctuations, among others, in the interest rate and/or exchange rate to which the position or balance to be hedged is subject (fair value hedge).
 - b. Changes in the estimated cash flows arising from financial assets and liabilities, commitments and highly probable forecast transactions (cash flow hedge).
 - c. The net investment in a foreign operation (hedge of a net investment in a foreign operation).
2. It is effective in offsetting exposure inherent in the hedged item or position throughout the expected term of the hedge, which means that:
 - a. At the date of arrangement the hedge is expected, under normal conditions, to be highly effective (prospective effectiveness).
 - b. There is sufficient evidence that the hedge was actually effective during the whole life of the hedged item or position (retrospective effectiveness). To this end, the Group checks that the results of the hedge were within a range of 80% to 125% of the results of the hedged item.
3. There must be adequate documentation evidencing the specific designation of the financial derivative to hedge certain balances or transactions and how this hedge was expected to be achieved and measured, provided that this is consistent with the Group's management of own risks.



The changes in value of financial instruments qualifying for hedge accounting are recognised as follows:

- a. In fair value hedges, the gains or losses arising on both the hedging instruments and the hedged items attributable to the type of risk being hedged are recognised directly in the consolidated income statement.

In fair value hedges of interest rate risk on a portfolio of financial instruments, the gains or losses that arise on measuring the hedging instruments are recognised directly in the consolidated income statement, whereas the gains or losses due to changes in the fair value of the hedged amount (attributable to the hedged risk) are recognised in the consolidated income statement with a balancing entry under Changes in the fair value of hedged items in portfolio hedges of interest rate risk on the asset or liability side of the balance sheet, as appropriate.
- b. In cash flow hedges, the effective portion of the change in value of the hedging instrument is recognised temporarily in Other comprehensive income – under Items that may be reclassified to profit or loss – Hedging derivatives – Cash flow hedges (effective portion) until the forecast transactions occur, when it is recognised in the consolidated income statement, unless, if the forecast transactions result in the recognition of non-financial assets or liabilities, it is included in the cost of the non-financial asset or liability.
- c. In hedges of a net investment in a foreign operation, the gains or losses attributable to the portion of the hedging instruments qualifying as an effective hedge are recognised temporarily in Other comprehensive income under Items that may be reclassified to profit or loss – Hedges of net investments in foreign operations until the gains or losses – on the hedged item are recognised in profit or loss.
- d. The ineffective portion of the gains or losses on the hedging instruments of cash flow hedges and hedges of a net investment in a foreign operation is recognised directly under 'Gains/losses on financial assets and liabilities (net)' in the consolidated income statement, in Gains or losses from hedge accounting, net.

If a derivative designated as a hedge no longer meets the requirements described above due to expiration, ineffectiveness or for any other reason, the derivative is classified for accounting purposes as a trading derivative.

When fair value hedge accounting is discontinued, the adjustments previously recognised on the hedged item are amortised to profit or loss at the effective interest rate recalculated at the date of hedge discontinuation. The adjustments must be fully amortised at maturity.

When cash flow hedge accounting is discontinued, any cumulative gain or loss on the hedging instrument recognised in equity under other comprehensive income 'Items that may be reclassified to profit or loss' (from the period when the hedge was effective) remains in this equity item until the forecast transaction occurs, at which time it is recognised in profit or loss, unless the transaction is no longer expected to occur, in which case the cumulative gain or loss is recognised immediately in profit or loss.

vi. Derivatives embedded in hybrid financial instruments

Derivatives embedded in other financial instruments or in other host contracts are accounted for separately as derivatives if their risks and characteristics are not closely related to those of the host contracts, provided that the host contracts are not classified as financial assets/liabilities designated at fair value through profit or loss or as 'Financial assets/liabilities held for trading'.

e) Derecognition of financial assets and liabilities

The accounting treatment of transfers of financial assets depends on the extent to which the risks and rewards associated with the transferred assets are transferred to third parties:

1. If the Group transfers substantially all the risks and rewards to third parties unconditional – sale of financial assets, sale of financial assets under an agreement to repurchase them at their fair value at the date of repurchase, sale of financial assets with a purchased call option or written put option that is deeply out of the money, securitisation of assets in which the transferor does not retain a subordinated debt or grant any credit enhancement to the new holders, and other similar cases-, the transferred financial asset is derecognised and any rights or obligations retained or created in the transfer are recognised simultaneously.
2. If the Group retains substantially all the risks and rewards associated with the transferred financial asset – sale of financial assets under an agreement to repurchase them at a fixed price or at the sale price plus interest, a securities lending agreement in which the borrower undertakes to return the same or similar assets, and other similar cases-, the transferred financial asset is not derecognised and continues to be measured by the same criteria as those used before the transfer. However, the following items are recognised:
 - a. An associated financial liability, which is recognised for an amount equal to the consideration received and is subsequently measured at amortised cost, unless it meets the requirements for classification under 'Financial liabilities designated at fair value through profit or loss'.
 - b. The income from the transferred financial asset not derecognised and any expense incurred on the new financial liability, without offsetting.



3. If the Group neither transfers nor retains substantially all the risks and rewards associated with the transferred financial asset -sale of financial assets with a purchased call option or written put option that is not deeply in or out of the money, securitisation of assets in which the transferor retains a subordinated debt or other type of credit enhancement for a portion of the transferred asset, and other similar cases- the following distinction is made:

- a. If the transferor does not retain control of the transferred financial asset, the asset is derecognised and any rights or obligations retained or created in the transfer are recognised.
- b. If the transferor retains control of the transferred financial asset, it continues to recognise it for an amount equal to its exposure to changes in value and recognises a financial liability associated with the transferred financial asset. The net carrying amount of the transferred asset and the associated liability is the amortised cost of the rights and obligations retained, if the transferred asset is measured at amortised cost, or the fair value of the rights and obligations retained, if the transferred asset is measured at fair value.

Accordingly, financial assets are only derecognised when the rights to the cash flows they generate have expired or when substantially all the inherent risks and rewards have been transferred to third parties. Similarly, financial liabilities are only derecognised when the obligations they generate have been extinguished or when they are acquired with the intention either to cancel them or to resell them.

Regarding contractual modifications of financial assets, Grupo Santander has differentiated them into two main categories in relation to the conditions under which a modification leads to a derecognition or disposal of the financial asset (and the recognition of a new financial asset) and those under which the accounting of the original financial instrument with the modified terms is maintained:

- Contractual modifications for commercial or market reasons, which are generally carried out at the request of the debtor to apply current market conditions to the debt. The new contract is considered a new transaction and, consequently, it is necessary to derecognize the original financial asset and recognize a new financial asset subject to the classification and measurement requirements established by IFRS 9. Also, the new financial asset will be recorded at fair value and, if applicable, the difference between the carrying amount of the asset derecognized and the fair value of the new asset will be recognized in profit or loss.

- Modifications due to refinancing or restructuring, in which the payment conditions are modified to allow a customer that is experiencing financial difficulties (current or foreseeable) to meet its payment obligations and that, if such modification had not been made, it would be reasonably certain that it would not be able to meet such payment obligations. In this case, the modification does not result in the derecognition of the financial asset, but rather the original financial asset is maintained and does not require a new assessment of its classification and measurement. When assessing credit impairment, the current credit risk (considering the modified cash flows) should be compared with the credit risk at initial recognition. Finally, the gross carrying amount of the financial asset (the present value of the renegotiated or modified contractual cash flows that are discounted at the original effective interest rate of the financial asset) should be recalculated, with a gain or loss recognized in profit or loss for the difference.



f) Offsetting of financial instruments

Financial asset and liability balances are offset, i.e. reported in the consolidated balance sheet at their net amount, only if the Group entities currently have a legally enforceable right to set off the recognised amounts and intend either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Following is the detail of financial assets and liabilities that were offset in the consolidated balance sheets as of 31 December 2022, 2021 and 2020:

31 December 2022				31 December 2022			
EUR million				EUR million			
	Gross amount of financial assets	Gross amount of financial assets offset in the balance sheet	Net amount of financial assets presented in the balance sheet		Gross amount of financial liabilities	Gross amount of financial liabilities offset in the balance sheet	Net amount of financial liabilities presented in the balance sheet
Assets				Liabilities			
Derivatives	176,814	(101,743)	75,071	Derivatives	175,862	(101,743)	74,119
Reverse repurchase agreements	127,561	(48,949)	78,612	Reverse repurchase agreements	148,715	(48,949)	99,766
Total	304,375	(150,692)	153,683	Total	324,577	(150,692)	173,885

31 December 2021				31 December 2021			
EUR million				EUR million			
	Gross amount of financial assets	Gross amount of financial assets offset in the balance sheet	Net amount of financial assets presented in the balance sheet		Gross amount of financial liabilities	Gross amount of financial liabilities offset in the balance sheet	Net amount of financial liabilities presented in the balance sheet
Assets				Liabilities			
Derivatives	101,486	(42,432)	59,054	Derivatives	101,462	(42,432)	59,029
Reverse repurchase agreements	72,023	(13,916)	58,107	Reverse repurchase agreements	73,424	(13,916)	59,508
Total	173,509	(56,348)	117,161	Total	174,886	(56,348)	118,537

31 December 2020				31 December 2020			
EUR million				EUR million			
	Gross amount of financial assets	Gross amount of financial assets offset in the balance sheet	Net amount of financial assets presented in the balance sheet		Gross amount of financial liabilities	Gross amount of financial liabilities offset in the balance sheet	Net amount of financial liabilities presented in the balance sheet
Assets				Liabilities			
Derivatives	136,437	(60,975)	75,462	Derivatives	132,313	(60,975)	71,338
Reverse repurchase agreements	82,865	(16,078)	66,787	Reverse repurchase agreements	77,925	(16,078)	61,847
Total	219,302	(77,053)	142,249	Total	210,238	(77,053)	133,185



At 31 December 2022, Grupo Santander has offset other items amounting to EUR 1,024 million (EUR 1,188 million and EUR 1,194 million at 31 December 2021 and 2020, respectively).

At 31 December 2022 the balance sheet shows the amounts EUR 141,529 million (EUR 106,430 million and EUR 130,653 million at 31 December 2021 and 2020) on derivatives and repos as assets and EUR 157,572 million (EUR 104,130 million and EUR 122,416 million at 31 December 2021 and 2020, respectively) on derivatives and repos as liabilities that are subject to netting and collateral arrangements.

g) Impairment of financial assets

i. Definition

Grupo Santander associates an impairment in the value to financial assets measured at amortised cost, debt instruments measured at fair value with changes in other comprehensive income, lease receivables and commitments and guarantees granted that are not measured at fair value.

The impairment for expected credit losses is recorded with a charge to the consolidated income statement for the period in which the impairment arises. In the event of occurrence, the recoveries of previously recognised impairment losses are recorded in the consolidated income statement for the period in which the impairment no longer exists or is reduced.

In the case of purchased or originated credit-impaired assets, the Group only recognizes at the reporting date the changes in the expected credit losses during the life of the asset since the initial recognition as a credit loss. In the case of assets measured at fair value with changes in other comprehensive income, the changes in the fair value due to expected credit losses are charged in the consolidated income statement of the year where the change happened, reflecting the rest of the valuation in other comprehensive income.

As a rule, the expected credit loss is estimated as the difference between the contractual cash flows to be recovered and the expected cash flows discounted using the original effective interest rate. In the case of purchased or originated credit-impaired assets, this difference is discounted using the effective interest rate adjusted by credit rating.

Depending on the classification of financial instruments, which is mentioned in the following sections, the expected credit losses may be along 12 months or during the life of the financial instrument:

- 12-month expected credit losses: arising from the potential default events, as defined in the following sections that are estimated to be likely to occur within the 12 months following the reporting date. These losses will be associated with financial assets classified as 'normal risk' as defined in the following sections.
- Expected credit losses over the life of the financial instrument: arising from the potential default events that are estimated to be likely to occur throughout the life of the financial instruments. These losses are associated with financial assets classified as 'normal risk under watchlist' or 'doubtful risk'.

With the purpose of estimating the expected life of the financial instrument all the contractual terms have been taken into account (e.g. prepayments, duration, purchase options, etc.), being the contractual period (including extension options) the maximum period considered to measure the expected credit losses. In the case of financial instruments with an uncertain maturity period and a component of undrawn commitment (e.g.: credit cards), the expected life is estimated through quantitative analyses to determine the period during which the entity is exposed to credit risk, also considering the effectiveness of management procedures that mitigate such exposure (e.g. the ability to unilaterally cancel such financial instruments, etc.).

The following constitute effective guarantees:

- a) Mortgage guarantees on housing as long as they are first duly constituted and registered in favour of the entity. The properties include:
 - i. Buildings and building elements, distinguishing among:
 - Houses.
 - Offices, stores and multi-purpose premises.
 - Rest of buildings such as non-multi-purpose premises and hotels.
 - ii. Urban and developable ordered land.
 - iii. Rest of properties that classify as: buildings and building elements under construction, such as property development in progress and halted development, and the rest of land types, such as rustic lands.
- b) Collateral guarantees on financial instruments in the form of cash deposits and debt securities issued by creditworthy issuers.
- c) Other types of real guarantees, including properties received in guarantee and second and subsequent mortgages on properties, as long as the entity demonstrates its effectiveness. When assessing the effectiveness of the second and subsequent mortgages on properties the entity will implement particularly restrictive criteria. It will take into account, among others, whether the previous charges are in favour of the entity itself or not and the relationship between the risk guaranteed by them and the property value.
- d) Personal guarantees, as well as the incorporation of new owners, covering the entire amount of the financial instruments and implying direct and joint liability to the entity of persons or other entities whose solvency is sufficiently proven to ensure the repayment of the loan on the agreed terms.

The different aspects that the Group considers for the evaluation of effective guarantees are set out below in relation to the individual analysis.



ii. Financial instruments presentation

For the purposes of estimating the impairment amount, and in accordance with its internal policies, the Group classifies its financial instruments (financial assets, commitments and guarantees) measured at amortised cost or fair value through other comprehensive income in one of the following categories:

- Normal Risk ('stage 1'): includes all instruments that do not meet the requirements to be classified in the rest of the categories.
- Normal risk under watchlist ('stage 2'): includes all instruments that, without meeting the criteria for classification as doubtful or default risk, have experienced significant increases in credit risk since initial recognition.

In order to determine whether a financial instrument has increased its credit risk since initial recognition and is to be classified in stage 2, the Group considers the following criteria:

	Changes in the risk of a default occurring through the expected life of the financial instrument are analysed and quantified with respect to its credit level in its initial recognition.
	With the purpose of determining if such changes are considered as significant, with the consequent classification into stage 2, each Group unit has defined the quantitative thresholds to consider in each of its portfolios taking into account corporate guidelines ensuring a consistent interpretation in all units.
Quantitative criteria	Within the quantitative thresholds, two types are considered: A relative threshold is those that compare current credit quality with credit quality at the time of origination in percentage terms of change. In addition, an absolute threshold compares both references in total terms, calculating the difference between the two. These absolute/relative concepts are used homogeneously (with different values) in all geographies. The use of one type of threshold or another (or both) is determined in accordance with the process described in note 53, below, and is marked by the type of portfolio and characteristics such as the starting point of the average credit quality of the portfolio.
Qualitative criteria	In addition to the quantitative criteria indicated, various indicators are used that are aligned with those used by the Group in the normal management of credit risk. Irregular positions of more than 30 days and renewals are common criteria in all Group units. In addition, each unit can define other qualitative indicators, for each of its portfolios, according to the particularities and normal management practices in line with the policies currently in force (i.e. use of management alerts, etc.). The use of these qualitative criteria is complemented with the use of an expert judgement, under the corresponding governance.

In the case of forbearances, instruments classified as 'normal risk under watchlist' may be generally reclassified to 'normal risk' in the following circumstances: at least two years have elapsed from the date of reclassification to that category or from its forbearance date, the client has paid the accrued principal and interest balance, and the client has no other instruments with more than 30 days past due balances.

- Doubtful Risk ('stage 3'): includes financial instruments, overdue or not, in which, without meeting the circumstances to classify them in the category of default risk, there are reasonable doubts about their total repayment (principal and interests) by the client in the terms contractually agreed. Likewise, off-balance-sheet exposures whose payment is probable and their recovery doubtful are considered in stage 3. Within this category, two situations are differentiated:

- Doubtful risk for non-performing loans: financial instruments, irrespective of the client and guarantee, with balances more than 90 consecutive days on material arrears for principal, interest or expenses contractually agreed.

This category also includes all loan balances for a client when the operations with more than 90 consecutive days on material arrears are greater than 20% of the amounts pending collection.

These instruments may be reclassified to other categories if, as a result of the collection of part of the past due balances, the reasons for their classification in this category do not remain and the client does not have balances more than 90 consecutive days on material arrears in other loans.

- Doubtful risk for reasons other than non-performing loans: this category includes doubtful recovery financial instruments that are not more than 90 consecutive days on material arrears.

Grupo Santander considers that a financial instrument to be doubtful for reasons other than delinquency when one or more combined events have occurred with a negative impact on the estimated future cash flows of the financial instrument. To this end, the following indicators, among others, are considered:

- Negative net equity or decrease because of losses of the client's net equity by at least 50% during the last financial year.
- Continued losses or significant decrease in revenue or, in general, in the client's recurring cash flows.
- Generalised delay in payments or insufficient cash flows to service debts.
- Significantly inadequate economic or financial structure or inability to obtain additional financing by the client.
- Existence of an internal or external credit rating showing that the client is in default.
- Existence of overdue customer commitments with a significant amount to public institutions or employees.

These financial instruments may be reclassified to other categories if, as a result of an individualised study, reasonable doubts do not remain about the total repayment under the contractually agreed terms and the client does not have balances of 90 consecutive days on material arrears.



In the case of forbearances, instruments classified as doubtful risk may be reclassified to the category of 'normal risk under watchlist' when the following circumstances are present: a minimum period of one year has elapsed from the forbearance date, the client has paid the accrued principal and interest amounts, and the client has no other loan balances of 90 consecutive days on material arrears.

- **Default Risk:** includes all financial assets, or part of them, for which, after an individualised analysis, their recovery is considered remote due to a notorious and irrecoverable deterioration of their solvency.

In any event, except in the case of financial instruments with effective collateral covering a substantial portion of the transaction amount, the Group generally consider as remote the following:

- Those operations that, after an individualized analysis, are categorized as unsustainable debt, assuming an irrecoverability of such debt.
- Transactions classified as doubtful due to non-performing loans with recovery costs that exceed the amounts receivable.
- The operations on which the award is executed. The queue of these operations shall be included under default risk, as the recovery of the flows, provided that no further guarantees associated with the operation remain after the award of the property.
- Those operations on which a deduction is made, the portion of the operation corresponding to that deduction, will be given as a balance at the time of signature.

A financial asset amount is maintained in the balance sheet until they are considered as a "default risk", either all or a part of it, and the write-off is registered against the balance sheet.

In the case of operations that have only been partially derecognised, for forgiveness reasons or because part of the total balance is considered unrecoverable, the remaining amount shall be fully classified in the category of 'doubtful risk', except where duly justified.

The classification of a financial asset, or part of it, as a 'default risk' does not involve the disruption of negotiations and legal proceedings to recover the amount.

iii. Impairment valuation assessment

Grupo Santander has policies, methods and procedures in place to hedge its credit risk, both due to the insolvency attributable to counterparties and its residence in a specific country.

These policies, methods and procedures are applied in the concession, study and documentation of financial assets, commitments and guarantees, as well as in the identification of their impairment and in the calculation of the amounts needed to cover their credit risk.

The asset impairment model in IFRS 9 applies to financial assets measured at amortised cost, debt instruments at fair value with changes in other comprehensive income, lease receivables and commitments and guarantees granted that are not measured at fair value.

The impairment represents the best estimation of the financial assets expected credit losses at the balance sheet date, assessed both individually and collectively.

- **Individually:** for the purposes of estimating the provisions for credit risk arising from the insolvency of a financial instrument, the Group individually assesses impairment by estimating the expected credit losses on those financial instruments that are considered to be significant and with sufficient information to make such an estimate.

Therefore, this classification mostly includes wholesale banking customers —Corporations, specialised financing— as well as some of the largest companies —Chartered and real estate developers— from retail banking. The determination of the perimeter in which the individualised estimate is applied is detailed in a later section.

The individually assessed impairment estimate is equal to the difference between the gross carrying amount of the financial instrument and the estimated value of the expected cash flows receivable discounted using the original effective interest rate of the transaction. The estimate of these cash flows takes into account all available information on the financial asset and the effective guarantees associated with that asset. This estimation process is detailed below.

- **Collectively:** the Group also assesses impairment by estimating the expected credit losses collectively in cases where they are not assessed on an individual basis. This includes, for example, loans with individuals, sole proprietors or businesses in retail banking subject to a standardised risk management.

For the purposes of the collective assessment of expected credit losses, the Group has consistent and reliable internal models. For the development of these models, instruments with similar credit risk characteristics that are indicative of the debtors' capacity to pay are considered.

The credit risk characteristics used to group the instruments are, among others: type of instrument, debtor's sector of activity, geographical area of activity, type of guarantee, aging of past due balances and any other factor relevant to estimating the future cash flows.

Grupo Santander performs retrospective and monitoring tests to evaluate the reasonableness of the collective estimate.

On the other hand, the methodology required to estimate the expected credit loss due to credit events is based on an unbiased and weighted consideration by the probability of occurrence of a series of scenarios, considering a range of three to five possible future scenarios, depending on the characteristics of each unit, which could have an impact on the collection of contractual cash flows, always taking into account the time value of money, as well as all available and relevant information on past events, current conditions and forecasts of the evolution of macroeconomic scenarios that are shown to be relevant for the estimation of this amount (for example: GDP (Gross Domestic Product), housing price, unemployment rate, etc.).



The estimation of expected losses requires expert judgment and the support of historical, current and future information. The probability of loss is measured considering past events, the present situation and future trends of macroeconomic scenarios.

Grupo Santander uses forward-looking information in both internal risk management and prudential regulation processes, so that for the calculation of the impairment loss allowance, various scenarios are incorporated that take advantage of the experience with such information, thus ensuring consistency in obtaining the expected loss.

The complexity of the estimation in this exercise has been derived from the current macroeconomic scenario as a consequence of the war in Ukraine, as well as the increasing level of inflation and interest rates, and the difficulties in the supply chains, which has generated some uncertainty in the evolution of the economy.

Grupo Santander has internally ensured the criteria to be followed for guarantees received from government bodies, both through credit lines and other public guarantees, so that when they are adequately reflected in each of the contracts, they are recognised as mitigating factors of the potential expected losses, and therefore of the provisions to be recognised, based on the provisions of the applicable standard (IFRS 9 Par. B5.5.55). Furthermore, where applicable, these guarantees are appropriately reflected in the mitigation of the significant increase in risk, considering their nature as personal guarantees.

For the estimation of the parameters used in the estimation of impairment provisions -EAD (exposure at default), PD (probability of default), LGD (loss given default)-, the Group based its experience in developing internal models for the estimation of parameters both in the regulatory area and for management purposes, adapting the development of the impairment provision models under IFRS 9.

- Exposure at default: is the amount of estimated risk incurred at the time of the counterparty's analysis.
- Probability of default: is the estimated probability that the counterparty will default on its principal and/or interest payment obligations.
- Loss given default: is the estimate of the severity of the loss incurred in the event of non-compliance. It depends mainly on the updating of the guarantees associated with the operation and the future cash flows that are expected to be recovered.

In any case, when estimating the flows expected to be recovered, portfolio sales are included. It should be noted that due to the Group's recovery policy and the experience observed in relation to the prices of past sales of assets classified as stage 3 and/or default risk, there is no substantial divergence between the flows obtained from recoveries after performing recovery management of the assets with those obtained from the sale of portfolios of assets discounting structural expenses and other costs incurred.

The definition of default implemented by the Group for the purpose of calculating the impairment provision models is based on the definition in Article 178 of Regulation 575/2013 of the European Union (CRR), which is fully aligned with the requirements of IFRS 9, which considers that a 'default' exists in relation to a specific customer/contract when at least one of the following circumstances exists: the entity considers that there are reasonable doubts about the payment of all its credit obligations or that the customer/contract is in an irregular situation for more than 90 consecutive days past due material balances with respect to any significant credit obligation.

Grupo Santander has partially and voluntarily aligned during 2022 the accounting definition of Stage 3, as well as the calculation of impairment provision models, to the New Definition of Default, incorporating the criteria defined by the EBA in its implementation guide of the definition of default, capturing the economic deterioration of the operations (days in default - on a daily basis - and materiality thresholds - minimum amount in arrears). The alignment of criteria has been done taking into account the criteria of IFRS 9 as well as the accounting principles of unbiased presentation of financial information. Grupo Santander has registered an increase in the default rate at around 19 basis points, with no material impact on the provision figures for credit risk.

In addition, the Group considers the risk generated in all cross-border transactions due to circumstances other than the usual commercial risk of insolvency (sovereign risk, transfer risk or risks arising from international financial activity, such as wars, natural catastrophes, balance of payments crisis, etc.).

IFRS 9 includes a series of practical solutions that can be implemented by entities, with the aim of facilitating its implementation. However, in order to achieve a complete and high-level implementation of the standard, and following the best practices of the industry, the Group does not apply these practical solutions in a generalised manner:

- Rebuttable presumption that the credit risk has increased significantly, when payments are more than 30 days past due: this threshold is used as an additional, but not primary, indicator of significant risk increase. Additionally, there may be cases in the Group where its use has been rebutted as a result of studies that show a low correlation of the significant risk increase with this past due threshold. The volume rebutted does not exceed 0.1% of the Group's total exposure.
- Assets with low credit risk at the reporting date: the Group assesses the existence of significant risk increase in all its financial instruments.

This information is provided in more detail in note 53 b.

iv. Detail of individual estimate of impairment

For the individual estimate of the assessment for impairment of the financial asset, the Group has a specific methodology to estimate the value of the cash flows expected to be collected:

- Recovery through the debtor's ordinary activities (going approach).
- Recovery through the execution and sale of the collateral guaranteeing the operations (gone approach).



Gone approach:

a. Evaluation of the effectiveness of guarantees

Grupo Santander assesses the effectiveness of all the guarantees associated considering the following:

- The time required to execute these guarantees.
- Grupo Santander's ability to enforce or assert these guarantees in its favour.
- The existence of limitations imposed by each local unit's regulation on the foreclosure of collateral.

Under no circumstances the Group considers that a guarantee is effective if its effectiveness depends substantially on the solvency of the debtor, as could be the case:

- Promises of shares or other securities of the debtor himself when their valuation may be significantly affected by a debtor's default.
- Personal cross-collateralisation: when the guarantor of a transaction is, at the same time, guaranteed by the holder of that transaction.

On the basis of the foregoing, the following types of guarantees are considered to be effective:

- Mortgage guarantees on properties, which are first charge, duly constituted and registered. Real estate includes:
 - Buildings and finished building elements.
 - Urban and developable land in order.
 - Other real estate, including buildings under construction, developments in progress or at a standstill, and other land, such as rural properties.
- Pledges on financial instruments such as cash deposits, debt securities of reputable issuers or equity instruments.
- Other types of security interests, including movable property received as security and second and subsequent mortgages on real state, provided that they are proven to be effective under particularly restrictive criteria.
- Personal guarantees, including new holders, covering the entire amount and involving direct and joint liability to the entity, from persons or entities whose equity solvency ensures repayment of the transaction under the agreed terms.

b. Valuation of guarantees

Grupo Santander assesses the guarantees on the basis of their nature in accordance with the following:

- Mortgage guarantees on properties associated with financial instruments, using a complete individual valuations carried out by independent valuation experts and under generally accepted valuation standards. If this is not possible, alternative valuations are used with duly documented and approved internal valuation models.

- Personal guarantees are valued individually on the basis of the guarantor's updated information.
- The rest of the guarantees are valued based on current market values.

c. Adjustments to the value of guarantees and estimation of future cash flow inflows and outflows

Grupo Santander applies a series of adjustments to the value of the guarantees in order to improve the reference values:

- Adjustments based on the historical sales experience of local units for certain types of assets.
- Individual expert adjustments based on additional management information.

Likewise, to adjust the value of the guarantees, the time value of money is taken into account based on the historical experience of each of the units, estimating:

- Period of adjudication.
- Estimated time of sale of the asset.

In addition, the Group takes into account all those cash inflows and outflows linked to that guarantee until it is sold:

- Possible future income commitments in favour of the borrower which will be available after the asset is awarded.
- Estimated foreclosure costs.
- Asset maintenance costs, taxes and community costs.
- Estimated marketing or sales costs.

Finally, since it is considered that the guarantee will be sold in the future, the Group applies an additional adjustment ('index forward') in order to adjust the value of the guarantees to future valuation expectations.

**v. Impairment individual assessment scope**

Grupo Santander determines the perimeter over which it makes an estimate of the assessment for impairment on an individual basis based on a relevance threshold set by each of the geographical areas and the stage in which the operations are located. In general, the Group applies the individualised calculation of expected losses to the significant exposures classified in stage 3, although Banco Santander, S.A. has also extended its analyses to some of the exposures classified in stage 2.

It should be noted that, in any case and irrespective of the stage in which their transactions are carried out, for customers who do not receive standardised treatment, a relational risk management model is applied, with individualised treatment and monitoring by the assigned risk analyst. In addition to wholesale customers (Santander Corporate & Investment Banking or SCIB) and large companies, this relational management model also includes other segments of smaller companies for which there is information and capacity for more personalised and expert analysis and monitoring. As indicated in the Group's wholesale credit model, the individual treatment of the client facilitates the continuous updating of information. The risk assumed must be followed and monitored throughout its life cycle, enabling anticipation and action to be taken in the event of possible impairments. In this way, the customer's credit quality is analysed individually, taking into account specific aspects such as his competitive position, financial performance, management, etc. In the wholesale risk management model, every customer with a credit risk position is assigned a rating, which has an associated probability of customer default. Thus, individual analysis of the debtor triggers a specific rating for each customer, which determines the appropriate parameters for calculating the expected loss, so that it is the rating itself that initially modulates the necessary coverage, adjusting the severity of the possible loss to the guarantees and other mitigating factors that the customer may have available. In addition, if as a result of this individualised monitoring of the customer, the analyst finally considers that his coverage is not sufficient, he has the necessary mechanisms to adjust it under his expert judgement, always under the appropriate governance.

h) Repurchase agreements and reverse repurchase agreements

Purchases (sales) of financial instruments under a non-optional resale (repurchase) agreement at a fixed price (repos) are recognised in the consolidated balance sheet as financing granted (received), based on the nature of the debtor (creditor), under 'Loans and advances with central banks', 'Loans and advances to credit institutions' or 'Loans and advances to customers' (Deposits from central banks, Deposits from credit institutions or Customer deposits).

Differences between the purchase and sale prices are recognised as interest over the contract term.

i) 'Non-current assets' and 'liabilities associated with non-current assets held for sale'

'Non-current assets held for sale' includes the carrying amount of individual items, disposal groups or items forming part of a business unit earmarked for disposal (discontinued operations), whose sale in their present condition is highly likely to be completed within one year from the reporting date. Therefore, the recovery of the carrying amount of these items -which can be of a financial nature or otherwise- will foreseeably be effected through the proceeds from their disposal.

Specifically, property or other non-current assets received by the consolidated entities as total or partial settlement of their debtors' payment obligations to them are deemed to be 'Non-current assets held for sale', unless the consolidated entities have decided to make continuing use of these assets. In this connection, for the purpose of its consideration in the initial recognition of these assets, the Group obtains, at the foreclosure date, the fair value of the related asset through a request for appraisal by external appraisal agencies.

Grupo Santander has in place a corporate policy that ensures the professional competence and the independence and objectivity of the external appraisal agencies, in accordance with the regulations, which require appraisal agencies to meet independence, neutrality and credibility requirements, so that the use of their estimates does not reduce the reliability of its valuations. This policy establishes that all the appraisal companies and agencies with which the Group works in Spain should be registered in the Official Register of the Bank of Spain and that the appraisals performed by them should follow the methodology established in Ministry of Economy Order ECO/805/2003, of 27 March. The main appraisal companies and agencies with which the Group worked in Spain in 2022 are as follows: Gloval Valuation, S.A.U., Tinsa Tasaciones Inmobiliarias, S.A.U., CBRE Valuation Advisory, S.A., Valoraciones Mediterráneo, S.A. y Sociedad de tasación, S.A.

Also, this policy establishes that the various subsidiaries abroad work with appraisal companies that have recent experience in the area and the type of asset under appraisal and meet the independence requirements established in the corporate policy. They should verify, inter alia, that the appraisal company is not a party related to the Group and that its billings to the Group in the last twelve months do not exceed 15% of the appraisal company's total billings.

'Liabilities associated with non-current assets held for sale' includes the balances payable arising from the assets held for sale or disposal groups and from discontinued operations.

'Non-current assets and disposal groups of items that have been classified as held for sale' are generally recognised at the date of their allocation to this category and are subsequently valued at the lower of their fair value less costs to sell or its book value. 'Non-current assets and disposal groups of items that are classified as held for sale' are not amortised as long as they remain in this category.

At 31 December 2022 the fair value less costs to sell of non-current assets held for sale exceeded their carrying amount by EUR 631 million (EUR 567 million at 31 December 2021); however, in accordance with the accounting standards, this unrealised gain could not be recognised.



The valuation of the portfolio of non-current assets held for sale has been made in compliance with the requirements of International Financial Reporting Standards in relation to the estimate of the fair value of tangible assets and the value-in-use of financial assets.

The value of the portfolio is determined as the sum of the values of the individual elements that compose the portfolio, without considering any total or batch grouping in order to correct the individual values.

Banco Santander, in compliance with Bank of Spain Circular 4/2017, and subsequent amendments, on public and private financial reporting standards and financial statement models, has developed a methodology that enables it to estimate the fair value and costs of sale of assets foreclosed or received in payment of debts. This methodology is based on the classification of the portfolio of foreclosed assets into different segments. Segmentation enables the intrinsic characteristics of Banco Santander's portfolio of foreclosed assets to be differentiated, so that assets with homogeneous characteristics are grouped by segment.

Thus, the portfolio is segmented into (i) finished assets of a residential and tertiary nature, (ii) developments in progress and (iii) land.¹

In determining the critical segments in the overall portfolio, assets are classified on the basis of the nature of the asset and its stage of development. This segmentation is made in order to seek the liquidation of the asset (which should be carried out in the shortest possible time).

When making decisions, the situation and/or characteristics of the asset are fundamentally taken into account, as well as the evaluation of all the determining factors that favour the recovery of the debt. For them, the following aspects are analyzed, among others:

- The time that has elapsed since the adjudication.
- The transferability and contingencies of the foreclosed asset.
- The economic viability from the real estate point of view with the necessary investment estimate.
- The expenses that may arise from the marketing process.
- The offers received, as well as the difficulties in finding buyers.

In the case of real estate assets foreclosed in Spain, which represent 90% of the Group's total non-current assets held for sale, the valuation of the portfolio is carried out by applying the following models:

- Market Value Model used in the valuation of finished properties of a residential nature (mainly homes and car parks) and properties of a tertiary nature (offices, commercial premises and multipurpose buildings). For the valuation of finished assets whose availability for sale is immediate, a market sale value provided by a third party external to Banco Santander is considered, calculated under the AVM methodology by the comparable properties method adjusted by our experience in selling similar assets, given the term, price, volume, trend in the value of these assets and the time elapsing until their sale and discounting the estimated costs of sale.

The market value is determined on the basis of the definition established by the International Valuation Standards drawn up by the IVSC (International Valuation Standards Council), understood as the estimated amount for which an asset or a liability should be exchanged on the measurement date between a willing buyer and a willing seller, in an arm's length transaction, after appropriate marketing, and in which the parties have acted with sufficient information, prudently and without coercion.

The current market value of the properties is estimated on the basis of automated valuations obtained by taking comparable properties as a reference; simulating the procedure carried out by an appraiser in a physical valuation according to Order ECO 805/2003: selection of properties and obtaining the unit value by applying homogenisation adjustments. The selection of the properties is carried out by location within the same real estate cluster and according to the characteristics of the properties, filtering by type², surface area range and age. The model enables a distinction to be made within the municipality under study as to which areas are similar and comparable and therefore have a similar value in the property market, discriminating between which properties are good comparators and which are not.

Adjustments to homogenize the properties are made according to: (i) the age of the property according to the age of the property to be valued, (ii) the deviation of the built area from the common area with respect to the property to be valued and (iii) by age of the date of capture of the property according to the price evolution index of the real estate market.

In addition, for individually significant assets, complete individual valuations are carried out, including a visit to the asset, market analysis (data relating to supply, demand, current sale or rental price ranges and supply-demand and revaluation expectations) and an estimate of expected income and costs.

1. The assets in a situation of 'stopped development' are included under 'land

2. Assets qualified as protected housing are taken into account. The maximum legal value of these assets is determined by the VPO module, obtained from the result of multiplying the State Basic Module (MBE) by a zone coefficient determined by each autonomous community. To carry out the valuation of a protected property, the useful surface area is used in accordance with current regulations..



For this segmentation of assets, when they are completed, the real costs are known and the actual expenses for the marketing and sale of the asset must be taken into account. Therefore, Banco Santander uses the actual costs in its calculation engine or, failing that, those estimated on the basis of its observed experience.

- Market Value Model according to Evolution of Market Values used to update the valuation of developments in progress. The valuation model estimates the current market value of the properties based on complete individual valuations by third parties, calculated from the values of the feasibility studies and development costs of the promotion, as well as the selling costs, distinguishing by location, size and type of property. The inputs used in the valuation model for residential assets under construction are actual revenues and costs.

For this purpose, in order to calculate the investment flows, Banco Santander considers, on the basis of the feasibility studies, the expenditure required for construction, the professional fees relating to the project and to project management, the premiums for mandatory building insurance, the developer's administrative expenses, licenses, taxes on new construction and fees, and urban development charges.

With respect to the calculation of income flows, Banco Santander takes into account the square metres built, the number of homes under construction and the estimated selling price over 1.5 years.

The market value will be the result of the difference between the income flows and the investment flows estimated at each moment.

- Land Valuation model. The methodology followed by the Group regarding land valuation consists of updating the individual reference valuation of each of the land on an annual basis, through updated valuation valuations carried out by independent professionals and following the methodology established in the OM (Ministerial Order) ECO/805/2003, of 27 March, whose main verifications in the case of land valuation, regardless of the degree of urbanisation of the land, correspond to:

- Visual verification of the assessed property.
- Registry description.
- Urban planning.
- Visible easements.
- Visible state of occupation, possession, use and exploitation.
- Protection regime.
- Apparent state of preservation.
- Correspondence with cadastral property.
- Existence of expropriation procedure, expropriation plan or project, administrative resolution or file that may lead to expropriation.
- Expiry of the urbanization or building deadlines.

- Existence of a procedure for failure to comply with obligations.
- Verification of surfaces.

For the purposes of valuation, the land will be classified in the following levels:

- Level I: It will include all the lands that do not belong to level II.
- Level II: It shall include land classified as undeveloped where building is not allowed for uses other than agriculture, forestry, livestock or linked to an economic exploitation permitted by the regulations in force. Also included are lands classified as developable that are not included in a development area of urban planning or that, in such an area, the conditions for its development have not been defined.

In those cases where the Group does not have an updated reference value through an ECO valuation for the current year, we use as a reference value the latest available ECO valuation reduced or corrected by the average annual coverage ratio of the land on which we have obtained an updated reference value, through an ECO valuation.

Grupo Santander applies a discount to the aforementioned reference values that takes into account both the discount on the reference value in the sales process and the estimated costs of marketing or selling the land:

Discount on reference value = % discount on sales + % marketing costs being:

- % discount on Sales: = $100 - (\text{sales price} / \text{updated appraisal value})$.
- marketing costs: calculated on the basis of our historical experience in sales and in accordance with the marketing management fees negotiated with our suppliers of this type of service.

In this way the Group obtains the corrected market value, an amount that we compare with the net cost of each piece of land to determine its correct valuation and conclude with our valuation process.

In addition, in relation to the previously mentioned valuations, less costs to sell, are contrasted with the sales experience of each type of asset in order to confirm that there is no significant difference between the sale price and the valuation.

Impairment losses on an asset or disposal group arising from a reduction in its carrying amount to its fair value (less costs to sell) are recognised under 'Gains or (losses) on non-current assets held for sale not classified as discontinued operations' in the consolidated income statement.

The gains on a non-current asset held for sale resulting from subsequent increases in fair value (less costs to sell) increase its carrying amount and are recognised in the consolidated income statement up to an amount equal to the impairment losses previously recognised.



j) Assets under insurance or reinsurance contracts and Liabilities under insurance or reinsurance contracts

Insurance contracts involve the transfer of a certain quantifiable risk in exchange for a periodic or one-off premium. The effects on the Group's cash flows will arise from a deviation in the payments forecast and/or an insufficiency in the premium set.

The Group controls its insurance risk as follows:

- By applying a strict methodology in the launch of products and in the assignment of value thereto.
- By using deterministic and stochastic actuarial models for measuring commitments.
- By using reinsurance as a risk mitigation technique as part of the credit quality guidelines in line with the Group's general risk policy.
- By establishing an operating framework for credit risks.
- By actively managing asset and liability matching.
- By applying security measures in processes.

Reinsurance assets includes the amounts that the consolidated entities are entitled to receive for reinsurance contracts with third parties and, specifically, the reinsurer's share of the technical provisions recorded by the consolidated insurance entities.

At least once a year these assets are reviewed to ascertain whether they are impaired (i.e. there is objective evidence, as a result of an event that occurred after initial recognition of the reinsurance asset, that Grupo Santander may not receive all amounts due to it under the terms of the contract and the amount that will not be received can be reliably measured), and any impairment loss is recognised in the consolidated income statement and the assets are written down.

'Liabilities under insurance contracts' includes the technical provisions recorded by the consolidated entities to cover claims arising from insurance contracts in force at year-end.

Insurers' results relating to their insurance business are recognised, according to their nature, under the related consolidated income statement items.

In accordance with standard accounting practice in the insurance industry, the consolidated insurance entities credit to the income statement the amounts of the premiums written and charge to income the cost of the claims incurred on final settlement thereof. Insurance entities are therefore required to accrue at period-end the unearned revenues credited to their income statements and the accrued costs not charged to income.

At least at each reporting date the Group assesses whether the insurance contract liabilities recognised in the consolidated balance sheet are adequate. For this purpose, it calculates the difference between the following amounts:

- Current estimates of future cash flows under the insurance contracts of the consolidated entities. These estimates include all contractual cash flows and any related cash flows, such as claims handling costs.

- The carrying amount recognised in the consolidated balance sheet of its insurance contract liabilities (see note 15), less any related deferred acquisition costs or related intangible assets, such as the amount paid to acquire, in the event of purchase by the entity, the economic rights held by a broker deriving from policies in the entity's portfolio.

If the calculation results in a positive amount, this deficiency is charged to the consolidated income statement. When unrealised gains or losses on assets of the Group's insurance companies affect the measurement of liabilities under insurance contracts and/or the related deferred acquisition costs and/or the related intangible assets, these gains or losses are recognised directly in equity. The corresponding adjustment in the liabilities under insurance contracts (or in the deferred acquisition costs or in intangible assets) is also recognised in equity.

The most significant items forming part of the technical provisions (see note 15) are detailed below:

- Non-life insurance provisions:
 - i) Provision for unearned premiums: relates to the portion of the premiums received at year-end that is allocable to the period from the reporting date to the end of the policy cover period.
 - ii) Provisions for unexpired risks: this supplements the provision for unearned premiums to the extent that the amount of the latter is not sufficient to reflect all the assessed risks and expenses to be covered by the insurance companies in the policy period not elapsed at the reporting date.
- Life insurance provisions: represent the value of the net obligations acquired vis-à-vis life insurance policyholders. These provisions include:
 - i) Provision for unearned premiums and unexpired risks: this relates to the portion of the premiums received at year-end that is allocable to the period from the reporting date to the end of the policy cover period.
 - ii) Mathematical provisions: these relate to the value of the insurance companies' obligations, net of the policyholders' obligations. These provisions are calculated on a policy-by-policy basis using an individual capitalisation system, taking as a basis for the calculation the premium accrued in the year, and in accordance with the technical bases of each type of insurance updated, where appropriate, by the local mortality tables.
- Provision for claims outstanding: this reflects the total obligations outstanding arising from claims incurred prior to the reporting date. This provision is calculated as the difference between the total estimated or certain cost of the claims not yet reported, settled or paid and all the amounts already paid in relation to such claims.



- Provision for bonuses and rebates: this provision includes the amount of the bonuses accruing to policyholders, insureds or beneficiaries and that of any premiums to be returned to policyholders or insureds, to the extent that such amounts have not been assigned at the reporting date. These amounts are calculated on the basis of the conditions of the related individual policies.
- Technical provisions for life insurance policies where the investment risk is borne by the policyholders: these provisions are calculated on the basis of the indices established as a reference to determine the economic value of the policyholders' rights.

k) Tangible assets

Tangible assets includes the amount of buildings, land, furniture, vehicles, computer hardware and other fixtures owned by the consolidated entities or acquired under finance leases. Tangible assets are classified by use as follows:

i. Property, plant and equipment for own use

Property, plant and equipment for own use – including tangible assets received by the consolidated entities in full or partial satisfaction of financial assets representing receivables from third parties which are intended to be held for continuing use and tangible assets acquired under finance leases– are presented at acquisition cost, less the related accumulated depreciation and any estimated impairment losses (carrying amount higher than recoverable amount).

Depreciation is calculated, using the straight-line method, on the basis of the acquisition cost of the assets less their residual value. The land on which the buildings and other structures stand has an indefinite life and, therefore, is not depreciated.

The annual tangible asset depreciation charge is recognised in the consolidated income statement and are essentially equivalent to the following amortization percentages (determined based on the years of estimated useful life, on average, of the different elements):

	Average annual rate
Buildings for own use	2.7%
Furniture	8.4%
Fixtures	8.4%
Office and IT equipment	23.6%
Lease use rights	Less than the lease term or the useful life of the underlying asset

At the end of each reporting period, consolidated entities assess whether there is any indication that the carrying amount of an asset exceeds its recoverable amount, in which case they write down the carrying amount of the asset to its recoverable amount and adjust future depreciation charges in proportion to its adjusted carrying amount and to its new remaining useful life, if the useful life needs to be re-estimated.

Similarly, if there is an indication of a recovery in the value of a tangible asset, the consolidated entities recognise the reversal of the impairment loss recognised in prior periods and adjust the future depreciation charges accordingly. In no circumstances may the reversal of an impairment loss on an asset raise its carrying amount above that which it would have if no impairment losses had been recognised in prior years.

The estimated useful lives of the items of property, plant and equipment for own use are reviewed at least at the end of the reporting period with a view to detecting significant changes therein. If changes are detected, the useful lives of the assets are adjusted by correcting the depreciation charge to be recognised in the consolidated income statement in future years on the basis of the new useful lives.

Upkeep and maintenance expenses relating to property, plant and equipment for own use are recognised as an expense in the period in which they are incurred, since they do not increase the useful lives of the assets.

ii. Investment property

'Investment property' reflects the net values of the land, buildings and other structures held either to earn rentals or for obtaining profits by sales due to future increase in market prices.

The criteria used to recognise the acquisition cost of investment property, to calculate its depreciation and its estimated useful life and to recognise any impairment losses thereon are consistent with those described in relation to property, plant and equipment for own use.

In order to evaluate the possible impairment Grupo Santander determines periodically the fair value of its investment property so that, at the end of the reporting period, the fair value reflects the market conditions of the investment property at that date. This fair value is determined annually, taking as benchmarks the valuations performed by independent experts. The methodology used to determine the fair value of investment property is selected based on the status of the asset in question; thus, for properties earmarked for lease, the valuations are performed using the sales comparison approach, whereas for leased properties the valuations are made primarily using the income capitalisation approach and, exceptionally, the sales comparison approach.

In the sales comparison approach, the property market segment for comparable properties is analysed, inter alia, and, based on specific information on actual transactions and firm offers, current prices are obtained for cash sales of those properties. The valuations performed using this approach are considered as level 2 valuations.

In the income capitalisation approach, the cash flows estimated to be obtained over the useful life of the property are discounted taking into account factors that may influence the amount and actual obtainment thereof, such as: (i) the payments that are normally received on comparable properties; (ii) current and probable future occupancy; (iii) the current or foreseeable default rate on payments. The valuations performed using this approach are considered as Level 3 valuations, since significant unobservable inputs are used, such as current and probable future occupancy and/or the current or foreseeable default rate on payments.

**iii. Assets leased out under an operating lease**

'Property, plant and equipment' - Leased out under an operating lease reflects the amount of the tangible assets, other than land and buildings, leased out by the Group under an operating lease.

The criteria used to recognise the acquisition cost of assets leased out under operating leases, to calculate their depreciation and their respective estimated useful lives and to recognise the impairment losses thereon are consistent with those described in relation to property, plant and equipment for own use.

l) Accounting for leases

The main aspects contained in the regulation (IFRS 16) adopted by the Group are included below:

When the Group acts as lessee, it recognises a right-of-use asset representing its right to use the underlying leased asset with a corresponding lease liability on the date on which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and the finance charge. The finance charge is allocated to the income statement during the term of the lease in such a way as to produce a constant periodic interest rate on the remaining balance of the liability for each year. The right-of-use asset is depreciated over the useful life of the asset or the lease term, whichever is shorter, on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is amortized over the useful life of the underlying asset.

Assets and liabilities arising from a lease are initially measured at present value. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including inflation-linked payments), less any lease incentive receivable.
- Variable lease payments that depend on an index or rate.
- The amounts expected to be paid by the lessee under residual value guarantees.
- The exercise price of a purchase option if the lessee is reasonably certain that it will exercise that option.
- Lease termination penalty payments, if the term of the lease reflects the lessee's exercise of that option.

Lease payments are discounted using the interest rate implicit in the lease. Given in certain situations this interest rate cannot be obtained, the discount rate used in these cases, is the lessee's incremental borrowing rate at the related date. For this purpose, the entity has calculated this incremental borrowing rate taking as reference the listed debt instruments issued by the Group; in this regard, the Group has estimated different interest rate curves depending on the currency and economic environment in which the contracts are located.

In order to construct the incremental borrowing rate, a methodology has been developed at the corporate level. This methodology is based on the need for each entity to consider its economic and financial situation, for which the following factors must be considered:

- Economic and political situation (country risk).
- Credit risk of the company.
- Monetary policy.
- Volume and seniority of the company's debt instrument issues.

The incremental borrowing rate is defined as the interest rate that a lessee would have to pay for borrowing, given a similar period to the duration of the lease and with similar security, the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment. The Group entities have a wide stock and variety of financing instruments issued in different currencies to that of the euro (pound, dollar, etc.) that provide sufficient information to be able to determine an "all in rate" (reference rate plus adjustment for credit spread at different terms and in different currencies). In circumstances, where the leasing company has its own financing, this has been used as the starting point for determining the incremental borrowing rate. On the other hand, for those Grupo Santander entities that do not have their own financing, the information from the financing of the consolidated subgroup to which they belong was used as the starting point for estimating the entity's curve, analysing other factors to assess whether it is necessary to make any type of negative or positive adjustment to the initially estimated credit spread.

Right-of-use assets are valued at cost which includes the following:

- The amount of the initial measurement of the lease liability.
- Any lease payment made at or before the commencement date less any lease incentive received.
- Any initial direct costs.
- Restoration costs.

The Group recognises the payments associated with short-term leases and leases of low-value assets on a straight-line basis as an expense in the income statement. Short-term leases are leases with a lease term less than or equal to 12 months (a lease that contains a purchase option is not a short term lease).

m) Intangible assets

Intangible assets are identifiable non-monetary assets (separable from other assets) without physical substance which arise as a result of a legal transaction or which are developed internally by the consolidated entities.

Only assets whose cost can be estimated reliably and from which the consolidated entities consider it probable that future economic benefits will be generated are recognised.

Intangible assets are recognised initially at acquisition or production cost and are subsequently measured at cost less any accumulated amortisation and any accumulated impairment losses.

**i. Goodwill**

Any excess of the cost of the investments in the consolidated entities and entities accounted for using the equity method over the corresponding underlying carrying amounts acquired, adjusted at the date of first-time consolidation, is allocated as follows:

- If it is attributable to specific assets and liabilities of the companies acquired, by increasing the value of the assets (or reducing the value of the liabilities) whose fair values were higher (lower) than the carrying amounts at which they had been recognised in the acquired entities' balance sheets.
- If it is attributable to specific intangible assets, by recognising it explicitly in the consolidated balance sheet provided that the fair value of these assets within twelve months following the date of acquisition can be measured reliably.
- The remaining amount is recognised as goodwill, which is allocated to one or more cash-generating units (CGU) (a cash-generating unit is the smallest identifiable group of assets that, as a result of continuing operation, generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets). The cash-generating units represent the Group's geographical and/or business segments.

Goodwill (only recognised when it has been acquired by consideration) represents, therefore, a payment made by the acquirer in anticipation of future economic benefits from assets of the acquired entity that are not capable of being individually identified and separately recognised.

At the end of each annual reporting period or whenever there is any indication of impairment goodwill is reviewed for impairment (i.e. a reduction in its recoverable amount to below its carrying amount) and, if there is any impairment, the goodwill is written down with a charge to 'Impairment or reversal of impairment on non-financial assets, net - Intangible assets' in the consolidated income statement.

An impairment loss recognised for goodwill is not reversed in a subsequent period.

In the event of sale or departure of an activity that is part of a CGU, the part of the goodwill that can be assigned to said activity would be written-off, taking as a reference the relative value of the same over the total of the CGU at the time of sale or abandonment. If applicable, the distribution by currency of the remaining goodwill will be performed based on the relative values of the remaining activities.

ii. Other intangible assets

Other intangible assets includes the amount of identifiable intangible assets, such as purchased customer lists and computer software.

Other intangible assets can have an indefinite useful life -when, based on an analysis of all the relevant factors, it is concluded that there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the consolidated entities- or a finite useful life, in all other cases.

Intangible assets with indefinite useful lives are not amortised, but rather at the end of each reporting period or whenever there is any indication of impairment the consolidated entities review the remaining useful lives of the assets in order to determine whether they continue to be indefinite and, if this is not the case, to take the appropriate steps.

Intangible assets with finite useful lives are amortised over those useful lives using methods similar to those used to depreciate tangible assets.

The intangible asset amortisation charge is recognised under 'Depreciation and amortisation' in the consolidated income statement.

In both cases the consolidated entities recognise any impairment loss on the carrying amount of these assets with a charge to 'Impairment or reversal of impairment on non-financial assets, net - Intangible assets in the consolidated' income statement.

The criteria used to recognise the impairment losses on these assets and, where applicable, the reversal of impairment losses recognised in prior years are similar to those used for tangible assets (see note 2.k).

Internally developed computer software

Internally developed computer software is recognised as an intangible asset if, among other requisites (basically the Group's ability to use or sell it), it can be identified and its ability to generate future economic benefits can be demonstrated.

Expenditure on research activities is recognised as an expense in the year in which it is incurred and cannot be subsequently capitalised into the carrying amount of the intangible asset.

n) Other assets

'Other assets' in the consolidated balance sheet includes the amount of assets not recorded in other items, the breakdown being as follows:

- **Inventories:** this item includes the amount of assets, other than financial instruments, that are held for sale in the ordinary course of business, that are in the process of production, construction or development for such purpose, or that are to be consumed in the production process or in the provision of services. Inventories include land and other property held for sale in the property development business.

Inventories are measured at the lower of cost and net realisable value, which is the estimated selling price of the inventories in the ordinary course of business, less the estimated costs of completion and the estimated costs required to make the sale.

Any write-downs of inventories -such as those due to damage, obsolescence or reduction of selling price- to net realisable value and other impairment losses are recognised as expenses for the year in which the impairment or loss occurs. Subsequent reversals are recognised in the consolidated income statement for the year in which they occur.

The carrying amount of inventories is derecognised and recognised as an expense in the period in which the revenue from their sale is recognised.



- Other: this item includes the balance of all prepayments and accrued income (excluding accrued interest, fees and commissions), the net amount of the difference between pension plan obligations and the value of the plan assets with a balance in the entity's favour, when this net amount is to be reported in the consolidated balance sheet, and the amount of any other assets not included in other items.

o) Other liabilities

'Other liabilities' includes the balance of all accrued expenses and deferred income, excluding accrued interest, and the amount of any other liabilities not included in other categories.

p) Provisions and contingent liabilities (assets)

When preparing the financial statements of the consolidated entities, Banco Santander's directors made a distinction between:

- Provisions: credit balances covering present obligations at the reporting date arising from past events which could give rise to a loss for the consolidated entities, which is considered to be likely to occur and certain as to its nature but uncertain as to its amount and/or timing.
- Contingent liabilities: possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the consolidated entities. They include the present obligations of the consolidated entities when it is not probable that an outflow of resources embodying economic benefits will be required to settle them. The Group does not recognise the contingent liability. The Group will disclose a contingent liability, unless the possibility of an outflow of resources embodying economic benefits is remote.
- Contingent assets: possible assets that arise from past events and whose existence is conditional on, and will be confirmed only by, the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Contingent assets are not recognised in the consolidated balance sheet or in the consolidated income statement, but rather are disclosed in the notes, provided that it is probable that these assets will give rise to an increase in resources embodying economic benefits.

Grupo Santander's consolidated financial statements include all the material provisions with respect to which it is considered that it is more likely than not the obligation will have to be settled. In accordance with accounting standards, contingent liabilities must not be recognised in the consolidated financial statements, but must rather be disclosed in the Notes.

Provisions (which are quantified on the basis of the best information available on the consequences of the event giving rise to them and are reviewed and adjusted at the end of each year) are used to cater for the specific obligations for which they were originally recognised. Provisions are fully or partially reversed when such obligations cease to exist or are reduced.

Provisions are classified according to the obligations covered as follows (see note 25):

- Provision for pensions and similar obligations: includes the amount of all the provisions made to cover post-employment benefits, including obligations to pre-retirees and similar obligations.
- Provisions for contingent liabilities and commitments: include the amount of the provisions made to cover contingent liabilities -defined as those transactions in which the Group guarantees the obligations of a third party, arising as a result of financial guarantees granted or contracts of another kind- and contingent commitments -defined as irrevocable commitments that may give rise to the recognition of financial assets.
- Provisions for taxes and other legal contingencies and Other provisions: include the amount of the provisions recognised to cover tax and legal contingencies and litigation and the other provisions recognised by the consolidated entities. Other provisions includes, inter alia, any provisions for restructuring costs and environmental measures.

q) Court proceedings and/or claims in process

At the end of 2022 certain court proceedings and claims were in process against the consolidated entities arising from the ordinary course of their operations (see note 25).

r) Own equity instruments

Own equity instruments are those meeting both of the following conditions:

- The instruments do not include any contractual obligation for the issuer (i) to deliver cash or another financial asset to a third party; or (ii) to exchange financial assets or financial liabilities with a third party under conditions that are potentially unfavourable to the issuer.
- The instruments will or may be settled in the issuer's own equity instruments and are: (i) a non-derivative that includes no contractual obligation for the issuer to deliver a variable number of its own equity instruments; or (ii) a derivative that will be settled by the issuer through the exchange of a fixed amount of cash or another financial asset for a fixed number of its own equity instruments.

Transactions involving own equity instruments, including their issuance and cancellation, are charged directly to equity.

Changes in the value of instruments classified as own equity instruments are not recognised in the consolidated financial statements. Consideration received or paid in exchange for such instruments, including the coupons on preference shares contingently convertible into ordinary shares and the coupons associated with CCPP, is directly added to or deducted from equity.



s) Equity-instrument-based employee remuneration

Own equity instruments delivered to employees in consideration for their services, if the instruments are delivered once the specific period of service has ended, are recognised as an expense for services (with the corresponding increase in equity) as the services are rendered by employees during the service period. At the grant date the services received (and the related increase in equity) are measured at the fair value of the equity instruments granted. If the equity instruments granted are vested immediately, Grupo Santander recognises in full, at the grant date, the expense for the services received.

When the requirements stipulated in the remuneration agreement include external market conditions (such as equity instruments reaching a certain quoted price), the amount ultimately to be recognised in equity will depend on the other conditions being met by the employees (normally length of service requirements), irrespective of whether the market conditions are satisfied. If the conditions of the agreement are met but the external market conditions are not satisfied, the amounts previously recognised in equity are not reversed, even if the employees do not exercise their right to receive the equity instruments.

t) Recognition of income and expenses

The most significant criteria used by Grupo Santander to recognise its income and expenses are summarised as follows:

i. Interest income, interest expenses and similar items

Interest income, interest expenses and similar items are generally recognised on an accrual basis using the effective interest method. Dividends received from other companies are recognised as income when the consolidated entities' right to receive them arises.

ii. Commissions, fees and similar items

Fee and commission income and expenses are recognised in the consolidated income statement using criteria that vary according to their nature. The main criteria are as follows:

- Fee and commission income and expenses relating to financial assets and financial liabilities measured at fair value through profit or loss are recognised when paid.
- Those arising from transactions or services that are performed over a period of time are recognised over the life of these transactions or services.
- Those relating to services provided in a single act are recognised when the single act is carried out.

iii. Non-finance income and expenses

They are recognised for accounting purposes when the good is delivered or the non-financial service is rendered. To determine the amount and timing of recognition, a five-step model is followed: identification of the contract with the customer, identification of the separate obligations of the contract, determination of the transaction price, distribution of the transaction price among the identified obligations and finally recording of income as the obligations are satisfied.

iv. Deferred collections and payments

These are recognised for accounting purposes at the amount resulting from discounting the expected cash flows at market rates.

v. Loan arrangement fees

Loan arrangement fees, mainly loan origination, application and information fees, are accrued and recognised in income over the term of the loan.

u) Financial guarantees

Financial guarantees are considered contracts that require the issuer to make specific payments to reimburse the creditor for the loss it incurs when a specific debtor defaults on its due date payment obligation in accordance with the original or modified conditions of debt instrument, regardless of its legal form, which may be, among others, a deposit, financial guarantee, insurance contract or credit derivative.

Grupo Santander initially recognises the financial guarantees provided on the liability side of the consolidated balance sheet at fair value, which is generally the present value of the fees, commissions and interest receivable from these contracts over the term thereof, and simultaneously the Group recognises the amount of the fees, commissions and similar interest received at the inception of the transactions and a credit on the asset side of the consolidated balance sheet for the present value of the fees, commissions and interest outstanding.

Financial guarantees, regardless of the guarantor, instrumentation or other circumstances, are reviewed periodically so as to determine the credit risk to which they are exposed and, if appropriate, to consider whether a provision is required. The credit risk is determined by application of criteria similar to those established for quantifying impairment losses on debt instruments carried at amortised cost (described in note 2.g above).

The provisions made for these transactions are recognised under 'Provisions - Provisions for commitments and guarantees given in the consolidated balance sheet' (see note 25). These provisions are recognised and reversed with a charge or credit, respectively, to 'Provisions or reversal of provisions', net, in the consolidated income statement.

If a specific provision is required for financial guarantees, the related unearned commissions recognised under 'Financial liabilities at amortised cost - Other financial liabilities in the consolidated balance sheet', are reclassified to the appropriate provision.

v) Assets under management and investment and pension funds managed by the Group

Assets owned by third parties and managed by the consolidated entities are not presented on the face of the consolidated balance sheet. Management fees are included in 'Fee and commission income' in the consolidated income statement.

The investment funds and pension funds managed by the consolidated entities are not presented on the face of the Group's consolidated balance sheet since the related assets are owned by third parties. The fees and commissions earned in the year for the services rendered by the Group entities to these funds (asset management and custody services) are recognised under Fee and 'Commission income' in the consolidated income statement.

Note 2.b.iv describes the internal criteria and procedures used to determine whether control exists over the structured entities, which include, inter alia, investment funds and pension funds.



w) Post-employment benefits

Under the collective agreements currently in force and other arrangements, the Spanish banks included in the Group and certain other Spanish and foreign consolidated entities have undertaken to supplement the public social security system benefits accruing to certain employees, and to their beneficiary right holders, for retirement, permanent disability or death, and the post-employment welfare benefits.

Grupo Santander's post-employment obligations to its employees are deemed to be defined contribution plans when the Group makes pre-determined contributions (recognised under Personnel expenses in the consolidated income statement) to a separate entity and will have no legal or effective obligation to make further contributions if the separate entity cannot pay the employee benefits relating to the service rendered in the current and prior periods. Post-employment obligations that do not meet the aforementioned conditions are classified as defined benefit plans (see note 25).

Defined contribution plans

The contributions made in this connection in each year are recognised under 'Personnel expenses' in the consolidated income statement.

The amounts not yet contributed at each year-end are recognised, at their present value, under 'Provisions - Provision for pensions' and similar obligations on the liability side of the consolidated balance sheet.

Defined benefit plans

Grupo Santander recognises under 'Provisions - Provision for pensions and similar obligations on the liability side of the consolidated balance sheet' (or under 'Other assets' on the asset side, as appropriate) the present value of its defined benefit post-employment obligations, net of the fair value of the plan assets.

Plan assets are defined as those that will be directly used to settle obligations and that meet the following conditions:

- They are not owned by the consolidated entities, but by a legally separate third party that is not a party related to the Group.
- They are only available to pay or fund post-employment benefits and they cannot be returned to the consolidated entities unless the assets remaining in the plan are sufficient to meet all the benefit obligations of the plan and of the entity to current and former employees, or they are returned to reimburse employee benefits already paid by Grupo Santander.

If Grupo Santander can look to an insurer to pay part or all of the expenditure required to settle a defined benefit obligation, and it is practically certain that said insurer will reimburse some or all of the expenditure required to settle that obligation, but the insurance policy does not qualify as a plan asset, the Group recognises its right to reimbursement -which, in all other respects, is treated as a plan asset- under 'Insurance contracts linked to pensions' on the asset side of the consolidated balance sheet.

Grupo Santander will recognise the following items in the income statement:

- Current service cost, (the increase in the present value of the obligations resulting from employee service in the current period), is recognised under 'Staff costs'.
- The past service cost, which arises from changes to existing post-employment benefits or from the introduction of new benefits and includes the cost of reductions, is recognised under 'Provisions or reversal of provisions'.
- Any gain or loss arising from a liquidation of the plan is included in the Provisions or reversion of provisions.
- Net interest on the net defined benefit liability (asset), i.e. the change during the period in the net defined benefit liability (asset) that arises from the passage of time, is recognised under 'Interest expense' and similar charges ('Interest and similar income' if it constitutes income) in the consolidated income statement.

The remeasurement of the net defined benefit liability (asset) is recognised in 'Other comprehensive income' under Items not reclassified to profit or loss and includes:

- Actuarial gains and losses generated in the year, arising from the differences between the previous actuarial assumptions and what has actually occurred and from the effects of changes in actuarial assumptions.
- The return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).
- Any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset).

x) Other long-term employee benefits

Other long-term employee benefits, defined as obligations to pre-retirees -taken to be those who have ceased to render services at the entity but who, without being legally retired, continue to have economic rights vis-à-vis the entity until they acquire the legal status of retiree-, long-service bonuses, obligations for death of spouse or disability before retirement that depend on the employee's length of service at the entity and other similar items, are treated for accounting purposes, where applicable, as established above for defined benefit post-employment plans, except that actuarial gains and losses are recognised under 'Provisions or reversal of provisions', net, in the consolidated income statement (see note 25).

y) Termination benefits

Termination benefits are recognised when there is a detailed formal plan identifying the basic changes to be made, provided that implementation of the plan has begun, its main features have been publicly announced or objective facts concerning its implementation have been disclosed.

z) Income tax

The expense for Spanish income tax and other similar taxes applicable to the foreign consolidated entities is recognised in the consolidated income statement, except when they arise from a transaction whose results are recognised directly in equity, in which case the related tax effect is recognised in equity.



The current income tax expense is calculated as the sum of the current tax resulting from application of the appropriate tax rate to the taxable profit for the year (net of any deductions allowable for tax purposes), and of the changes in deferred tax assets and liabilities recognised in the consolidated income statement.

'Deferred tax assets' and liabilities include temporary differences, which are identified as the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their related tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realised or the liability is settled.

'Tax assets' include the amount of all tax assets, which are broken down into current -amounts of tax to be recovered within the next twelve months- and deferred -amounts of tax to be recovered in future years, including those arising from tax loss or tax credit carryforwards.

Tax liabilities' includes the amount of all tax liabilities (except provisions for taxes), which are broken down into current -the amount payable in respect of the income tax on the taxable profit for the year and other taxes in the next twelve months- and deferred -the amount of income tax payable in future years.

Deferred tax liabilities are recognised in respect of taxable temporary differences associated with investments in subsidiaries, associates or joint ventures, except when the Group is able to control the timing of the reversal of the temporary difference and, in addition, it is probable that the temporary difference will not reverse in the foreseeable future. In this regard, no deferred tax liabilities of EUR 374.6 million were recognised in relation to the taxation that would arise from the undistributed earnings of certain Group holding companies, in accordance with the legislation applicable in those jurisdictions.

Deferred tax assets are only recognised for temporary differences to the extent that it is considered probable that the consolidated entities will have sufficient future taxable profits against which the deferred tax assets can be utilised, and the deferred tax assets do not arise from the initial recognition (except in a business combination) of other assets and liabilities in a transaction that affects neither taxable profit nor accounting profit. Other deferred tax assets (tax loss and tax credit carryforwards) are only recognised if it is considered probable that the consolidated entities will have sufficient future taxable profits against which they can be utilised.

Differences generated by the different accounting and tax treatment of any of the income and expenses recorded directly in equity to be paid or recovered in the future are accounted for as temporary differences.

The deferred tax assets and liabilities are reassessed at the reporting date in order to ascertain whether any adjustments need to be made on the basis of the findings of the analyses performed.

aa) Residual maturity periods

In note 50, it is provided an analysis of the maturities of the balances of certain items in the consolidated balance sheet.

ab) Consolidated statement of recognised income and expense

This statement presents the income and expenses generated by the Group as a result of its business activity in the year, and a distinction is made between the income and expenses recognised in the consolidated income statement for the year and the other income and expenses recognised directly in consolidated equity.

Accordingly, this statement presents:

- a. Consolidated profit for the year.
- b. The net amount of the income and expenses recognised in 'Other comprehensive income' under items that will not be reclassified to profit or loss.
- c. The net amount of the income and expenses recognised in Other comprehensive income under items that may be reclassified subsequently to profit or loss.
- d. The income tax incurred in respect of the items indicated in b and c above, except for the valuation adjustments arising from investments in associates or joint ventures accounted for using the equity method, which are presented net.
- e. Total consolidated recognised income and expense, calculated as the sum of a) to d) above, presenting separately the amount attributable to the parent company and the amount relating to non-controlling interests.

The statement presents the items separately by nature, grouping together items that, in accordance with the applicable accounting standards, will not be reclassified subsequently to profit and loss since the requirements established by the corresponding accounting standards are met.

ac) Statement of changes in total equity

This statement presents all the changes in equity, including those arising from changes in accounting policies and from the correction of errors. Accordingly, this statement presents a reconciliation of the carrying amount at the beginning and end of the year of all the consolidated equity items, and the changes are grouped together on the basis of their nature into the following items:

- a. Adjustments due to changes in accounting policies and to errors: include the changes in consolidated equity arising as a result of the retrospective restatement of the balances in the consolidated financial statements, distinguishing between those resulting from changes in accounting policies and those relating to the correction of errors.
- b. Income and expense recognised in the year: includes, in aggregate form, the total of the aforementioned items recognised in the consolidated statement of recognised 'Income and expense'.
- c. Other changes in equity: includes the remaining items recognised in equity, including, inter alia, increases and decreases in capital, distribution of profit, transactions involving own equity instruments, equity-instrument-based payments, transfers between equity items and any other increases or decreases in consolidated equity.



ad) Consolidated statement of cash flows

The following terms are used in the consolidated statements of cash flows with the meanings specified:

- Cash flows: inflows and outflows of cash and cash equivalents, which are short-term, highly liquid investments that are subject to an insignificant risk of changes in value, irrespective of the portfolio in which they are classified.

Grupo Santander classifies as cash and cash equivalents the balances recognised under 'Cash, cash balances at central banks' and 'Other deposits on demand' in the consolidated balance sheet.

- Operating activities: the principal revenue-producing activities of credit institutions and other activities that are not investing or financing activities.
- Investing activities: the acquisition and disposal of long-term assets and other investments not included in cash and cash equivalents.
- Financing activities: activities that result in changes in the size and composition of the equity and liabilities that are not operating activities.

During 2022 Grupo Santander received interest amounting to EUR 69,282 million (EUR 48,081 and EUR 43,953 in 2021 and 2020, respectively) and paid interest amounting to EUR 23,390 million (EUR 12,738 and EUR 13,690 in 2021 and 2020, respectively).

Also, dividends received and paid by the Group are detailed in notes 4, 28 and 40, including dividends paid to minority interests (non-controlling interests).

3. Grupo Santander

a) Banco Santander, S.A., and international Group structure

The growth of Grupo Santander in the last decades has led Banco Santander to also act, in practice, as a holding entity of the shares of the various companies in its Group, and its results are becoming progressively less representative of the performance and earnings of the Group. Therefore, each year the bank determines the amount of the dividends to be distributed to its shareholders on the basis of the consolidated net profit, while maintaining the Group's objectives of capitalisation and taking into account that the transactions of the Bank and of the rest of the Group are managed on a consolidated basis (notwithstanding the allocation to each company of the related net worth effect).

At the international level, the various banks and other subsidiaries, joint ventures and associates of the Group are integrated in a corporate structure comprising various holding companies which are the ultimate shareholders of the banks and subsidiaries abroad.

The purpose of this structure, all of which is controlled Banco Santander, is to optimise the international organisation from the strategic, economic, financial and tax standpoints, since it makes it possible to define the most appropriate units to be entrusted with acquiring, selling or holding stakes in other international entities, the most appropriate financing method for these transactions and the most appropriate means of remitting the profits obtained by the group's various operating units to Spain.

The Appendices provide relevant data on the consolidated group companies and on the companies accounted for using the equity method.

b) Acquisitions and disposals

Following is a summary of the main acquisitions and disposals of ownership interests in the share capital of other entities and other significant corporate transactions performed in the last three years or pending to be completed:

i. Tender offer for shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México

On 21 October 2022, Banco Santander, S.A. ('Banco Santander') announced that it intends to make concurrent cash tender offers to acquire all of the shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México ('Santander Mexico') in Mexico (Series B shares) and United States (American Depositary Shares ('ADSs')) which are not owned by Grupo Santander, which amount to approximately 3.76% of Santander Mexico's share capital.

The offers were launched on 7 February 2023 and will be settled on 13 March, 2023. The shareholders who tender their shares in the offer will receive 24.52 Mexican pesos (approximately 1.20 euro) in cash per Santander Mexico share (and the US dollar equivalent of 122.6 Mexican pesos in cash per ADS based on the US dollar/Mexican peso exchange rate on the expiration date of 8 March, 2023), which corresponds to the book value of each Santander Mexico Share in accordance with Santander Mexico's quarterly report for the fourth quarter of 2022 according to applicable law.

Following the tender offers, Banco Santander intends to (a) cancel the registration of the Series B Shares in the National Securities Registry of the Mexican National Banking and Securities Commission ('CNBV') and delist such Series B Shares from the Mexican Stock Exchange ('BMV'), and (b) remove the ADSs from listing on the New York Stock Exchange and the Series B Shares from registration with the US Securities and Exchange Commission ('SEC') in the United States. Such cancellation has been approved by Santander Mexico's share capital at an extraordinary general shareholders' meeting held on 30 November 2022, with the favourable vote of the holders of the shares representing more than 95% of Santander Mexico's shares, as required by applicable law.

Consummation of the offers is subject to certain conditions, including the absence of any material adverse change in the financial condition, results of operations or prospects of Santander Mexico.



ii. Agreement to acquire a significant holding in Ebury Partners Limited

On 28 April 2020, the investment announced on 4 November 2019 in Ebury, a payments and foreign exchange platform for SMEs, was completed. The transaction involved a total disbursement of GBP 357 million (EUR 409 million) of which GBP 70 million (approximately EUR 80 million) was for new shares. By the end of 2019, the Group had already acquired 6.4% of the company for GBP 40 million (approximately EUR 45 million). Following the disbursement made in April 2020, which gave the Group 50.38% of the economic rights of the company, without the conditions to obtain control being met, this interest was recorded under 'Investments - Associated entities' in the consolidated balance sheet.

In April 2022 Grupo Santander acquired a new package of shares for GBP 113 million (EUR 135 million) and subscribed in full to a new capital increase, paying an additional GBP 60 million (EUR 72 million). Following these transactions, the Group holds 66.54% of the economic rights and control of the company.

The total value of the net assets identified in the business combination amounted to EUR 413 million, mainly intangible assets (IT developments, customer lists and brand) and resulted in the recognition of goodwill of EUR 316 million.

No gain or loss was recorded for the difference between the book value and the fair value of the previous holding as this difference was not significant.

The amount contributed by this business to the Group's net attributable profit since the date of acquisition is immaterial. Similarly, the result that this business would have contributed to the Group if the transaction had been carried out on 1 January 2022 would also have been immaterial.

iii. Purchase by SHUSA for shares of Santander Consumer USA

In August 2021 Santander Holdings USA, Inc. ('SHUSA') and Santander Consumer USA Holdings Inc. ('SC') entered into a definitive agreement pursuant to which SHUSA acquired all outstanding shares of common stock of SC not already owned by SHUSA via an all-cash tender offer (the 'Tender Offer') for USD 41.50 per SC common share (the 'Offer Price'), followed by a second-step consisting of a merge (together with the Offer, the 'Transaction') in which a wholly owned subsidiary of SHUSA was merged with and into SC, with SC surviving as a wholly owned subsidiary of SHUSA, and all outstanding shares of common stock of SC not tendered in the Tender Offer were converted into the right to receive the Offer Price in cash. The Offer Price represented a 14% premium to the closing price of SC common stock of USD 36.43 as of 1 July 2021, the last day prior to the announcement of SHUSA's initial offer to acquire the remaining outstanding shares of SC's common stock.

On 31 January 2022, after completion of the customary closing conditions, the Transaction was performed and SHUSA increased its share up to the 100% of SC's common stock. The transaction has meant a disbursement of USD 2,510 million (around EUR 2,239 million) for the Group, with a decrease of reserves of EUR 487 million and a decrease of EUR 1,752 million of minority interests.

iv. Acquisition of Amherst Pierpont Securities LLC, a US fixed-income broker dealer

On 15 July 2021, Santander Holdings USA, Inc. reached an agreement to acquire Amherst Pierpont Securities LLC, a market-leading independent fixed-income and structured products broker dealer, through the acquisition of its parent holding company, Pierpont Capital Holdings LLC, for a total consideration of approximately USD 450 million (around EUR 405 million). The operation was closed on 11 April 2022 once the pertinent regulatory approvals have been obtained. Immediately after the acquisition, SHUSA has lent financing to the company for an amount of USD 163 million (approximately EUR 147 million), which the company will use to cancel debt with third parties. Amherst Pierpont Securities LLC will become part of Santander Corporate & Investment Banking (Santander CIB) Global business line.

The business combination meant the recognition of a goodwill of EUR 158 million and EUR 24 million of intangible assets (mainly relationships with customers) identified in the purchase price allocation, without other relevant value adjustments to net assets of the business.

The amount contributed by this business to the group net attributable profit since the date of acquisition is not material. Similarly, the result that this business would have brought to the group if the transaction had been carried out on January 1, 2022 is also immaterial.

v. Tender offer for shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México

On 26 March 2021, Banco Santander, S.A. announced its intention to make a tender offer for all shares of Banco Santander Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México ('Santander México') that were not owned by Grupo Santander (8.3% of the share capital of Santander México at that time). The announcement was subsequently supplemented by other publications on 24 May, 8 June and 28 October 2021, in which amendments to some of the terms of the offer were announced.

The offer was finally launched on 3 November 2021 and was settled on 10 December. Banco Santander accepted all of the Santander Mexico Shares and Santander Mexico American Depositary Share (ADS) (securities listed on the New York Stock Exchange, each representing 5 shares of Santander Mexico) tendered and not withdrawn representing approximately 4.5% of the share capital of Santander México. After the transaction, Grupo Santander holds approximately 96.2% of Santander México share capital.

The shareholders who tendered their shares in the offer received MXN 26.5 (approximately EUR 1) per share of Santander México and USD 6.2486 in cash per each ADS (the USD equivalent of MXN 132.50 per ADS based on the USD/MXN exchange rate on the expiration date of 7 December 2021) which meant a disbursement of approximately EUR 335 million.

This transaction entailed a decrease of reserves of EUR 41 million and a decrease of EUR 294 million of minority interests.



vi. Reorganization of the banking insurance business, asset management and pension plans in Spain

On 24 June 2019, Banco Santander, S.A., reached an agreement with the Allianz Group to terminate the agreement that Banco Popular Español, S.A.U. ('Banco Popular') held in Spain with the Allianz Group for the exclusive distribution of certain life insurance products, non-life insurance products, collective investment institutions (IIC), and pension plans through the Banco Popular network (the 'Agreement'). Under this Agreement, the Group held a 40% stake in the capital of Popular Spain Holding de Inversiones, S.L.U., classified as investments in joint ventures and associated entities for an overall amount of EUR 409 million on 31 December 2019.

The Agreement was executed on 15 January 2020 for the non-life business and on 31 January 2020 for the remaining businesses, once the regulatory authorisations were obtained in the first half of 2020. The execution of the Termination Agreement entailed the payment by Banco Santander of a total consideration of EUR 859 million (after deducting the dividends paid until the end of the operation) and the acquisition of the remaining 60% of the capital of Popular Spain Holding de Inversiones, S.L.U.

On 10 July, 51% of the life-risk insurance business held by Banco Santander and the 51% of the new General Insurance business from Banco Popular's network not transferred to Mapfre (in accordance with the agreement indicated below) was acquired by Aegon, valuing these businesses at a total of approximately EUR 557 million.

The total amount of the life-savings business, collective investment institutions and pension plans is EUR 711 million and has resulted in the recognition of EUR 271 million of goodwill.

In addition, under the agreement reached between Banco Santander and Mapfre on 21 January 2019, 50.01% of the car, commercial multi-risk, SME multi-risk and corporate liability insurance business in the whole network of Banco Santander in Spain was acquired by Mapfre on 25 June 2019 amounting to EUR 82 million.

c) Offshore entities

Spanish regulation

According to current Spanish regulation (Law 11/2021, of 9 July, Royal Decree 1080/1991, of 5 July and Order HFP/115/2023, of 9 February), Santander has one subsidiary and three branches in the non-cooperative jurisdictions of Jersey, the Isle of Man and the Cayman Islands (offshore entities). Santander also has two other subsidiaries incorporated in non-cooperative jurisdictions that are tax resident in the UK and subject to British tax law.

i. Offshore subsidiaries

At the reporting date, Grupo Santander has only one subsidiary resident in Jersey, Abbey National International Limited, with activity of services. In 2022, this subsidiary has contributed to Santander's consolidated profit with immaterial losses and has no employees.

ii. Offshore branches

Grupo Santander also has three offshore branches in the Cayman Islands, the Isle of Man and Jersey. They report to, and consolidate balance sheets and income statements with, their foreign headquarters. They are taxed either with their headquarters (the Cayman Islands branch in Brazil) or in the territories they are located in (Jersey and Isle of Man, pertain to the UK).

These three offshore branches have a total of 155 employees as of December 2022.

iii. Subsidiaries in non-cooperative jurisdictions that are tax resident in the United Kingdom

Grupo Santander also has two subsidiaries that were incorporated in offshore jurisdictions (one in Bermuda without activity and one in Guernsey with leasing activity) but are not deemed offshore entities because they only operate from and are tax resident in the UK and, thus, are subject to British tax law.

Additionally, a subsidiary incorporated in Guernsey but tax resident in the UK was liquidated in 2022.

iv. Other offshore holdings

From Brazil, Grupo Santander manages Santander Brazil Global Investment Fund SPC, a segregated portfolio company located in the Cayman Islands. Grupo Santander also has other non-controlling financial interest of a reduced amount in entities located in non-cooperative jurisdictions.

The European Union (EU)

As of February 2023, the EU blacklist comprises 16 jurisdictions where Santander is only present in The Bahamas. In this jurisdiction, Santander has two banks without third-party activity, Santander Bank & Trust Ltd. and Santander Investment Bank Limited, and one branch of the Swiss bank Banco Santander International SA.

These three entities have a total of 27 employees as of December 2022.

Additionally, the EU grey list comprises 18 jurisdictions which have sufficiently committed to adapt their legislation to international standards, subject to monitoring by the EU. Within these jurisdictions, Santander is mainly present in Hong Kong through a branch.

Organization for Economic Cooperation and Development (OECD)

Grupo Santander is not present in any jurisdictions non-compliant with both OECD standards on transparency and exchange of information for tax purposes (Automatic exchange of information standard -AEOI- and Exchange of information on request standard -EOIR-) according to the last annual report of the OECD Global forum on transparency and exchange of information for tax purposes released in November 2022.

However, the Group is present in The Bahamas and Chile. Although these territories have complete legal and regulatory frameworks in place for the application of the AEOI standard, they need to improve the effectiveness of this standard.



The Group's presence in offshore territories at the end of 2022 is as follows:

Presence of the Group in non-cooperative jurisdictions	Spanish legislation		Council of the EU blacklist		OECD ^a	
	Sub.	Branch	Sub.	Branch	Sub.	Branch
Jersey	1	1				
Isle of Man			1			
Guernsey ^b						
Bermuda ^b						
Cayman Islands		1				
The Bahamas			2	1		
2022	1	3	2	1	—	—
2021^c	1	3	3	1	—	—

a Jurisdictions non-compliant with both OECD standards on transparency and exchange of information for tax purposes (AEOI and EOIR). Jersey, the Isle of Man and the Cayman Islands continue to fully comply with both OECD standards.

b Additionally, there is one subsidiary constituted in Guernsey and one in Bermuda, but residents for tax purposes in the UK.

c In 2021 The Bahamas was not included in the EU blacklist. One subsidiary in The Bahamas was merged in 2022.

Grupo Santander has the right mechanisms (risk management, supervision, verification and review plans, and regular reporting) to prevent reputational, tax and legal risk in entities resident in non-cooperative jurisdictions. Grupo Santander also maintains its policy of reducing the number of these entities.

PwC (PricewaterhouseCoopers) member firms audited the financial statements of Grupo Santander's offshore entities in 2022, 2021 and 2020.

4. Distribution of Banco Santander's profit, shareholder remuneration scheme and earnings per share

a) Distribution of Banco Santander's profit and shareholder remuneration scheme

The distribution of the Bank's current annual results that the board of directors will propose for approval by the shareholders at the annual general meeting is as follows:

EUR million	
To dividends	1,942
Dividend paid at 31 December 2022 ^A	979
Complementary dividend ^B	963
To voluntary reserves ^C	5,979
Net profit for the year	7,921

- A. Total amount paid as interim dividend, at the rate of EUR 5.83 fixed cents per eligible share (recorded in 'Shareholders' equity - Interim dividends').
- B. Fixed dividend of EUR 5.95 gross cents per eligible share, payable in cash as from 2 May 2023. The total amount has been estimated on the assumption that, after the implementation of the second buyback program charged to the results of 2022, the number of the Bank's outstanding shares eligible for the dividend will be 16,190,866,119. Therefore, the total dividend may be higher if fewer shares are acquired in the buyback program than expected, and it will be lower in the opposite case.
- C. Estimated amount corresponding to a final dividend of EUR 963,356,534. To be increased or reduced by the same amount by which the final dividend is lower or higher, respectively, than that amount.

The transcribed proposal comprises the part of the 2022 shareholder remuneration policy that is implemented through cash dividends (the interim dividend paid in November 2022 of EUR 5.83 cents per share with dividend entitlement, approved by the board of directors on 27 September 2022, and the complementary dividend expected to be paid as of 2 May 2023, of EUR 5.95 cents per share with the dividend entitlement, proposed by the board of directors on 27 February 2023, and therefore subject to approval by the General Meeting of Shareholders).

In addition, the 2022 remuneration policy also includes expected shareholder remuneration through the implementation of share buyback programs, which are not reflected in the above-transcribed proposal for the appropriation of earnings. The first of these programs charged to the results of 2022, amounting to approximately EUR 979 million, was completed between November 2022 and January 2023. A second share buyback program charged to 2022 results amounting to approximately EUR 921 million is planned to be deployed. A capital reduction resolution has been also submitted to the General Meeting of Shareholders to redeem the shares acquired in the buyback program, subject to the relevant regulatory authorization.

Finally, and although it is not part of the remuneration charged to the 2022 financial year, it should be noted that pursuant to the resolution of the Bank's General Meeting of Shareholders held on 1 April 2022, on 2 May 2022 the Bank paid a complementary cash dividend of EUR 5.15 cents per share charged to the results of the 2021 financial year for an amount of EUR 869 million (see Statement of Changes in total Equity). Finally, also charged to the results of 2021, the Bank implemented a repurchase program for an approximate amount of EUR 865 million, which ended on 18 May 2022.



The provisional accounting statement, prepared by the Bank pursuant to legal requirements, evidencing the existence of sufficient liquidity for the payment of the interim dividend on the date and for the amount mentioned above, is as follows:

EUR million	
31 August 2022	
Profit before taxes	3,829
Tax expense	(69)
Dividends paid in cash	—
Distributable maximum amount	3,760
Available liquidity	130,519

b) Earnings/loss per share from continuing and discontinued operations

i. Basic earnings / loss per share

Basic earnings/loss per share are calculated by dividing the net profit attributable to the Group, adjusted by the after-tax amount of the remuneration of contingently convertible preference shares (PPCC) recognised in equity and the capital perpetual preference shares (PPCA) (see note 23), if applicable, by the weighted average number of ordinary shares outstanding during that period, excluding the average number of own shares held through that period.

Accordingly:

	2022	2021	2020
Profit (Loss) attributable to the Parent (EUR million)	9,605	8,124	(8,771)
Remuneration of PPCC and PPCA (EUR million) (note 23)	(529)	(566)	(552)
	9,076	7,558	(9,323)
<i>Of which:</i>			
<i>Profit (Loss) from discontinued operations (non controlling interest net) (EUR million)</i>	—	—	—
<i>Profit (Loss) from continuing operations (non-controlling interest and PPCC and PPCA net) (EUR million)</i>	9,076	7,558	(9,323)
Weighted average number of shares outstanding	16,848,344,667	17,272,055,430	17,316,288,908
Adjusted number of shares	16,848,344,667	17,272,055,430	17,316,288,908
Basic earnings (Loss) per share (euros)	0.539	0.438	(0.538)
Of which, from discounted operations (euros)	—	—	—
Basic earnings (Loss) per share from continuing operations (euros)	0.539	0.438	(0.538)

ii. Diluted earnings / loss per share

Diluted earnings/loss per share are calculated by dividing the net profit attributable to the Group, adjusted by the after-tax amount of the remuneration of contingently convertible preference shares recognised in equity (PPCC) recognised in equity and the capital perpetual preference shares (PPCA) (see note 23), by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares and adjusted for all the dilutive effects inherent to potential ordinary shares (share options, and convertible debt securities).

Accordingly, diluted earnings/loss per share were determined as follows:

	2022	2021	2020
Profit (Loss) attributable to the Parent (EUR million)	9,605	8,124	(8,771)
Remuneration of PPCC and PPCA (EUR million) (Note 23)	(529)	(566)	(552)
Dilutive effect of changes in profit for the period arising from potential conversion of ordinary shares	—	—	—
	9,076	7,558	(9,323)
<i>Of which:</i>			
<i>Profit (Loss) from discontinued operations (net of non-controlling interests) (EUR million)</i>	—	—	—
<i>Profit (Loss) from continuing operations (net of non-controlling interests and PPCC and PPCA) (EUR million)</i>	9,076	7,558	(9,323)
Weighted average number of shares outstanding	16,848,344,667	17,272,055,430	17,316,288,908
Dilutive effect of options/rights on shares	55,316,206	48,972,459	Not applicable
Adjusted number of shares	16,903,660,873	17,321,027,889	17,316,288,908
Diluted earnings (Loss) per share (euros)	0.537	0.436	(0.538)
Of which, from discounted operations (euros)	—	—	—
Diluted earnings (Loss) per share from continuing operations (euros)	0.537	0.436	(0.538)



5. Remuneration and other benefits paid to the Bank's directors and senior managers

The following section contains qualitative and quantitative disclosures on the remuneration paid to the members of the board of directors —both executive and non-executive directors — and senior managers for 2022 and 2021:

a) Remuneration of Directors

i. Bylaw-stipulated emoluments

The annual general meeting held on 22 March 2013 approved an amendment to the Bylaws, whereby the remuneration of directors in their capacity as board members became an annual fixed amount determined by the annual general meeting. This amount shall remain in effect unless the shareholders resolve to change it at a general meeting. However, the board of directors may elect to reduce the amount in any years in which it deems such action justified.

The maximum remuneration established by the annual general meeting was EUR 6 million in 2022 (EUR 6 million in 2021), with two components: (a) an annual emolument and (b) attendance fees.

The specific amount payable for the above-mentioned items to each of the directors is determined by the board of directors. For such purpose, it takes into consideration the positions held by each director on the board, their membership of the board and the board committees and their attendance to the meetings thereof, and any other objective circumstances considered by the board.

The total Bylaw-stipulated emoluments earned by the directors in 2022 amounted to EUR 4.7 million (EUR 4.8 million in 2021).

Annual allotment

In accordance with the remuneration policy approved at the general shareholders' meeting on 1 April 2022, the amounts for serving and holding roles on the board and committees was the same amount as initially approved for 2021, with the exception of the yearly amount for serving on the board of directors, which was modified from EUR 90,000 to EUR 95,000. The annual amounts received individually by the directors in 2022 and 2021 based on the positions held by them on the board and their membership of the board committees were as follows:

Amount per director in euros	2022	2021
Members of the board of directors	95,000	90,000
Members of the executive committee	170,000	170,000
Members of the audit committee	40,000	40,000
Members of the appointments committee	25,000	25,000
Members of the remuneration committee	25,000	25,000
Members of the risk supervision, regulation and compliance committee	40,000	40,000
Members of the responsible banking, sustainability and culture committee	15,000	15,000
Members of the innovation and technology committee	25,000	25,000
Chair of the audit committee	70,000	70,000
Chair of the appointments committee	50,000	50,000
Chair of the remuneration committee	50,000	50,000
Chair of the risk supervision, regulation and compliance committee	70,000	70,000
Chair of the responsible banking, sustainability and culture committee	50,000	50,000
Chair of the innovation and technology committee	70,000	70,000
Lead independent director ^A	110,000	110,000
Non-executive Vice Chair	30,000	30,000

A. Bruce Carnegie-Brown, in view of the positions held on the board and its committees, in particular as Chair of the appointments and remuneration committees and as lead independent director, and the time and dedication required to properly perform such positions, has been assigned a minimum total annual remuneration of EUR 700,000 since 2015, including the annual allowance for the items corresponding to him of those indicated above and attendance fees.

Attendance fees

The directors receive fees for attending board and committee meetings, excluding executive committee meetings, where no attendance fees are received.

For 2022 the board voted to keep the same amounts set out in the 2021 policy.



The fees for 2022 and 2021 are as follows:

Attendance fees per director per meeting in euros	2022	2021
Board of directors	2,600	2,600
Audit committee and risk supervision, regulation and compliance committee	1,700	1,700
Other committees (excluding executive committee)	1,500	1,500

ii. Salaries

The executive directors receive salaries. In accordance with the policy approved by the annual general meeting, salaries are composed of a fixed annual remuneration and a variable one, which consists in a unique incentive, which is a deferred variable remuneration plan linked to multi-year objectives, which establishes the following payment scheme:

- 40% of the variable remuneration amount, determined at year-end on the basis of the achievement of the established objectives, is paid immediately.
- The remaining 60% is deferred over five years, to be paid in five portions, provided that the conditions of permanence in the Group and non-concurrence of the malus clauses are met, and subject to long term metrics, taking into account the following accrual scheme:
 - The accrual of the first and second portion (payment in 2024 and 2025) will be conditional on none of the malus clauses being triggered.
 - The accrual of the third, fourth, and fifth portion (payment in 2026, 2027 and 2028), is linked to objectives related to the period 2022–2024 and the metrics and scales associated with these objectives. The fulfilment of the objectives determines the percentage to be paid of the deferred amount in these three annuities, and these targets can reduce these amounts and the number of deferred instruments, or increase them up to a maximum achievement ratio of 125%, so executives have the incentive to exceed their targets.
- In accordance with current remuneration policies, the amounts already paid will be subject to a possible recovery (clawback) by the Bank during the period set out in the policy in force at each moment.

The immediate payment (or short-term), as well as each deferred payment (linked to long term metrics and not linked to long-term metrics) will be settled 50% in cash and the remaining 50% in instruments, consisting of Banco Santander, S.A. shares, Banco Santander, S.A. share options and restricted stock units (RSUs) of PagoNxt, split as:

- the amount of PagoNxt RSUs set for each year; and
- the rest, shares and share options in equal parts, unless the director chooses to receive options only.

Comparative of executive remuneration (Chair and CEO)

The board voted to maintain the same benchmark incentive for Ana Botín and José Antonio Álvarez in 2022 as in 2021. Variable contributions to pensions were not modified in 2022, so the amounts are the 22% of the 30% of the last three assigned bonus' average.

In 2022, the good business performance (which enabled Banco Santander to reach a 13.37% underlying RoTE, above the end of 2021), the excellent execution of our strategy (with the highest attributable profit ever), and the efficient capital management, boosted the bonus pool once again and thus the variable remuneration of corporate centre employees, (including executive directors).

**iii. Detail by director**

The detail, by bank director, of the short-term (immediate) and deferred (not subject to long-term goals) remuneration for 2022 and 2021 is provided below:

EUR thousand

	2022									
	Bylaw-stipulated emoluments									
	Annual emolument									
	Board ^F	Executive committee	Audit committee	Appointments committee	Remuneration committee	Risk supervision, regulation and compliance oversight committee	Responsible banking, sustainability and culture committee	Innovation and technology committee	Attendance fees and commissions	
Ana Botín	95	170	—	—	—	—	—	74	41	
José Antonio Álvarez	95	170	—	—	—	—	—	25	39	
Bruce Carnegie-Brown	280	170	—	75	75	—	—	25	75	
Homaira Akbari	95	—	40	—	—	—	15	25	69	
Javier Botín ^A	95	—	—	—	—	—	—	—	34	
Álvaro Cardoso ^B	24	—	—	—	—	—	4	—	11	
R.Martín Chávez ^C	48	—	—	13	8	11	—	29	40	
Sol Daurella	95	—	—	25	25	—	15	—	70	
Henrique de Castro	95	—	40	—	25	—	—	25	76	
Gina Díez Barroso	95	—	—	25	—	—	—	—	52	
Luis Isasi ¹	95	170	—	—	25	40	—	—	82	
Ramiro Mato	95	170	40	—	—	40	65	—	90	
Sergio Rial	95	—	—	—	—	—	—	—	36	
Belén Romana	95	170	40	—	—	110	15	25	94	
Pamela Walkden	95	—	110	—	—	40	—	—	78	
Germán de la Fuente ^D	66	—	31	—	—	—	—	—	40	
Glenn Hutchins ^E	3	—	—	1	1	—	—	1	4	
Total 2022	1,561	1,020	301	139	159	241	114	229	930	
Total 2021	1,536	1,020	270	126	175	268	125	245	1,036	

A. All amounts received were reimbursed to Fundación Botín.

B. Stepped down as director on 1 April 2022.

C. Stepped down as director on 1 July 2022.

D. Director since 1 April 2022.

E. Director since 20 December 2022.

F. Also includes emoluments for other roles in the board.

1. Includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings



	2022						2021				
Short-term and deferred (not subject to long-term goals) salaries of executive directors											
	Variable - immediate payment			Deferred variable			Total	Pension contribution	Other remuneration	Total	Total
	Fixed	In cash	In instruments	In cash	In instruments	In					
Ana Botín	3,176	1,688	1,689	1,013	1,013	8,579	1,081	961	11,001	11,436	
José Antonio Álvarez	2,541	1,139	1,140	684	684	6,188	811	1,758	9,086	9,160	
Bruce Carnegie-Brown	—	—	—	—	—	—	—	—	700	700	
Homaira Akbari	—	—	—	—	—	—	—	—	244	248	
Javier Botín ^A	—	—	—	—	—	—	—	—	129	129	
Álvaro Cardoso ^B	—	—	—	—	—	—	—	—	39	183	
R.Martín Chávez ^C	—	—	—	—	—	—	—	—	147	374	
Sol Daurella	—	—	—	—	—	—	—	—	230	239	
Henrique de Castro	—	—	—	—	—	—	—	—	261	267	
Gina Díez Barroso	—	—	—	—	—	—	—	—	172	130	
Luis Isasi ^I	—	—	—	—	—	—	—	1,000	1,412	1,406	
Ramiro Mato	—	—	—	—	—	—	—	—	500	499	
Sergio Rial	—	—	—	—	—	—	—	—	131	879	
Belén Romana	—	—	—	—	—	—	—	—	549	533	
Pamela Walkden	—	—	—	—	—	—	—	—	323	303	
Germán de la Fuente	—	—	—	—	—	—	—	—	137	—	
Glenn Hutchins ^E	—	—	—	—	—	—	—	—	10	—	
Total 2022	5,717	2,827	2,829	1,697	1,697	14,767	1,892	3,719	25,071	—	
Total 2021	6,467	3,079	3,079	1,847	1,848	16,320	1,824	3,542	—	26,487	

Footnotes in previous table.



Following is the detail by executive director of the salaries linked to multi-year objectives at their fair Value, which will only be received if the conditions of permanence in the Group, non-applicability of malus clauses and achievement of the established objectives are met (or, as the case may be, of the minimum thresholds thereof, with the consequent reduction of amount agreed-upon at the end of the year) in the terms described in Note 46.

EUR thousand

	2022				2021	
	Variable subject to long-term objectives				Total	Total
	In cash	In shares	In share options	In RSUs		
Ana Botín	1,064	404	404	255	2,128	2,316
José Antonio Álvarez	718	273	273	172	1,436	1,563
Total	1,782	677	677	428	3,564	3,880

1. Corresponds with the fair value of the maximum amount they are entitled to in a total of 3 years: 2026, 2027 and 2028, subject to conditions of continued service, with the exceptions provided, and to the non-applicability of malus clauses and achievement of the objectives established.

The fair value has been determined at the grant date based on the valuation report of an independent expert, Willis Towers Watson. Based on the design of the plan for 2022 and the levels of achievement of similar plans in comparable entities, the fair value considered is 70% of the variable remuneration subject to long-term objectives. (see note 46).

Note 5.e below includes disclosures on the shares delivered from the deferred remuneration schemes in place in previous years and for which delivery conditions were met, as well as on the maximum number of shares that may be received in future years in connection with the aforementioned 2022 and 2021 variable remuneration plans.

b) Remuneration of the board members as representatives of the Bank

By resolution of the executive committee, all the remuneration received by the Bank's directors who represent the Bank on the boards of directors of listed companies in which the Bank has a stake, paid by those companies and relating to appointments made on or after 18 March, 2002, accrues to the Group. In 2022 and 2021 the Bank's directors did not receive any remuneration in respect of these representative duties.

On the other hand, in their personal capacity, in 2022 Álvaro Cardoso was paid BRL 150 thousand (EUR 28 thousand) as member of the sustainability committee of Banco Santander Brasil S.A., Homaira Akbari was paid USD 169 thousand (EUR 161 thousand) as member of the board of Santander Consumer USA Holdings, Inc. and EUR 200 thousand as member of the board of PagoNxt S.L., and Henrique de Castro and R. Martín Chávez were each paid the same EUR 200 thousand as members of the board of PagoNxt S.L. Likewise, Pamela Walkden was paid GBP 125 thousand (EUR 147 thousand) as member of Santander UK plc and Santander UK Group Holdings. And Sergio Rial, as non-Executive Chair of Ebury Partners Limited received a total pay of GBP 244 thousand (EUR 286 thousand) and as Chair of board of directors of Banco Santander Brasil S.A. was paid BRL 10,981 thousand (EUR 2,000 thousand).

Likewise, Luis Isasi was paid EUR 1,000 thousand as non-Executive Chair of the board of Santander España and for attending its board and committee meetings (amounts paid by Banco Santander, S.A.).

Additionally, Héctor Grisi has received at the end of 2022 a payment of EUR 2,500 thousand as relocation expenses, for settling in Spain to carry out his CEO role with effect from 1 January 2023. Because the payment is based on his annual allowance capitalized over five years, in accordance with corporate practices and policies, if the CEO terminates his contract before said period, he will reimburse the proportional share of that amount.

c) Post-employment and other long-term benefits

In 2012, the contracts of Ana Botín and José Antonio Álvarez (and other members of the Bank's senior management) with defined benefit pension commitments were modified to transform these commitments into a defined contribution system, which covers the contingencies of retirement, disability and death. From that moment on, the Bank makes annual contributions to their pension system for their benefit.

This system gives them the right to receive benefits upon retirement, regardless of whether or not they are active at the Bank at such time, based on contributions to the system, and replaced their previous right to receive a pension supplement in the event of retirement.

The initial balance for each of them in the new defined benefits system corresponded to the market value of the assets from which the provisions corresponding to the respective accrued obligations had materialised on the date on which the old pension commitments were transferred into the new benefits system.

Since 2013, the Bank has made annual contributions to the benefits system for executive directors and senior executives, in proportion to their respective pensionable bases, until they leave Grupo Santander or until their retirement within the Group, death, or disability.

The benefit plan system is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A., and the economic rights of the foregoing directors under this plan belong to them regardless of whether or not they are active at the Bank at the time of their retirement, death or disability.



In accordance with the provisions of the remuneration regulations, contributions made calculated on variable remuneration are subject to the discretionary pension benefits regime. Under this regime, contributions are subject to malus clauses and clawback according to the policy in force at any given time and during the same period in which the variable remuneration is deferred.

Furthermore, they must be invested in bank shares for a period of five years from the date when the executive director leaves the Group, regardless of whether or not they leave to retire. Once that period has elapsed, the amount invested in shares will be reinvested, along with the remainder of the cumulative balance corresponding to the executive director, or it will be paid to the executive director or to their beneficiaries in the event of a contingency covered by the benefits system.

As per the director's remuneration policy approved at the 23 March 2018 general shareholder's meeting, the system was changed with a focus on:

- Aligning the annual contributions with practices of comparable institutions.
- Reducing future liabilities by eliminating the supplementary benefits scheme in the event of death (death of spouse or parent) and permanent disability of serving directors.
- Not increasing total costs for the Bank.

The changes to the system were the following:

- Fixed and variable pension contributions were reduced to 22% of the respective pensionable bases. The gross annual salaries and the benchmark variable remuneration were increased in the corresponding amount with no increase in total costs for the Bank. The pensionable base for the purposes of the annual contributions for the executive directors is the sum of fixed remuneration plus 30% of the average of their last three variable remuneration amounts.
- The death and disability supplementary benefits were eliminated since 1 April 2018. A fixed remuneration supplement (included in other remuneration in section a.iii in this note) was implemented the same date.
- The total amount insured for life and accident insurance was increased.

The provisions recognised in 2022 and 2021 for retirement pensions were as follows:

EUR thousand	2022	2021
Ana Botín	1,081	1,041
José Antonio Álvarez	811	783
Total	1,892	1,825

Following is a detail of the balances relating to each of the executive directors under the welfare system as of 31 December 2022 and 2021:

EUR thousand	2022	2021
Ana Botín	46,725	48,075
José Antonio Álvarez	18,958	18,821
Total	65,683	66,896

d) Insurance

The Group pays for life insurance policies for the Bank's directors, who will be entitled to receive benefits if they are declared disabled. In the event of death, the benefits will be payable to their heirs. The premiums paid by the Group are included in the 'Other remuneration' column of the table shown in Note 5.a.iii above. Also, the following table provides information on the sums insured for the Bank's executive directors:

EUR thousand	2022	2021
Ana Botín	20,988	21,489
José Antonio Álvarez	17,345	18,028
Total	38,333	39,517

The insured capital has been modified in 2018 for Ana Botín and José Antonio Álvarez as part of the pension systems transformation set out in note 5.c) above, which has encompassed the elimination of the supplementary benefits systems (death of spouse and death of parent) and the increase of the life insurance annuities.

During 2022 and 2021, the Group has disbursed a total amount of EUR 48.2 million and EUR 25.5 million, respectively, for the payment of civil-liability insurance premiums. These premiums correspond to several civil-liability insurance policies that hedge, among others, directors, senior executives and other managers and employees of the Group and the Bank itself, as well as its subsidiaries, in light of certain types of potential claims. For this reason, it is not possible to disaggregate or individualize the amount that correspond to the directors and executives.

As of 31 December 2022 and 2021, no life insurance commitments exist for the Group in respect of any other directors.



e) Deferred variable remuneration systems

The following information relates to the maximum number of shares to which the executive directors are entitled at the beginning and end of 2022 and 2021 due to their participation in the deferred variable remuneration systems, which instrumented a portion of their variable remuneration relating to 2022 and prior years, as well as on the deliveries, in shares or in cash, made to them in 2022 and 2021 once the conditions for the receipt thereof had been met (see Note 46):

i) Deferred conditional variable remuneration plan

From 2011 to 2015, the bonuses of executive directors and certain executives (including senior management) and employees who assume risk, who perform control functions or receive an overall remuneration that puts them on the same remuneration level as senior executives and employees who assume risk (all of whom are referred to as identified staff) have been approved by the board of directors and instrumented, respectively, through various cycles of the deferred conditional variable remuneration plan. Application of these cycles, insofar as they entail the delivery of shares to the plan beneficiaries, was authorized by the related annual general meetings.

The purpose of these plans was to defer a portion of the bonus of the plan beneficiaries (60% in the case of executive directors) over a period of five years (three years for the plans approved up to 2014) for it to be paid, where appropriate, in cash and in Santander shares. The remaining 40% portion of the bonus is paid in cash and Santander shares (in equal parts), upon commencement of this plan, in accordance with the rules set forth below.

In addition to the requirement that the beneficiary remains in Grupo Santander's employ, the accrual of the deferred remuneration was conditional upon none of the following circumstances existing in the opinion of the board of directors - following a proposal of the remuneration committee-, in relation to the corresponding year, in the period prior to each of the deliveries: (i) poor financial performance of the Group; (ii) breach by the beneficiary of internal regulations, including, in particular, those relating to risks; (iii) material restatement of the Group's consolidated financial statements, except when it is required pursuant to a change in accounting standards; or (iv) significant changes in the Group's economic capital or its risk profile. All the foregoing shall be subject in each case to the regulations of the relevant plan cycle.

Similarly, Banco Santander can claw back any paid variable amounts in the scenarios and for the period dictated by the terms and conditions in the said policy.

On each delivery, the beneficiaries are paid an amount in cash equal to the dividends paid for the amount deferred in shares and the interest on the amount deferred in cash. If the Santander Dividendo Elección scrip dividend scheme is applied, payment will be based on the price offered by the Bank for the bonus share rights corresponding to those shares.

The maximum number of shares to be delivered is calculated taking into account the daily volume-weighted average prices for the 15 trading sessions prior to the date on which the board of directors approves the bonus for the Bank's executive directors for each year.

This plan and the Performance Shares (ILP) plan described below have been integrated for the executive directors and other senior managers in the deferred variable compensation plan linked to multiannual objectives, in the terms approved by the General Meeting of Shareholders held on March 18, 2016.

2021 was the last financial year in which a payment was made in application of this plan.

ii) Deferred variable compensation plan linked to multiannual objectives

In the annual shareholders meeting of 18 March 2016, with the aim of simplifying the remuneration structure, improving the ex-ante risk adjustment and increasing the incidence of long-term objectives, the bonus plan (deferred and conditioned variable compensation plan) and ILP were replaced by one single plan.

The variable remuneration of executive directors and certain executives (including senior management) corresponding to 2022 has been approved by the board of directors and implemented through the seventh cycle of the deferred variable remuneration plan linked to multi-year objectives. The application of the plan was authorised by the annual general meeting of shareholders, as it entails the delivery of shares to the beneficiaries.

As indicated in section a.ii of this note, 60% of the variable remuneration amount is deferred over five years for executive directors, to be paid, where appropriate, in five portions, provided that the conditions of permanence in the Group, according to the following accrual scheme:

- The accrual of the first and second parts (instalments in 2024 and 2025) is conditional on none of the malus clauses being triggered.
- The accrual of the third, fourth and fifth parts (instalments in 2026, 2027 and 2028) is linked to non-concurrence of malus clauses and the fulfilment of certain objectives related to the 2022- 2024 period. These objective and their respective weights are:
 - Banco Santander's consolidated Return on tangible equity (RoTE) target in 2024 (weight of 40%).
 - Relative performance of Banco Santander's total shareholder return (TSR) in 2022-2024 in respect of the weighted TSR of a peer group comprising 9 credit institutions, with the appropriate TSR ratio based on the group's TSR among its peers (weight of 40%).
 - Five ESG (environmental, social and governance) metrics. Each of the five Responsible banking targets have the same weighting (and total weight of ESG objective, 20%).

The degree of compliance with the above objectives determines the percentage to be applied to the deferred amount in these three annuities, with a maximum achievement ratio of 125%, so executives have the incentive to exceed their targets.

Both the immediate (short-term) and each of the deferred (long-term and conditioned) portions are paid 50% in cash and the remaining 50% in instruments.



The accrual of deferred amounts (whether or not subject to performance measures) is conditioned, in addition to the permanence of the beneficiary in the Group, to non-occurrence, during the period prior to each of the deliveries, of any the circumstances giving rise to the application of malus as set out in the Group's remuneration policy in its chapter related to malus and clawback. Likewise, the amounts already paid of the incentive will be subject to clawback by the Bank in the cases and during the term foreseen in said policy, and in accordance with the terms and conditions foreseen in it.

Malus and clawback clauses are triggered by poor financial performance of Banco Santander, a division or area, or exposures from staff as a result of an executive(s)'s management of, at least, one of these factors:

- (i) Significant failures in risk management committed by the entity, or by a business unit or risk control.
- (ii) The increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures.
- (iii) Regulatory sanctions or judicial sentences from events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity.
- (iv) Irregular conduct, whether individual or collective. In this regard, the negative effects derived from the marketing of inappropriate products and the responsibilities of the people or bodies that made those decisions will be specially considered.

And among the specific cases that could lead to the application of these clauses, of note the restatement of the annual financial statements that does not result from a regulatory change, but from incorrect application of accounting regulations or criteria, as appreciated by supervisors and as long as it results in a lower variable remuneration to be settled than that initially accrued or where no remuneration would have been paid in accordance with the variable remuneration system of the Entity or a specific unit.

The maximum number of shares to be delivered is calculated by taking into account the average weighted daily volume of the average weighted listing prices corresponding to the fifteen trading sessions prior to the previous Friday (excluded) to the date on which the bonus is agreed by the board of executive directors of the Bank.

iii) Shares assigned by deferred variable remuneration plans

The following table shows the number of Santander shares assigned to each executive director and pending delivery as of 1 January 2021, 31 December 2021 and 31 December 2022, as well as the gross shares that were delivered to them in 2021 and 2022, either in the form of an immediate payment or a deferred payment. In this case after having been appraised by the board, at the proposal of the remuneration committee, that the corresponding one-fifth of each plan had accrued. They come from the deferred conditional and linked to multi-year objectives in 2016, 2017, 2018, 2019, 2020, 2021 and 2022 were formalized.

**Share-based variable remuneration**

	Maximum number of shares to be delivered at January 1, 2021	Shares delivered in 2021 (immediate payment 2020 variable remuneration)	Shares delivered in 2021 (deferred payment 2019 variable remuneration)	Shares delivered in 2021 (deferred payment 2018 variable remuneration)	Shares delivered in 2021 (deferred payment 2017 variable remuneration)	Shares delivered in 2021 (deferred payment 2016 variable remuneration)	Variable remuneration 2021 (Maximum number of shares to be delivered)
2016 variable remuneration							
Ana Botín	110,029	—	—	—	—	(55,014)	—
José Antonio Álvarez	74,264	—	—	—	—	(37,133)	—
	184,293					(92,147)	
2017 variable remuneration							
Ana Botín	94,083	—	—	—	(31,361)	—	—
José Antonio Álvarez	62,919	—	—	—	(20,973)	—	—
	157,001				(52,334)		
2018 variable remuneration							
Ana Botín	413,215	—	—	(103,304)	—	—	—
José Antonio Álvarez	276,129	—	—	(69,032)	—	—	—
	689,344			(172,336)			
2019 variable remuneration							
Ana Botín	532,316	—	(106,463)	—	—	—	—
José Antonio Álvarez	355,749	—	(71,150)	—	—	—	—
	888,065		(177,613)				
2020 variable remuneration							
Ana Botín	310,615	(124,246)	—	—	—	—	—
José Antonio Álvarez	168,715	(67,486)	—	—	—	—	—
	479,330	(191,732)					
2021 variable remuneration							
Ana Botín	—	—	—	—	—	—	1,480,622
José Antonio Álvarez	—	—	—	—	—	—	999,259
	—	—	—	—	—	—	2,479,881
2022 variable remuneration¹							
Ana Botín	—	—	—	—	—	—	—
José Antonio Álvarez	—	—	—	—	—	—	—

1. For each director, 40% of the shares indicated correspond to the short-term variable (or immediate payment). The remaining 60% is deferred for delivery, where appropriate, by fifths in the next five years, the last three being subject to the fulfilment of multiannual objectives. Sergio Rial's has the right to a maximum of 51,483 Santander shares and 269,148 options over Santander shares for his participation in the 2019 Digital Transformation Award. In addition, as of 31 December 2022, Rodrigo Echenique maintains the right to a maximum of 150,979 shares arising from his participation in the corresponding plans during his term as executive director.



Maximum number of shares to be delivered at December 31, 2021	Instruments matured but not consolidated at January 1, 2022	Shares delivered in 2022 (immediate payment 2021 variable remuneration)	Shares delivered in 2022 (deferred payment 2020 variable remuneration)	Shares delivered in 2022 (deferred payment 2019 variable remuneration)	Shares delivered in 2022 (deferred payment 2018 variable remuneration)	Shares delivered in 2022 (deferred payment 2017 variable remuneration)	Shares delivered in 2022 (deferred payment 2016 variable remuneration)	Variable remuneration 2022 (Maximum number of shares to be delivered)	Maximum number of shares to be delivered at December 31, 2022
55,015	—	—	—	—	—	—	(55,015)	—	—
37,131	—	—	—	—	—	—	(37,131)	—	—
92,146							(92,146)		
62,722	—	—	—	—	—	(31,361)	—	—	31,361
41,946	—	—	—	—	—	(20,973)	—	—	20,973
104,668						(52,334)			52,334
309,911	(206,618)	—	—	—	(34,431)	—	—	—	68,862
207,097	(138,072)	—	—	—	(23,008)	—	—	—	46,017
517,008	(344,689)				(57,440)				114,879
425,853	—	—	—	(106,463)	—	—	—	—	319,390
284,599	—	—	—	(71,150)	—	—	—	—	213,449
710,452				(177,613)					532,839
186,369	—	—	(37,274)	—	—	—	—	—	149,095
101,229	—	—	(20,246)	—	—	—	—	—	80,983
287,598			(57,520)						230,078
1,480,622	—	(592,249)	—	—	—	—	—	—	888,373
999,259	—	(399,704)	—	—	—	—	—	—	599,555
2,479,881		(991,953)							1,487,928
—	—	—	—	—	—	—	—	585,079	585,079
—	—	—	—	—	—	—	—	394,916	394,916
								979,995	979,995

2. After reviewing the results of the 3rd cycle of the deferred variable remuneration plan linked to multi-year targets (2018), the board of directors confirmed in 2022, upon recommendation from the remuneration committee, a 33.3% achievement of the long-term metrics of the plan (as the following level of achievement was met during 2018-2020 period: CET1 at 100% at 2020 year-end (the target was 11.30%); underlying EPS growth at 0% (the target was a 25% growth); and TSR metric at 0% (33% minimum target not reach), with a 33% weight each one) and the amounts of the pending deliveries for each executive director, payable in February 2022, 2023 and 2024 in connection with this plan. Therefore, regarding the maximum number of shares to be delivered at December 31 of 2021 in relation with the last three payments of the 2018 variable remuneration (309,911 and 207,097 shares in the case of Ana Botín and José Antonio Álvarez, respectively) only one third have been delivered (corresponding to the 33.3% of the achievement mentioned above), with the rest of shares definitively not collected as "matured but not consolidated". This applies to all persons under this plan.

Furthermore, the maximum number of share options to be delivered regarding the 2022 variable remuneration plan is 1,575,335 options in the case of Ana Botín, and 1,063,316 options in the case of José Antonio Álvarez. Meanwhile, the maximum number of RSUs of PagoNxt, S.L. to be delivered under the current plan is 12,646 and 8,527 units for Ana Botín and José Antonio Álvarez, respectively.



In addition, the table below shows the cash delivered in 2022 and 2021, by way of either immediate payment or deferred payment, in the latter case once the Board had determined, at the proposal of the remuneration committee, that one-fifth relating to each plan had accrued:

EUR thousand

	2022		2021	
	Cash paid (immediate payment 2021 variable remuneration)	Cash paid (deferred payments from 2020, 2019, 2018 and 2017 variable remuneration)	Cash paid (immediate payment 2020 variable remuneration)	Cash paid (deferred payments from 2019, 2018, 2017 and 2016 variable remuneration)
Ana Botín	1,838	1,102	334	1,550
José Antonio Álvarez	1,241	726	181	1,037
Total	3,079	1,827	515	2,586

iv) Information on former members of the board of directors

The chart below includes information on the maximum number of shares to which former members of the board of directors who ceased in office prior to 1 January 2021 are entitled for their participation in the various deferred variable remuneration systems, which instrumented a portion of their variable remuneration relating to the years in which they were executive directors. Also set forth below is information on the deliveries, whether in shares or in cash, made in 2022 and 2021 to former board members, upon achievement of the conditions for the receipt thereof (see note 46):

Maximum number of shares to be delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	—
Deferred conditional variable remuneration plan and linked to objectives (2016)	—	60,251
Deferred conditional variable remuneration plan and linked to objectives (2017)	33,783	64,659
Deferred conditional variable remuneration plan and linked to objectives (2018)	36,543	164,462
Deferred conditional variable remuneration plan and linked to objectives (2019)	98,092	130,790
Deferred conditional variable remuneration plan and linked to objectives (2020)	—	—

Number of shares delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	92,557
Performance shares plan ILP (2015)	—	—
Deferred conditional variable remuneration plan and linked to objectives (2016)	60,251	60,254
Deferred conditional variable remuneration plan and linked to objectives (2017)	33,783	32,330
Deferred conditional variable remuneration plan and linked to objectives (2018)	18,272	54,821
Deferred conditional variable remuneration plan and linked to objectives (2019)	32,698	32,698
Deferred conditional variable remuneration plan and linked to objectives (2020)	—	—

In addition, EUR 702 thousand and EUR 1,213 thousand relating to the deferred portion payable in cash of the aforementioned plans were paid each in 2022 and 2021.



f) Loans

Grupo Santander's direct risk exposure to the bank's directors and the guarantees provided for them are detailed below. These transactions were made on terms equivalent to those that prevail in arm's-length transactions or the related compensation in kind was recognized:

EUR thousand

	2022			2021		
	Loans and credits	Guarantees	Total	Loans and credits	Guarantees	Total
Mrs Ana Botín-Sanz de Sautuola y O'Shea	20	—	20	25	—	25
Mr José Antonio Álvarez Álvarez	7	—	7	4	—	4
Mr Bruce Carnegie-Brown	—	—	—	—	—	—
Mr Javier Botín-Sanz de Sautuola y O'Shea	23	—	23	16	—	16
Mrs Sol Daurella Comadrán	49	—	49	69	—	69
Mrs Belén Romana García	1	—	1	—	—	—
Mr Ramiro Mato García-Ansorena	—	—	—	—	—	—
Mrs Homaira Akbari	—	—	—	—	—	—
Mr Álvaro Cardoso de Souza	—	—	—	—	—	—
Mr Henrique de Castro	—	—	—	—	—	—
Mrs Pamela Ann Walkden	—	—	—	—	—	—
Mr Luis Isasi Fernández de Bobadilla	—	—	—	—	—	—
Mr Sergio Agapito Lires Rial	5	—	5	1	—	1
Mr R. Martín Chávez Márquez	—	—	—	—	—	—
Mrs Gina Lorenza Díez Barroso	—	—	—	—	—	—
Mr Germán de la Fuente Escamilla	—	—	—	—	—	—
	105	—	105	115	—	115

g) Senior management

The table below includes the amounts relating to the short-term remuneration of the members of senior management at 31 December 2022 and those at 31 December 2021, excluding the remuneration of the executive directors, which is detailed above. This amount has been reduced by 35% compared to that reported in 2014 (EUR 80,792 thousand):

EUR thousand

Year	Number of persons	Short-term salaries and deferred remuneration							Total
		Fixed	Variable remuneration (bonus) - Immediate payment		Deferred variable remuneration		Pensions	Other remuneration ¹	
			In cash	In shares ²	In cash	In shares ³			
2022	14	18,178	7,733	7,733	3,398	3,399	5,339	6,956	52,736
2021	15	19,183	8,402	8,402	3,648	3,648	5,542	5,055	53,880

1. Includes other remuneration items such as life and medical insurance premiums and localization aids and lastly RSUs from PagoNxt S.L., for his work as a director in said entity.

2. The amount of immediate payment in shares for 2022 is 2,504,000 shares (2,706,819 Santander shares in 2021).

3. The deferred amount in shares not linked to long-term objectives for 2022 is 1,101,000 shares (1,175,191 Santander shares in 2021).

The board of directors approved the 2022 Digital Transformation Incentive which is a variable remuneration scheme split in two different blocks:

- the first one, with the same design as in previous years, that delivers Santander shares and share options if the group hits major milestones on its digital roadmap. It is aimed at a group of up to 250 employees whose functions are deemed essential to Santander's growth. No senior executives are included within this plan in 2022 and 2021.

- And the second one, which delivers PagoNxt, S.L. RSUs and premium priced options (PPOs), and is aimed at up to 50 employees whose roles are considered key to PagoNxt's success, including 1 senior executive who will receive EUR 500 thousand.

See note 46 to the 2022 Group's consolidated financial statements for further information on the Digital Transformation Incentive.



In 2022, the ratio of variable to fixed pay components was 120% of the total for senior managers, well within the maximum limit of 200% set by 2022 AGM.

Also, the detail of the breakdown of the remuneration linked to long-term objectives of the members of senior management at 31 December 2022 and 31 December 2021 is provided below. These remuneration payments shall be received, as the case may be, in the corresponding deferral periods, upon achievement of the conditions stipulated for each payment (see note 46):

EUR thousand

Year	Number of people	Variable remuneration subject to long-term objectives ¹		Total
		Cash payment	Share payment	
2022	14	3,568	3,569	7,137
2021	15	3,830	3,830	7,660

1. Relates to the fair value of the maximum annual amounts for years 2026, 2027 and 2028 of the seventh cycle of the deferred conditional variable remuneration plan (2025, 2026 and 2027 for the sixth cycle of the deferred variable compensation plan linked to annual objectives for the year 2021).

Additionally, senior executives who stepped down from their roles in 2022 consolidated salary remuneration and other remuneration for a total amount of EUR 3,691 thousand (EUR 5,294 thousand in 2021). They also have the right to receive, in total, EUR 447 thousand in variable pay subject to long-term objectives (this right has been generated in 2021 for a total amount of EUR 55 thousand).

The maximum number of Santander shares that the members of senior management at each plan grant date (excluding executive directors) were entitled to receive as of 31 December 2022 and 31 December 2021 relating to the deferred portion under the various plans then in force is the following (see note 46):

Maximum number of shares to be delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	—
Deferred conditional variable remuneration plan (2017)	—	—
Deferred conditional variable remuneration plan (2018)	—	3,475
Deferred conditional variable remuneration plan and linked to objectives (2016)	18,500	150,445
Deferred conditional variable remuneration plan and linked to objectives (2017)	76,053	164,428
Deferred conditional variable remuneration plan and linked to objectives (2018)	155,758	803,056
Deferred conditional variable remuneration plan and linked to objectives (2019)	949,917	1,274,450
Deferred conditional variable remuneration plan and linked to objectives (2020)	1,438,437	1,829,720
Deferred conditional variable remuneration plan and linked to objectives (2021)	2,711,926	—

Since the conditions established in the corresponding deferred share-based remuneration schemes for prior years had been met, the following number of Santander shares was delivered in 2022 and 2021 to the senior management, in addition to the payment of the related cash amounts:

Number of shares delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	146,930
Deferred conditional variable remuneration plan (2017)	—	2,786
Deferred conditional variable remuneration plan (2018)	—	3,474
Deferred conditional variable remuneration plan and linked to objectives (2016)	114,006	131,938
Deferred conditional variable remuneration plan and linked to objectives (2017)	107,891	79,104
Deferred conditional variable remuneration plan and linked to objectives (2018)	79,037	267,686
Deferred conditional variable remuneration plan and linked to objectives (2019)	288,041	321,006
Deferred conditional variable remuneration plan and linked to objectives (2020)	360,614	1,742,419
Deferred conditional variable remuneration plan and linked to objectives (2021)	2,556,117	—

As indicated in note 5.c above, senior management participate in the benefit system created in 2012, which covers the contingencies of retirement, disability and death. Banco Santander makes annual contributions to the benefit plans of its senior managers. In 2012, the contracts of the senior managers with benefit pension commitments were amended to transform them into a contribution system. The system, which is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A., gives senior managers the right to receive benefits upon retirement, regardless of whether or not they are active at Banco Santander at such time, based on contributions to the system. This new system replaced their previous right to receive a pension supplement in the event of retirement. In the event of pre-retirement, and up to the retirement date, senior managers appointed prior to September 2015 are entitled to receive an annual allowance.

In addition, further to applicable remuneration regulations, from 2016 (inclusive), a discretionary pension benefit component of at least 15% of total remuneration in contributions to the pension system has been included. Under the regime corresponding to these discretionary benefits, the contributions that are calculated on variable remunerations are subject to malus and clawback clauses, subject to policies applicable at each time, and during the same period in which the variable remuneration is deferred.

Likewise, the annual contributions calculated on variable remunerations must be invested in Bank shares for a period of five years from the date that the senior manager leaves the Group, regardless of whether or not they leave to retire. Once that period has elapsed, the amount invested in shares will be reinvested, along with the remainder of the cumulative balance corresponding to the senior manager, or it will be paid to the senior manager or to their beneficiaries in the event of a contingency covered by the benefits system.



The contracts of some senior executives were modified at the beginning of 2018 with the same objective and changes indicated in section c of this note for Ana Botín and José Antonio Álvarez. The modifications, which are aimed at aligning the annual contributions with the practices of comparable institutions and reducing the risk of future obligations by eliminating the supplementary scheme for death (widowhood and orphanhood) and permanent disability in service without increasing the costs to the bank, are as follows:

- Contributions to the pensionable bases were reduced. Gross annual salaries were increased in the corresponding amount.
- The death and disability supplementary benefits were eliminated since January 1, 2018 for some senior executives and since April 1, 2018 for executive directors. A fixed remuneration supplement reflected in other remuneration in the table above was implemented on the same date.
- The amounts insured for life and accident insurance were increased.

All of the above was done without an increase in total cost for the Bank.

The balance as of 31 December 2022 in the pension system for those who were part of senior management at year end amounted to EUR 54 million (EUR 57 million at 31 December 2021).

The net charge to income corresponding to pension amounted to EUR 5.3 million in 2022 (EUR 5.5 million in 31 December 2021).

In 2022 and 2021 there have been no payments in the form of a single payment of the annual voluntary pre-retirement allowance.

Additionally, the capital insured by life and accident insurance at 31 December 2022 of this group amounts to EUR 98 million (EUR 100 million at 31 December 2021).

h) Post-employment benefits to former directors and former senior executive vice presidents

The post-employment benefits and settlements paid in 2022 to former directors of the Bank, other than those detailed in note 5.c amounted to EUR 5.6 million and EUR 5.6 million in 2021, respectively. Also, the post-employment benefits and settlements paid in 2022 to former executive vice presidents amounted to EUR 4.8 million and EUR 51.6 million in 2021, respectively.

Contributions to insurance policies that hedge pensions and complementary widowhood, orphanhood and permanent disability benefits to previous members of the Bank's board of directors, amounted to EUR 0.17 million in 2022 (EUR 0.17 million in 2021). Likewise, contributions to insurance policies that hedge pensions for previous senior managers amounted to EUR 3.1 million in 2022 (EUR 4.4 million in 2021).

During the 2022 financial year, no releases or charges were recorded in the consolidated income statement for pension commitments and similar obligations held by the Group with previous former members of the bank's board of directors or former senior managers in 2022 and 2021.

In addition, 'Provisions - Pension Fund and similar obligations' in the consolidated balance sheet as at 31 December 2022 included EUR 48 million in respect of the post-employment benefit obligations to former Directors of the Bank (EUR 50 million at 31 December 2021) and EUR 99 million corresponding to former senior managers (EUR 114 million at 31 December 2021).

i) Pre-retirement and retirement

The board of directors approved an amendment to the contracts of the executive directors whereby Ana Botín and José Antonio Álvarez ceased to have the right to pre-retire in case of termination of his contract.

j) Contract termination

The executive directors and senior managers have indefinite-term employment contracts. Executive directors or senior managers whose contracts are terminated voluntarily or due to breach of duties are not entitled to receive any economic compensation. If Banco Santander terminates the contract for any other reason, they will be entitled to the corresponding legally-stipulated termination benefit, without prejudice to any compensation that may for non-competition obligations, as detailed in the directors' remuneration policy.

If Banco Santander were to terminate her contract, Ana Botín would have to remain at Banco Santander's disposal for a period of 4 months in order to ensure an adequate transition, and would receive her fixed salary during that period.

k) Information on investments held by the directors in other companies and conflicts of interest

None of the members of the board of directors have declared that they or persons related to them may have a direct or indirect conflict of interest with the interests of Banco Santander, S.A., as set forth in article 229 of the Corporate Enterprises Act.

6. Loans and advances to central banks and credit institutions

The detail, by classification, type and currency, of Loans and advances to central banks and credit institutions in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
CENTRAL BANKS			
Classification			
Financial assets held for trading	11,595	3,608	—
Non-trading financial assets mandatorily at fair value through profit or loss	—	—	—
Financial assets designated at fair value through profit or loss	—	—	9,481
Financial assets designated at fair value through other comprehensive income	—	—	—
Financial assets at amortised cost	15,375	15,657	12,499
	26,970	19,265	21,980
Type			
Time deposits	15,180	13,275	11,757
Reverse repurchase agreements	11,790	5,990	10,223
Impaired assets	—	—	—
Valuation adjustments for impairment	—	—	—
	26,970	19,265	21,980
CREDIT INSTITUTIONS			
Classification			
Financial assets held for trading	16,502	10,397	3
Non-trading financial assets mandatorily at fair value through profit or loss	—	—	—
Financial assets designated at fair value through profit or loss	673	3,152	12,136
Financial assets designated at fair value through other comprehensive income	—	—	—
Financial assets at amortised cost	46,518	39,169	37,838
	63,693	52,718	49,977
Type			
Time deposits	8,891	10,684	7,338
Reverse repurchase agreements	27,321	18,853	20,862
Non- loans advances	27,487	23,188	21,784
Impaired assets	—	1	1
Valuation adjustments for impairment	(6)	(8)	(8)
	63,693	52,718	49,977
CURRENCY			
Euro	26,024	24,286	22,260
Pound sterling	4,474	3,228	4,127
US dollar	18,468	12,639	13,209
Brazilian real	34,863	24,011	26,437
Other currencies	6,834	7,819	5,924
TOTAL	90,663	71,983	71,957

The loans and advances to credit institutions classified under 'Financial assets at amortised' cost are mainly time accounts and deposits.

Note 50 contains a detail of their residual maturity periods.

At 31 December 2022 the gross exposure by impairment stage of the assets accounted for amounts to EUR 61,898 million, EUR 1 million and EUR 0 million (EUR 54,833, EUR 0 million and EUR 1 million in 2021 and EUR 50,344 million, EUR 0 million and EUR 1 million in 2020), and the loan loss provision by impairment stage amounts to EUR 6 million, EUR 0 million and EUR 0 million (EUR 8 million, EUR 0 million and EUR 0 million in 2021 and 2020) in stage 1, stage 2 and stage 3, respectively.



7. Debt securities

a) Detail

The detail, by classification, type and currency, of Debt securities in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Classification			
Financial assets held for trading	41,403	26,750	37,894
Non-trading financial assets mandatorily at fair value through profit or loss	1,134	957	700
Financial assets designated at fair value through profit or loss	2,542	2,516	2,979
Financial assets designated at fair value through other comprehensive income	75,083	97,922	108,903
Financial assets at amortised cost	73,554	35,708	26,078
	193,716	163,853	176,554
Type			
Spanish government debt securities	26,876	20,638	30,397
Foreign government debt securities	121,018	102,976	110,570
Issued by financial institutions	10,176	12,324	10,133
Other fixed-income securities	35,468	27,850	25,337
Impaired financial assets	404	280	401
Impairment losses	(226)	(215)	(284)
	193,716	163,853	176,554
Currency			
Euro	63,903	45,197	58,850
Pound sterling	6,732	6,304	7,372
US dollar	37,749	34,229	29,009
Brazilian real	35,841	35,907	35,139
Other currencies	49,717	42,431	46,468
Debt securities excluding impairment adjustments	193,942	164,068	176,838
Impairment losses	(226)	(215)	(284)
	193,716	163,853	176,554

The decrease in the year of the debt securities portfolio under the heading 'Financial assets at fair value with changes in other comprehensive income' of EUR 22,839 million is mainly due to portfolio sales performed during the year.

The increase in the debt securities portfolio under the heading 'Financial assets at amortized cost' of EUR 37,846 million during the year is mainly due to the origination of two new business models whose goal is to hold financial assets to collect contractual cash flows. These new business models pursue mainly two different strategies:

- Optimization of excess liquidity for approximately 16,800 million through management aimed at making profitable the liquidity maintained on the balance sheet to comply with regulatory metrics through investment in HQLAs (High Quality Liquid Assets), basically, public debt instruments or bills very short-term central bank (terms not exceeding 2 years) and that offer higher returns than the alternative of keeping the cash deposited in the central bank, with the purpose of generating margin at maturity.

- Management of the maturity of the balance sheet for approximately EUR 14,500 million through the reconstruction of ALCO portfolios that contribute to the generation of financial margin to offset, at least partially, the higher financial cost derived from the increase in the cost of customer deposits and medium/long-term wholesale financing in the face of rising interest rates, while at the same time constituting a hedging position of the balance sheet/ long-term financial margin against potential future decreases in interest rates. This investment is also made mainly through liquid assets, sovereign debt, but at longer periods (3, 5, 7, 10 years).

At 31 December 2022, 2021 and 2020 the gross exposure by impairment stage of the book assets under IFRS 9 amounted to EUR 148,384 million, EUR 133,437 million and EUR 134,792 million in stage 1; EUR 75 million, EUR 128 million and EUR 72 million in stage 2, and EUR 404 million, EUR 280 million and EUR 401 million in stage 3, respectively.



b) Breakdown

The breakdown, by origin of the issuer, of debt securities at 31 December 2022, 2021 and 2020, net of impairment losses, is as follows:

EUR million

	2022				2021				2020			
	Private fixed-income	Public fixed-income	Total	%	Private fixed-income	Public fixed-income	Total	%	Private fixed-income	Public fixed-income	Total	%
Spain	1,015	26,876	27,891	14.40%	3,773	20,638	24,411	14.90%	1,588	30,397	31,985	18.12%
United Kingdom	2,545	3,013	5,558	2.87%	3,334	2,097	5,431	3.31%	3,099	2,795	5,894	3.34%
Portugal	2,572	3,603	6,175	3.19%	3,008	3,845	6,853	4.18%	3,095	6,462	9,557	5.41%
Italy	1,948	8,329	10,277	5.31%	1,215	1,531	2,746	1.68%	1,047	4,688	5,735	3.25%
Ireland	6,141	11	6,152	3.18%	4,759	52	4,811	2.94%	2,924	2	2,926	1.66%
Poland	2,830	9,443	12,273	6.34%	2,848	12,727	15,575	9.51%	3,126	11,400	14,526	8.23%
Other European countries	8,161	9,655	17,816	9.20%	8,922	3,422	12,344	7.53%	8,211	2,891	11,102	6.29%
United States	8,950	22,318	31,268	16.14%	5,634	21,465	27,099	16.54%	6,386	14,645	21,031	11.91%
Brazil	9,201	28,191	37,392	19.30%	5,446	29,251	34,697	21.18%	5,179	33,316	38,495	21.80%
Mexico	481	17,578	18,059	9.32%	517	14,572	15,089	9.21%	435	19,053	19,488	11.04%
Chile	28	10,009	10,037	5.18%	51	9,467	9,518	5.81%	41	8,082	8,123	4.60%
Other American countries	1,560	5,960	7,520	3.88%	655	2,128	2,783	1.70%	274	3,098	3,372	1.91%
Rest of the world	390	2,908	3,298	1.70%	77	2,419	2,496	1.52%	182	4,138	4,320	2.44%
	45,822	147,894	193,716	100%	40,239	123,614	163,853	100%	35,587	140,967	176,554	100%

The detail, by issuer rating, of Debt securities at 31 December 2022, 2021 and 2020 is as follows:

EUR million

	2022				2021				2020			
	Private fixed-income	Public fixed-income	Total	%	Private fixed-income	Public fixed-income	Total	%	Private fixed-income	Public fixed-income	Total	%
AAA	13,481	5,494	18,975	9.80%	15,956	1,773	17,729	10.82%	14,088	2,099	16,187	9.17%
AA	9,542	30,502	40,044	20.67%	2,005	26,355	28,360	17.31%	1,714	18,784	20,498	11.61%
A	10,058	48,341	58,399	30.15%	8,594	44,359	52,953	32.32%	6,228	53,655	59,883	33.92%
BBB	5,181	29,900	35,081	18.11%	5,234	20,304	25,538	15.59%	6,515	31,204	37,719	21.36%
Below BBB	2,974	33,657	36,631	18.91%	3,584	30,823	34,407	21.00%	3,431	35,164	38,595	21.86%
Unrated	4,586	—	4,586	2.37%	4,866	—	4,866	2.97%	3,611	61	3,672	2.08%
	45,822	147,894	193,716	100%	40,239	123,614	163,853	100%	35,587	140,967	176,554	100%

During 2022, 2021 and 2020, the distribution of the exposure by rating level of the previous table has not been affected by ratings reviews of the sovereign issuers.



The detail, by type of financial instrument, of private fixed-income securities at 31 December 2022, 2021 and 2020, net of impairment losses, is as follows:

EUR million	2022	2021	2020
Securitised mortgage bonds	9,222	5,806	5,926
Other asset-backed bonds	7,120	6,304	5,479
Floating rate debt	12,397	8,081	7,829
Fixed rate debt	17,083	20,048	16,353
Total	45,822	40,239	35,587

c) Impairment losses

The changes in the impairment losses on debt securities are summarised below:

EUR million	2022	2021	2020
Balance at beginning of year	215	284	474
Net impairment losses for the year ^A	16	28	79
<i>Of which:</i>			
<i>Impairment losses charged to income</i>	30	49	91
<i>Impairment losses reversed with a credit to income</i>	(14)	(21)	(12)
Exchange differences and other items	(5)	(97)	(269)
Balance at end of year	226	215	284
<i>Of which:</i>			
<i>By geographical location of risk:</i>			
<i>European Union</i>	26	25	21
<i>Latin America</i>	200	190	263

A. Of the EUR 16 million corresponding to net provisions for the year ended 31 December 2022 (EUR 28 million and EUR 79 million at 31 December 2021 and 2020, respectively), EUR 17 million relates to financial assets at amortized cost (EUR 31 million and EUR 77 million at 31 December 2021 and 2020, respectively) and EUR -1 million relates to financial assets designated at fair value through other comprehensive income (EUR -3 million and EUR 2 million at 31 December 2021 and 2020, respectively).

At 31 December 2022, 2021 and 2020 the loan loss provision by impairment stage of the assets accounted for under IFRS9 amounted to EUR 25 million, EUR 26 million and EUR 25 million in stage 1, EUR 2 million, EUR 8 million and EUR 2 million in stage 2, and EUR 199 million, EUR 181 million and EUR 257 million in stage 3, respectively.

8. Equity instruments

a) Breakdown

The detail, by classification and type, of Equity instruments in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Classification			
Financial assets held for trading	10,066	15,077	9,615
Non-trading financial assets mandatorily at fair value through profit or loss	3,711	4,042	3,234
Financial assets designated at fair value through other comprehensive income	1,941	2,453	2,783
	15,718	21,572	15,632
Type			
Shares of Spanish companies	3,284	3,896	3,364
Shares of foreign companies	10,494	15,184	10,437
Shares of investment funds	1,940	2,492	1,831
	15,718	21,572	15,632

Note 29 contains a detail of the 'Other comprehensive income', recognised in equity, on 'Financial assets designated at fair value through other comprehensive income'.

b) Changes

The changes in 'Financial assets at fair value through other comprehensive income' were as follows:

EUR million	2022	2021	2020
Balance at beginning of the year	2,453	2,783	2,863
Net additions (disposals)	(33)	(276)	833
Changes in the fair value of equity instruments measured at fair value through other comprehensive income (EIGR) ^A	(497)	(171)	(917)
Changes in the RV hedged with micro-hedging transactions	18	117	4
Balance at end of year	1,941	2,453	2,783

A. They do not include fair value movements for currency risk hedged with hedging instruments.

c) Notifications of acquisitions of investments

The notifications of the acquisitions and disposals of holdings in investees made by the Bank in 2022, in compliance with Article 155 of the Spanish Limited Liability Companies Law and Article 125 of Spanish Securities Market Law 24/1998, are listed in appendix IV.



9. Trading Derivatives (assets and liabilities) and short positions

a) Trading Derivatives

The detail, by type of inherent risk, of the fair value of the trading derivatives arranged by the Group is as follows (see note 11):

EUR million	2022		2021		2020	
	Debit balance	Credit balance	Debit balance	Credit balance	Debit balance	Credit balance
	Interest rate risk	38,789	37,641	31,884	30,192	43,832
Currency risk	26,391	26,063	19,823	21,894	21,162	22,028
Price risk	1,347	817	1,498	891	1,931	944
Other risks	475	370	1,087	589	212	412
	67,002	64,891	54,292	53,566	67,137	64,469

b) Short positions

Following is a breakdown of the short positions (liabilities):

EUR million	2022	2021	2020
Borrowed securities			
Debt instruments	1,979	825	625
Of which:			
<i>Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México</i>	1,362	825	625
<i>Banco Santander, S.A.</i>	617	—	—
Equity instruments	993	389	289
Of which:			
<i>Banco Santander, S.A.</i>	934	318	289
Short sales			
Debt instruments	19,543	11,022	15,784
Of which:			
<i>Banco Santander, S.A.</i>	12,902	8,926	8,645
<i>Banco Santander (Brasil) S.A.</i>	3,857	1,952	7,085
<i>Pierpont Capital Holdings LLC</i>	2,690	—	—
Equity instruments	—	—	—
	22,515	12,236	16,698

10. Loans and advances to customers

a) Detail

The detail, by classification, of Loans and advances to customers in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Financial assets held for trading	9,550	6,829	296
Non-trading financial assets mandatorily at fair value through profit or loss	868	537	552
Financial assets designated at fair value through profit or loss	5,774	10,289	24,121
Financial assets at fair value through other comprehensive income	8,215	7,663	9,267
Financial assets at amortized cost	1,011,597	947,364	881,963
Of which:			
Impairment losses	(22,684)	(22,964)	(23,595)
	1,036,004	972,682	916,199
Loans and advances to customers disregarding impairment losses	1,058,688	995,646	939,794

Note 50 contains a detail of the residual maturity periods of 'Financial assets at amortized cost'.

Note 53 shows the Group's total exposure, by geographical origin of the issuer.

There are no loans and advances to customers for material amounts without fixed maturity dates.



b) Breakdown

Following is a breakdown of the loans and advances granted to the Group's customers, which reflect the Group's exposure to credit risk in its main activity, without considering the balance of value adjustments for impairment, taking into account the type and situation of the transactions, the geographical area of their residence and the type of interest rate on the transactions:

EUR million			
	2022	2021	2020
Loan type and status			
Commercial credit	56,688	49,603	37,459
Secured loans	565,609	542,404	503,014
Reverse repurchase agreements	39,500	33,264	35,702
Other term loans	290,031	269,526	269,143
Finance leases	39,833	38,503	36,251
Receivable on demand	11,435	10,304	7,903
Credit cards receivables	22,704	20,397	19,507
Impaired assets	32,888	31,645	30,815
	1,058,688	995,646	939,794
Geographical area			
Spain	212,804	216,741	215,330
European Union (excluding Spain)	202,958	190,032	192,988
United States and Puerto Rico	125,436	102,491	93,405
Other OECD countries ^A	385,906	374,729	338,362
South America (non - OECD)	112,803	94,010	79,629
Rest of the world	18,781	17,643	20,080
	1,058,688	995,646	939,794
Interest rate formula			
Fixed rate	642,537	593,645	550,883
Floating rate	416,151	402,001	388,911
	1,058,688	995,646	939,794

A. Includes, mainly, customers from the United Kingdom.

At 31 December 2022, 2021 and 2020 the Group had granted loans amounting to EUR 14,698 million, EUR 14,131 million and EUR 12,104 million to Spanish public sector agencies which had a rating at 31 December 2022 of A (ratings of A at 31 December 2021 and 31 December 2020), and EUR 12,467 million, EUR 10,263 million, and EUR 10,779 million to the public sector in other countries (at 31 December 2022, the breakdown of this amount by issuer rating was as follows: 3.6% AAA, 17% AA, 1% A, 70.8% BBB, 6.8% below BBB and 0.8% without rating).

Without considering the public administrations, the amount of the loans and advances at 31 December 2022, 2021 and 2020 amounts to EUR 1,031,523 million, EUR 916,911 million and EUR 942,249 million, of which, EUR 998,689 million, EUR 939,645 million and EUR 886,118 million are classified as performing, respectively.



Following is a detail, by activity, of the loans to customers at 31 December 2022, net of impairment losses:

EUR million

	Secured loans									
	Net exposure					Loan to value ratio ^C				
	Total	Without collateral	Of which property collateral	Of which other collateral	Less than or equal to 40%	More than 40% and less than or equal to 60%	More than 60% and less than or equal to 80%	More than 80% and less than or equal to 100%	More than 100%	
Public sector	24,436	23,410	157	869	66	73	18	862	7	
Other financial institutions (financial business activity)	83,091	28,950	5,223	48,918	4,172	2,677	739	45,934	619	
Non-financial corporations and individual entrepreneurs (non-financial business activity) (broken down by purpose)	345,083	195,015	70,063	80,005	25,973	25,327	19,813	55,306	23,649	
<i>Of which:</i>										
<i>Construction and property development</i>	20,320	1,561	17,673	1,086	6,572	6,251	2,027	2,188	1,721	
<i>Civil engineering construction</i>	2,959	1,895	149	915	59	109	139	715	42	
<i>Large companies</i>	188,730	127,137	19,751	41,842	8,650	6,642	6,690	29,228	10,383	
<i>SMEs and individual entrepreneurs</i>	133,074	64,422	32,490	36,162	10,692	12,325	10,957	23,175	11,503	
Households – other (broken down by purpose)	562,078	105,335	368,242	88,501	104,249	126,361	127,779	64,685	33,669	
<i>Of which:</i>										
<i>Residential</i>	361,235	1,524	359,072	639	97,155	118,774	116,484	24,415	2,883	
<i>Consumer loans</i>	182,097	100,686	2,118	79,293	3,436	5,183	8,294	34,501	29,997	
<i>Other purposes</i>	18,746	3,125	7,052	8,569	3,658	2,404	3,001	5,769	789	
Total^A	1,014,688	352,710	443,685	218,293	134,460	154,438	148,349	166,787	57,944	
<i>Memorandum item</i>										
<i>Refinanced and restructured transactions^B</i>	25,907	11,662	9,001	5,244	3,566	2,006	3,611	3,422	1,640	

A. In addition, the Group has granted advances to customers amounting to EUR 21,316 million, bringing the total of loans and advances to EUR 1,036,004 million.

B. Includes the net balance of the impairment of the accumulated value or accumulated losses in the fair value due to credit risk.

C. The ratio is the carrying amount of the transactions at 31 December 2022 provided by the latest available appraisal value of the collateral.

Note 53 contains information relating to the forbore loan portfolio.



Following is the movement of the gross exposure broken down by impairment stage of loans and advances to customers recognised under "Financial assets at amortised cost" and "Financial assets at fair value through other comprehensive income" during 2022, 2021 and 2020:

2022

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at the beginning of year	878,700	67,584	31,287	977,571
Movements				
Transfers				
To stage 2 from stage 1	(31,811)	31,811		—
To stage 3 from stage 1 ^A	(11,143)		11,143	—
To stage 3 from stage 2		(8,487)	8,487	—
To stage 1 from stage 2	18,907	(18,907)		—
To stage 2 from stage 3		3,250	(3,250)	—
To stage 1 from stage 3	456		(456)	—
Net changes on financial assets	86,459	(8,839)	(2,568)	75,052
Write-offs	—	—	(12,235)	(12,235)
Exchange differences and others	1,293	284	209	1,786
Balance at the end of the year	942,861	66,696	32,617	1,042,174

2021

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at the beginning of year	817,906	66,104	30,318	914,328
Movements				
Transfers				
To stage 2 from stage 1	(33,051)	33,051		—
To stage 3 from stage 1	(6,617)		6,617	—
To stage 3 from stage 2		(5,836)	5,836	—
To stage 1 from stage 2	17,796	(17,796)		—
To stage 2 from stage 3		1,865	(1,865)	—
To stage 1 from stage 3	271		(271)	—
Net changes on financial assets	62,629	(11,629)	(719)	50,281
Write-offs	—	—	(9,089)	(9,089)
Exchange differences and others	19,766	1,825	460	22,051
Balance at the end of the year	878,700	67,584	31,287	977,571

2020

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at the beginning of year	849,939	50,476	31,837	932,252
Movements				
Transfers				
To stage 2 from stage 1	(43,170)	43,170		—
To stage 3 from stage 1	(5,120)		5,120	—
To stage 3 from stage 2		(8,734)	8,734	—
To stage 1 from stage 2	13,459	(13,459)		—
To stage 2 from stage 3		1,831	(1,831)	—
To stage 1 from stage 3	578		(578)	—
Net changes on financial assets	53,555	(2,951)	(659)	49,945
Write-offs	—	—	(8,930)	(8,930)
Exchange differences and others	(51,335)	(4,229)	(3,375)	(58,939)
Balance at the end of the year	817,906	66,104	30,318	914,328

A. It includes the effect of the stage 3 definition alignment with the accounting default definition, mainly by Santander Consumer USA.

In addition, at 31 December 2022, the Group had EUR 322 million (EUR 420 million at 31 December 2021 and EUR 497 million at 31 December 2020) of exposure in assets purchased with impairment of which EUR 271 million still show signs of impairment, which correspond mainly to the business combinations carried out by the Group.



c) Impairment losses on loans and advances to customers at amortised cost and at fair value through other comprehensive income

The changes in the impairment losses on the assets making up the balances of financial assets at amortised cost and at fair value through other comprehensive income - Loans and advances - Customers:

EUR million	2022	2021	2020
Amount at beginning of the year	22,964	23,595	22,242
Impairment losses charged to income for the year	11,676	8,762	13,385
Of which:			
Impairment losses charged to profit or loss	19,879	18,240	20,909
Impairment losses reversed with a credit to profit or loss	(8,203)	(9,478)	(7,524)
Change of perimeter	—	—	(82)
Write-off of impaired balances against recorded impairment allowance	(12,235)	(9,089)	(8,930)
Exchange differences and other changes	279	(304)	(3,020)
Amount at end of the year	22,684	22,964	23,595
Which correspond to:			
Impaired assets	13,931	13,550	13,658
Other assets	8,753	9,414	9,937
Of which:			
Individually calculated	2,493	2,496	2,679
Collective calculated	20,191	20,468	20,916

In addition, provisions for debt securities amounting to EUR 16 million were recorded at 31 December 2022 (provisions amounting to EUR 28 million and EUR 79 million as of 31 December 2021 and 2020, respectively), written-off assets recoveries have been recorded in the year amounting to EUR 1,459 million at 31 December 2022 (EUR 1,383 million and EUR 1,221 million at 31 December 2021 and 2020, respectively).

EUR 630 million were recorded in the account for losses on renegotiation or contractual modification at 31 December 2022 (EUR 0 and EUR 139 million at 31 December 2021 and 2020, respectively) mainly due to the impact, on the one hand, of the Moratorium law approved in July 2022 in Poland, and, on the other hand, of the adjustment of the gross amount of mortgage loans denominated and indexed to foreign currencies in this same country (see note 25.e.).

With this, the impairment recorded in Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes: 'Financial assets at fair value through other comprehensive income' and 'Financial assets at amortised cost'; amounts EUR 10,863 million at 31 December 2022 (EUR 7,407 million and EUR 12,382 million at 31 December 2021 and 2020, respectively).

Following is the movement of the loan loss provision broken down by impairment stage of loans and advances to customers during 2022, 2021 and 2020:

2022

EUR million	Stage 1	Stage 2	Stage 3	Total
Loss allowance at the beginning of the year	4,188	5,226	13,550	22,964
Transfers				
To stage 2 from stage 1	(713)	3,046		2,333
To stage 3 from stage 1	(557)		4,586	4,029
To stage 3 from stage 2		(1,802)	3,182	1,380
To stage 1 from stage 2	215	(894)		(679)
To stage 2 from stage 3		400	(933)	(533)
To stage 1 from stage 3	9		(161)	(152)
Net changes of the exposure and modifications in the credit risk	414	(1,056)	5,940	5,298
Write-offs	—	—	(12,235)	(12,235)
FX and other movements	70	207	2	279
Loss allowance at the end of the year	3,626	5,127	13,931	22,684

2021

EUR million	Stage 1	Stage 2	Stage 3	Total
Loss allowance at the beginning of the year	4,265	5,672	13,658	23,595
Transfers				
To stage 2 from stage 1	(578)	2,968		2,390
To stage 3 from stage 1	(237)		2,209	1,972
To stage 3 from stage 2		(1,086)	2,474	1,388
To stage 1 from stage 2	254	(1,025)		(771)
To stage 2 from stage 3		216	(760)	(544)
To stage 1 from stage 3	8		(67)	(59)
Net changes of the exposure and modifications in the credit risk	617	(1,557)	5,326	4,386
Write-offs	—	—	(9,089)	(9,089)
FX and other movements	(141)	38	(201)	(304)
Loss allowance at the end of the year	4,188	5,226	13,550	22,964



2020

EUR million

	Stage 1	Stage 2	Stage 3	Total
Loss allowance at the beginning of the year	3,835	4,474	13,933	22,242
Transfers				
To stage 2 from stage 1	(1,040)	2,880		1,840
To stage 3 from stage 1	(255)		2,386	2,131
To stage 3 from stage 2		(971)	2,066	1,095
To stage 1 from stage 2	294	(976)		(682)
To stage 2 from stage 3		303	(727)	(424)
To stage 1 from stage 3	53		(138)	(85)
Net changes of the exposure and modifications in the credit risk	1,966	535	7,009	9,510
Write-offs	—	—	(8,930)	(8,930)
FX and other movements	(588)	(573)	(1,941)	(3,102)
Loss allowance at the end of the year	4,265	5,672	13,658	23,595

d) Impaired assets and assets with unpaid past-due amounts

The detail of the changes in the balance of the financial assets classified as 'Financial assets Loans to customers' considered to be impaired due to credit risk is as follows:

EUR million	2022	2021	2020
Balance at beginning of year	31,645	30,815	32,543
Net additions	13,060	9,390	10,577
Written-off assets	(12,235)	(9,089)	(8,930)
Changes in the scope of consolidation	—	—	(39)
Exchange differences and other	418	529	(3,336)
Balance at end of year	32,888	31,645	30,815

This amount, after deducting the related allowances, represents the Group's best estimate of the discounted value of the flows that are expected to be recovered from the impaired assets.

At 31 December 2022, the Group's written-off assets totalled EUR 43,675 million (EUR 40,585 million and EUR 39,087 million at 31 December 2021 and 2020, respectively).

Set forth below for each class of impaired asset are the gross amount, associated allowances and information relating to the collateral and/or other credit enhancements obtained at 31 December 2022:

EUR million

	Gross amount	Allowance recognised	Estimated collateral value ^A
Without associated real collateral	14,066	7,684	—
With real estate collateral	10,909	2,889	7,848
With other collateral	7,913	3,358	3,998
Total	32,888	13,931	11,846

A. Including the estimated value of the collateral associated with each loan. Accordingly, any other cash flows that may be obtained, such as those arising from borrowers' personal guarantees, are not included.

When classifying assets in the previous table, the main factors considered by the Group to determine whether an asset has become impaired are the existence of amounts past due — assets impaired due to arrears— or other circumstances may be arise which will not result in all contractual cash flow being recovered, such as a deterioration of the borrower's financial situation, the worsening of its capacity to generate funds or difficulties experienced by it in accessing credit.

e) Transferred credits

'Loans and advances to customers' includes, inter alia, the securitised loans transferred to third parties on which the Group has retained the risks and rewards, albeit partially, and which therefore, in accordance with the applicable accounting standards, cannot be derecognised. This is mainly due to mortgage loans, loans to companies and consumer loans in which the group retains subordinate financing and/or grants some kind of credit enhancement to new holders.

Securitisation is used as a tool for the management of regulatory capital and as a means of diversifying the Group's liquidity sources.

The breakdown of securitized loans held on the balance sheet, according to the nature of the financial instrument in which they are originated, is shown below:

EUR million	2022	2021	2020
Retained on the balance sheet	82,603	80,600	88,662
Of which			
Securitized mortgage assets	16,265	19,523	30,145
Of which: UK assets	4,144	5,295	9,034
Other securitized assets	66,338	61,077	58,517
Total^A	82,603	80,600	88,662

A. Note 22 details the liabilities associated with these securitisation transactions.

At 31 December 2022, Grupo Santander had loans that had been fully derecognised and for which it retained servicing amounting to EUR 13,711 million (EUR 14,141 million and EUR 13,999 million at 31 December 2021 and 2020, respectively).

11. Trading derivatives

The detail of the notional amounts and the market values of the trading derivatives held by the Group in 2022, 2021 and 2020 is as follows:

EUR million

	2022		2021		2020	
	Notional amount	Market value	Notional amount	Market value	Notional amount	Market value
Trading derivatives						
Interest rate risk						
Forward rate agreements	100,579	22	147,603	(11)	515,889	—
Interest rate swaps	4,844,043	2,387	3,920,945	1,931	3,789,169	3,638
Options, futures and other derivatives	495,994	(1,261)	508,723	(228)	698,500	(891)
Credit risk						
Credit default swaps	16,185	(6)	13,571	436	12,378	(133)
Foreign currency risk						
Foreign currency purchases and sales	384,024	423	329,781	(664)	304,280	(45)
Foreign currency options	54,967	150	49,680	(114)	45,074	(7)
Currency swaps	496,441	(245)	430,644	(1,293)	394,178	(814)
Securities and commodities derivatives and other	71,237	641	69,850	669	70,861	920
Total	6,463,470	2,111	5,470,797	726	5,830,329	2,668

12. Non-current assets

The detail of Non-current assets held for sale in the consolidated balance sheets is as follows:

EUR million

	2022	2021	2020
Tangible assets	3,435	4,089	4,445
Of which:			
Foreclosed assets	3,101	3,651	4,081
Of which property assets in Spain	2,596	3,120	3,485
Other tangible assets held for sale	334	438	364
Other assets	18	—	—
Total	3,453	4,089	4,445

At 31 December 2022, the provisions recognised for the total non-current assets held for sale totalled EUR 3,425 million (EUR 3,811 million and EUR 4,104 million at 31 December 2021 and 2020, respectively). The charges recorded in those years amounted to EUR 204 million, EUR 239 million and EUR 250 million, respectively, and the recoveries during these exercises are amounted to EUR 110 million, EUR 98 million and EUR 35 million, respectively.



13. Investments

a) Breakdown

The detail, by company, of Investments is as follows:

EUR million	2022	2021	2020
Associated entities	5,634	5,833	6,130
Merlin Properties, SOCIMI, S.A.	1,653	1,640	1,581
Caceis	1,046	975	1,077
Metrovacesa, S.A.	979	1,087	1,157
Zurich Santander Insurance America, S.L. - Consolidated	916	826	955
CNP Santander	406	418	439
Ebury Partners Limited (note 3)	—	394	388
Other companies	634	493	533
Joint Ventures entities	1,981	1,692	1,492
U.C.I., S.A. - Consolidated	416	228	168
Santander Caceis Latam Holding 1, S.L. - Consolidated (previously Santander Securities Services Latam Holding, S.L.)	359	334	326
Santander Vida Seguros y Reaseguros, S.A. (note 3)	356	378	381
Fortune Auto Finance Co., Ltd	244	222	172
Hyundai Capital UK Limited	223	201	151
Banco RCI Brasil S.A.	95	92	88
Other companies	288	237	206
Total Associated entities and Joint ventures	7,615	7,525	7,622

Of the entities included above, at 31 December 2022, the entities Merlin Properties, SOCIMI, S.A, Metrovacesa S.A. and Compañía Española de Viviendas en Alquiler, S.A. are the only listed companies.

Below is a breakdown of the Goodwill of the main investments in joint ventures and associates included in the balance of this heading:

EUR million	2022	2021	2020
Goodwill	1,508	1,723	1,862
<i>Of which:</i>			
Zurich Santander Insurance America, S.L. - Consolidated	526	526	526
Caceis	337	337	337

b) Changes

The changes in the investments were as follows:

EUR million	2022	2021	2020
Balance at beginning of year	7,525	7,622	8,772
Acquisitions (disposals) of companies and capital increases (reductions)	142	94	676
<i>Of which:</i>			
Ebury Partners Limited (note 3)	—	—	409
Santander Vida Seguros y Reaseguros, S.A. (note 3)	—	—	219
Changes in the consolidation method (note 3)	(320)	—	(1,359)
<i>Of which:</i>			
Ebury Partners Limited	(382)	—	—
Project Quasar Investments 2017, S.L.	—	—	(956)
Popular Spain Holding de Inversiones, S.L.U. (former Allianz Popular, S.L.)	—	—	(409)
Effect of equity accounting	702	432	(96)
Dividends distributed and reimbursements of share premium	(560)	(662)	(186)
<i>Of which:</i>			
Zurich Santander Insurance America S.L. - Consolidated	(160)	(230)	(80)
Caceis	—	(144)	—
CNP Santander	(15)	(60)	—
Metrovacesa, S.A.	(124)	(60)	—
Santander Vida Seguros y Reaseguros, S.A. - Consolidated	(40)	(31)	(37)
Merlin Properties, SOCIMI, S.A.	(139)	(52)	(17)
Other global result	70	(13)	(1)
Exchange differences and other changes	56	52	(184)
Balance at end of year	7,615	7,525	7,622

c) Impairment adjustments

During the years 2022, 2021 and 2020 there was no evidence of significant impairment in the Group's associated interests.



d) Other information

A summary of the financial information at the end of December 2022 of the main associates and joint ventures (obtained from the information available at the date of preparation of the consolidated financial statements) is shown below:

EUR million

	Associates					Joint ventures					
	Merlin Properties, SOCIMI, S.A. ^A	Metrovacesa, S.A. ^A	Caceis	Zurich Santander Insurance América, S.L. - Consolidated	CNP Santander	Santander Caceis Latam Holding, S.L. - Consolidated	U.C.I., S.A. - Consolidated	Hyundai Capital UK Limited	Fortune Auto Finance Co., LTD	Santander Vida Seguros y Reaseguros, S.A. - Consolidated (note 3)	Banco RCI Brasil S.A.
Current assets	1,038	2,200	36,702	1,027	166	191	308	2,593	176	79	5
Non current assets	13,234	577	87,638	16,216	2,168	497	11,228	2,064	1,863	1,725	1,939
Total assets	14,272	2,777	124,340	17,243	2,334	688	11,536	4,657	2,039	1,804	1,944
Current liabilities	737	364	9,629	337	19	188	182	2,346	29	190	109
Non current liabilities	6,508	334	110,251	15,907	1,907	10	10,574	1,868	1,521	1,051	1,582
Total liabilities	7,245	698	119,880	16,244	1,926	198	10,756	4,214	1,550	1,241	1,691
Attributable profit for the period	512	18	278	471	93	67	(63)	68	57	89	40
Other accumulated comprehensive income	32	1	—	(759)	(86)	(242)	280	(19)	12	(51)	(217)
Rest of equity	6,483	2,060	4,182	1,287	401	665	563	394	420	525	430
Total Equity	7,027	2,079	4,460	999	408	490	780	443	489	563	253
Total liabilities and equity	14,272	2,777	124,340	17,243	2,334	688	11,536	4,657	2,039	1,804	1,944
Ordinary activities income	551	511	2,770	4,771	816	120	263	809	257	784	292
Profit (loss) from continuing operations	512	18	278	471	93	67	(63)	68	57	89	40
Profit (loss) for the year from discontinuing operations	—	—	—	—	—	—	—	—	—	—	—

A. Data as of 31 December 2021, latest accounts available.

14. Insurance contracts linked to pensions

The detail of Insurance contracts linked to pensions in the consolidated balance sheets is as follows:

EUR million

	2022	2021	2020
Assets relating to insurance contracts covering post-employment benefit plan obligations:			
Banco Santander, S.A.	104	149	174
	104	149	174



15. Liabilities and assets under insurance contracts and reinsurance assets

The detail of Liabilities under insurance contracts and reinsurance assets in the consolidated balance sheets (see note 2.j) is as follows:

EUR million

Technical provisions for:	2022			2021			2020		
	Direct insurance and reinsurance assumed	Reinsurance ceded	Total (balance payable)	Direct insurance and reinsurance assumed	Reinsurance ceded	Total (balance payable)	Direct insurance and reinsurance assumed	Reinsurance ceded	Total (balance payable)
Unearned premiums and unexpired risks	65	(58)	7	56	(50)	6	51	(45)	6
Life insurance	226	(173)	53	209	(150)	59	189	(137)	52
<i>Unearned premiums and risks</i>	163	(150)	13	146	(130)	16	126	(122)	4
<i>Mathematical provisions</i>	63	(23)	40	63	(20)	43	63	(15)	48
Claims outstanding	389	(51)	338	451	(55)	396	561	(59)	502
Bonuses and rebates	14	(6)	8	20	(11)	9	23	(11)	12
Other technical provisions	53	(20)	33	34	(17)	17	86	(9)	77
	747	(308)	439	770	(283)	487	910	(261)	649

16. Tangible assets

a) Changes

The changes in Tangible assets in the consolidated balance sheets were as follows:

EUR million

	Tangible assets				Of which: For leasing			
	For own use	Leased out under an operating lease	Investment property	Total	For own use	Leased out under an operating lease	Investment property	Total
Cost								
Balances at 1 January 2020	27,108	24,454	1,450	53,012	5,686	—	—	5,686
Additions / disposals (net) due to change in the scope of consolidation	(16)	1,082	7	1,073	(37)	—	—	(37)
Additions / disposals (net)	827	512	(29)	1,310	(1,339)	—	—	(1,339)
Transfers, exchange differences and other items	(3,023)	(1,844)	32	(4,835)	(362)	—	—	(362)
Balance at 31 December 2020	24,896	24,204	1,460	50,560	3,948	—	—	3,948
Additions / disposals (net) due to change in the scope of consolidation	66	(257)	—	(191)	1	—	—	1
Additions / disposals (net)	781	(1,076)	(64)	(359)	96 ^A	—	—	96
Transfers, exchange differences and other items	(214)	1,552	141	1,479	384	—	—	384
Balance at 31 December 2021	25,529	24,423	1,537	51,489	4,429	—	—	4,429
Additions / disposals (net) due to change in the scope of consolidation	14	89	—	103	1	—	—	1
Additions / disposals (net)	604	(822)	(64)	(282)	109 ^A	—	—	109
Transfers, exchange differences and other items	423	1,476	107	2,006	153	—	—	153
Balance at 31 December 2022	26,570	25,166	1,580	53,316	4,692	—	—	4,692
Accumulated depreciation								
Balances at 1 January 2020	(11,974)	(5,210)	(144)	(17,328)	(765)	—	—	(765)
Disposals due to change in the scope of consolidation	(40)	—	—	(40)	(3)	—	—	(3)
Disposals	527	2,387	11	2,925	167	—	—	167
Charge for the year	(1,906)	—	(8)	(1,914)	(706)	—	—	(706)
Transfers, exchange differences and other items	1,850	(2,762)	8	(904)	90	—	—	90
Balance at 31 December 2020	(11,543)	(5,585)	(133)	(17,261)	(1,217)	—	—	(1,217)
Disposals due to change in the scope of consolidation	(1)	40	—	39	—	—	—	—
Disposals	733	3,390	3	4,126	44	—	—	44
Charge for the year	(1,733)	—	(10)	(1,743)	(612)	—	—	(612)
Transfers, exchange differences and other items	529	(3,083)	(9)	(2,563)	(4)	—	—	(4)
Balance at 31 December 2021	(12,015)	(5,238)	(149)	(17,402)	(1,789)	—	—	(1,789)
Disposals due to change in the scope of consolidation	(7)	(30)	4	(33)	—	—	—	—
Disposals	1,065	2,882	16	3,963	164	—	—	164
Charge for the year	(1,821)	—	(13)	(1,834)	(636)	—	—	(636)
Transfers, exchange differences and other items	(114)	(3,192)	(30)	(3,336)	(4)	—	—	(4)
Balance at 31 December 2022	(12,892)	(5,578)	(172)	(18,642)	(2,265)	—	—	(2,265)

A. Includes contract extensions on operating leases and repurchases.



EUR million

	Tangible assets				Of which: For leasing			
	For own use	Leased out under an operating lease	Investment property	Total	For own use	Leased out under an operating lease	Investment property	Total
Impairment losses								
Balances at 1 January 2020	(93)	(23)	(333)	(449)	—	—	—	—
Impairment charge for the year	(104)	(70)	(11)	(185)	(4)	—	—	(4)
Releases	4	2	5	11	1	—	—	1
Disposals due to change in the scope of consolidation	—	—	—	—	—	—	—	—
Disposals	20	—	3	23	—	—	—	—
Exchange differences and other	33	31	(28)	36	(6)	—	—	(6)
Balance at 31 December 2020	(140)	(60)	(364)	(564)	(9)	—	—	(9)
Impairment charge for the year	(144)	(17)	(8)	(169)	(13)	—	—	(13)
Releases	10	4	5	19	1	—	—	1
Disposals due to change in the scope of consolidation	—	—	—	—	—	—	—	—
Disposals	61	—	3	64	7	—	—	7
Exchange differences and other	(42)	(29)	(44)	(115)	(1)	—	—	(1)
Balance at 31 December 2021	(255)	(102)	(408)	(765)	(15)	—	—	(15)
Impairment charge for the year	(95)	(33)	(29)	(157)	(2)	—	—	(2)
Releases	12	1	4	17	1	—	—	1
Disposals due to change in the scope of consolidation	—	—	—	—	—	—	—	—
Disposals	34	76	9	119	13	—	—	13
Exchange differences and other	115	25	45	185	(11)	—	—	(11)
Balance at 31 December 2022	(189)	(33)	(379)	(601)	(14)	—	—	(14)
Tangible assets, net								
Balances at 31 December 2020	13,213	18,559	963	32,735	2,722	—	—	2,722
Balances at 31 December 2021	13,259	19,083	979	33,321	2,625	—	—	2,625
Balances at 31 December 2022	13,489	19,555	1,029	34,073	2,413	0	0	2,413



b) Tangible assets - For own use

The detail, by class of asset, of 'Property, plant and equipment' which is owned by the Group in the consolidated balance sheets is as follows:

EUR million

	Tangible assets for own use				Of which: for leasing
	Cost	Accumulated depreciation	Impairment losses	Carrying amount	
Land and buildings	13,081	(3,215)	(133)	9,733	2,716
IT equipment and fixtures	5,562	(4,416)	—	1,146	1
Furniture and vehicles	6,085	(3,854)	—	2,231	5
Construction in progress and other items	168	(58)	(7)	103	—
Balances at 31 December 2020	24,896	(11,543)	(140)	13,213	2,722
Land and buildings	13,855	(3,675)	(240)	9,940	2,570
IT equipment and fixtures	5,543	(4,335)	—	1,208	42
Furniture and vehicles	5,982	(3,954)	—	2,028	12
Construction in progress and other items	149	(51)	(15)	83	—
Balances at 31 December 2021	25,529	(12,015)	(255)	13,259	2,625
Land and buildings	14,623	(4,467)	(175)	9,981	2,349
IT equipment and fixtures	5,285	(3,984)	—	1,301	53
Furniture and vehicles	6,445	(4,389)	—	2,056	11
Construction in progress and other items	217	(52)	(14)	151	—
Balances at 31 December 2022	26,570	(12,892)	(189)	13,489	2,413

The carrying amount at 31 December 2022 in the foregoing table includes the following approximate amounts EUR 7,083 million (EUR 6,753 million at 31 December 2021 and EUR 6,299 million at 31 December 2020) relating to property, plant and equipment owned by group entities and branches located abroad.

c) Tangible assets - Leased out under an operating lease

Grupo Santander has assets leased out under operating leases where the company is the lessor and do not meet the accounting requirements to be classified as finance leases. The net cost of these leases is recorded as an asset and depreciated on a straight-line basis over the contractual term of the lease to the expected residual value.

The expected residual value and, consequently, the monthly depreciation expense may change during the term of the lease. The Group estimates expected residual values using independent data sources and internal statistical models. It also assesses the estimate of the residual value of these leases and adjusts the depreciation rate in line with the change in the expected value of the asset at the end of the lease.

Grupo Santander periodically assesses its investment in operating leases for impairment in certain circumstances, such as a systemic and material decrease in the values of used vehicles. If assets leased out under operating leases are deemed to be impaired, impairment is measured as the amount by which the carrying amount of the assets exceeds the fair value as estimated by discounted cash flows.

Of the EUR 19,555 million that the Group had assigned to operating leases at 31 December 2022 (EUR 19,083 million and EUR 18,559 million at 31 December 2021 and 2020, respectively), EUR 13,389 million (EUR 13,630 million and EUR 13,473 million at 31 December 2021 and 2020, respectively) relate to vehicles of Santander US Auto's business. The variable lease payments of various items of this entity are not significant.

In addition, the maturity analysis of the undiscounted payments for assets leased out under operating leases from Santander US Auto is as follows:

EUR million	2022
Maturity Analysis	
2023	2,811
2024	5,243
2025	4,762
2026	1,171

d) Tangible assets - Investment property

The fair value of investment property at 31 December 2022, 2021, 2020 amounted to EUR 1,153, 1,088 and 1,055 million, respectively. A comparison of the fair value of investment property at 31 December 2022, 2021 and 2020 with the net book value shows gross unrealised gains of EUR 124, 109 and 92 million, respectively, attributed completely to the group.



The rental income earned from investment property and the direct costs related both to investment properties that generated rental income in 2022, 2021 and 2020 and to investment properties that did not generate rental income in those years are not material in the context of the consolidated financial statements.

17. Intangible assets – Goodwill

The detail of goodwill, based on the cash-generating units giving rise thereto, is as follows:

EUR million	2022	2021	2020
Banco Santander (Brasil)	3,503	3,219	3,109
SAM Investment Holdings Limited	1,444	1,444	1,444
Santander Consumer Germany	1,304	1,304	1,314
Santander Bank Polska	1,075	1,095	1,104
Santander Portugal	1,040	1,040	1,040
Santander US Auto	1,039	979	904
Santander España	998	1,027	1,027
Santander Holding USA (ex. Auto) ^A	844	643	594
Santander UK	599	633	592
Banco Santander - Chile	548	516	571
Grupo Financiero Santander (México)	469	435	399
Ebury Partners	298	—	—
Santander Consumer Nordics	215	224	216
Other companies	365	154	157
Total Goodwill	13,741	12,713	12,471

A. Includes the Amherst Pierpont Securities LLC¹ business (see note 3).

The changes in goodwill were as follows:

EUR million	2022	2021	2020
Balance at beginning of year	12,713	12,471	24,246
Additions (note 3)	534	81	429
Of which:			
Ebury Partners	316	—	—
Santander Holding USA (ex. Auto) ^A	158	—	—
SAM Investment Holdings Limited	—	—	271
Impairment losses	—	(6)	(10,100)
Of which:			
Santander UK	—	—	(6,101)
Santander Bank Polska	—	—	(1,192)
Santander Holding USA (ex. Auto)	—	—	(1,177)
Santander US Auto	—	—	(1,153)
Santander Consumer Nordics	—	—	(277)
Disposals or changes in scope of consolidation	—	—	—
Exchange differences and other items	494	167	(2,104)
Balance at end of year	13,741	12,713	12,471

A. Acquisition of Amherst Pierpont Securities LLC (see note 3).

Grupo Santander has goodwill generated by cash-generating units located in non-euro currency countries (mainly Brazil, Poland, the United States, the United Kingdom, Chile, Mexico, Norway and Sweden) and, therefore, this gives rise to exchange differences on the translation to euros, at closing rates, of the amounts of goodwill denominated in foreign currencies. Accordingly, in 2022 there was an increase of EUR 494 million (an increase of EUR 167 million in 2021 and a decrease of EUR 2,104 million in 2020), due to exchange differences and other items which, pursuant to current standards, were recognised with a change to 'Other comprehensive income - Items that may be reclassified to profit or loss - Exchange differences in other comprehensive income in the consolidated statement of recognised income and expense' (see note 29.d).

At least once per year (or whenever there is any indication of impairment), Grupo Santander performs an analysis of the potential impairment of its recorded goodwill with respect to its recoverable amount. The first step that must be taken in order to perform this analysis is the identification of the cash-generating units, which are the Group's smallest identifiable groups of assets that generate cash inflows that are largely independent of the cash flows of other assets or groups of assets.

The amount to be recovered of each cash-generating unit is determined taking into consideration the carrying amount (including any fair value adjustment arising on the business combination) of all the assets and liabilities of all the independent legal entities composing the cash-generating unit, together with the related goodwill.

The amount to be recovered of the cash-generating unit is compared with its recoverable amount in order to determine whether there is any impairment.

Grupo Santander's directors assess the existence of any indication that might be considered to be evidence of impairment of the cash-generating unit by reviewing information including the following (i) certain macroeconomic variables that might affect its investments (population data, political situation, economic situation —including banking concentration level—, among others) and (ii) various microeconomic variables comparing the investments of the Group with the financial services industry of the country in which the cash-generating unit carries on most of its business activities (balance sheet composition, total funds under management, results, efficiency ratio, capital adequacy ratio, return on equity, among others).

Regardless of whether there is any indication of impairment, every year the Group calculates the recoverable amount of each cash-generating unit to which goodwill, has been allocated and, to this end, it uses price quotations, market references (multiples), internal estimates and valuations performed by internal and external experts.

Firstly, the Group determines the recoverable amount by calculating the fair value of each cash-generating unit on the basis of the quoted price of the cash-generating units, if available.



In addition, the Group performs estimates of the recoverable amounts of certain cash-generating units by calculating their value in use using discounted cash flow projections. The main assumptions used in this calculation are (i) earnings projections based on the financial budgets approved by the Group's directors which cover between three and five year periods (unless a longer time horizon can be justified), (ii) discount rates determined as the cost of capital taking into account the risk-free rate of return plus a risk premium in line with the market and the business in which the units operate and (iii) constant growth rates used in order to extrapolate earnings in perpetuity which do not exceed the long-term average growth rate for the market in which the cash-generating unit in question operates.

The cash flow projections used by Group management to obtain the values in use are based on the financial budgets approved by both local management of the related local units and the Group's directors. The Group's budgetary estimation process is common for all the cash-generating units. The local management teams prepare their budgets using the following key assumptions:

- a) Microeconomic variables of the cash-generating unit: management takes into consideration the current balance sheet structure, the product mix and the business decisions taken by local management in this regard.
- b) Macroeconomic variables: growth is estimated on the basis of the changing environment, taking into consideration expected GDP growth in the unit's geographical location and forecast trends in interest and exchange rates. These data, which are based on external information sources, are provided by the Group's economic research service.
- c) Past performance variables: in addition, management takes into consideration in the projection the difference (both positive and negative) between the cash-generating unit's past performance and budgets.

During 2022, the Group has not recognised any impairment losses.

During 2021, the Group recognised impairment losses of EUR 6 million of immaterial goodwill and in 2020, considering the economic and business environment resulting from covid-19, market conditions and the existing economic uncertainty, an impairment test was performed for certain CGU during the second quarter. As a result, the Group recognised goodwill impairment of EUR 10,100 million, mainly associated with Santander UK, Santander Bank Polska, Santander Bank, National Association, Santander Consumer USA and Santander Consumer Nordics. Those impairment losses were recognised under 'Impairment or reversal of impairment of non-financial assets, net - Intangible assets'. Goodwill is deducted from CET1 for regulatory purposes and therefore an impairment of goodwill has no impact on the Group's capital ratios.



Following is a detail of the main assumptions taken into account in determining the recoverable amount, at 2022 year-end, of the most significant cash-generating units which were valued using the discounted cash flow method:

	2022		
	Projected period	Discount rate ^A	Nominal perpetual growth rate
Santander UK	5 years	11.1%	2.5%
Santander Bank Polska	5 years	15.6%	4.8%
Santander US Auto	3 years	12.2%	2.8%
Santander Holding USA (ex. Auto) ^B	5 years	12.6%	3.5%
Santander Consumer Germany	5 years	9.4%	2.3%
SAM Investment Holdings, Limited	5 years	12.2%	2.5%
Santander Portugal	5 years	11.1%	2.3%
Santander Consumer Nordics	5 years	11.0%	2.5%

A. Post-tax discount rate.

B. Weighted information of the main assumptions of the segments to which goodwill has been allocated.

The discount and nominal perpetual growth rates taken into account in 2021 and 2020 are presented below for comparison purposes:

	Discount rate ^A		Nominal perpetual growth rate	
	2021	2020	2021	2020
Santander UK	9.2%	9.5%	2.3%	2.3%
Santander Bank Polska	10.3%	10.0%	3.5%	3.5%
Santander US Auto	10.6%	10.7%	1.5%	1.5%
Santander Holding USA (ex. Auto) ^B	11.6%	11.6%	3.0%	2.5%
Santander Consumer Germany	8.3%	9.0%	1.8%	1.8%
SAM Investment Holdings, Limited	10.4%	10.1%	2.5%	2.5%
Santander Portugal	9.7%	9.8%	1.8%	1.8%
Santander Consumer Nordics	9.9%	10.1%	2.0%	2.0%

A. Post-tax discount rate.

B. Weighted information of the main assumptions of the segments to which goodwill has been allocated.

The variations reflected in the assumptions used in 2022 are mainly a consequence of the current macroeconomic scenario, as well as the increasing level of inflation and difficulties in supply chains, which have led to a rapid increase in central banks' benchmark interest rates in the main countries where the Group's CGU are operating.

Given the degree of uncertainty of the above key assumptions on which the recoverable amount of the cash-generating units is based, the Group performs a sensitivity analysis which consisted of adjusting +/- 50 basis points the discount rate, adjusting +/- 50 basis points the growth rate in perpetuity and reducing the cash flow projections by 5%. These changes in the key assumptions in isolation mean that the recoverable amount of all the cash-generating units continues to exceed their amount to be recovered and have been considered by the Group as reasonably possible changes in the business operations of the cash-generating units are not contemplated.

The recoverable amount of Banco Santander - Chile, Grupo Financiero Santander (México) and Banco Santander (Brasil) was calculated as the fair values of the aforementioned cash-generating units obtained from the quoted market prices of their shares at year-end. This value exceeded the amount to be recovered. A significant reduction in the quoted market prices of these cash generating unit could result in an indication of impairment which in turn may lead to a goodwill impairment charge in the future.



18. Intangible assets - Other intangible assets

The detail of Intangible assets - Other intangible assets in the consolidated balance sheets and of the changes therein in 2022, 2021, and 2020 is as follows:

EUR million

	Estimated useful life	31/12/2021	Net additions and disposals	Change in scope of consolidation	Amortization and impairment	Application of amortization and impairment	Exchange differences and other	31/12/2022
Cost		10,712	1,757	381	—	(511)	163	12,502
Brand names		4	—	27		—	2	33
IT developments	3-7 years	9,189	1,748	153		(497)	128	10,721
Other		1,519	9	201		(14)	33	1,748
Accumulated amortisation		(6,707)	—	—	(1,151)	412	(108)	(7,554)
<i>Development</i>		(6,149)	—	—	(1,024)	403	(96)	(6,866)
<i>Other</i>		(558)	—	—	(127)	9	(12)	(688)
Impairment losses		(134)	—	—	(75)	99	66	(44)
<i>Of which addition</i>		—	—	—	(75)	—	—	—
<i>Liberation</i>		—	—	—	—	—	—	—
		3,871	1,757	381	(1,226)	—	121	4,904

EUR million

	Estimated useful life	31/12/2020	Net additions and disposals	Change in scope of consolidation	Amortization and impairment	Application of amortization and impairment	Exchange differences and other	31/12/2021
Cost		9,376	1,409	5	—	(293)	215	10,712
Brand names		37	—	—		(34)	1	4
IT developments	3-7 years	7,900	1,325	4		(212)	172	9,189
Other		1,439	84	1		(47)	42	1,519
Accumulated amortisation		(5,809)	—	(2)	(1,013)	232	(115)	(6,707)
<i>Development</i>		(5,307)	—	(1)	(922)	178	(97)	(6,149)
<i>Other</i>		(502)	—	(1)	(91)	54	(18)	(558)
Impairment losses		(130)	—	—	(65)	61	—	(134)
<i>Of which addition</i>		—	—	—	(65)	—	—	—
<i>Liberation</i>		—	—	—	—	—	—	—
		3,437	1,409	3	(1,078)	—	100	3,871



EUR million

	Estimated useful life	31/12/2019	Net additions and disposals	Change in scope of consolidation	Amortization and impairment	Application of amortization and impairment	Exchange differences and other	31/12/2020
Cost		9,263	1,451	(33)	—	(241)	(1,064)	9,376
Brand names		42	—	—		—	(5)	37
IT developments	3-7 years	7,945	1,123	(34)		(224)	(910)	7,900
Other		1,276	328	1		(17)	(149)	1,439
Accumulated amortisation		(5,686)	35	49	(896)	105	584	(5,809)
<i>Development</i>		(5,139)	—	49	(792)	88	487	(5,307)
<i>Other</i>		(547)	35	—	(104)	17	97	(502)
Impairment losses		(136)	—	—	(142)	136	12	(130)
<i>Of which addition</i>		—	—	—	(142)	—	—	—
<i>Liberation</i>		—	—	—	0	—	—	—
		3,441	1,486	16	(1,038)	—	(468)	3,437

In 2022, 2021 and 2020, impairment losses of EUR 75 million, EUR 65 million and EUR 142 million, respectively, were recognised under Impairment or reversal of impairment on non-financial assets, net – intangible assets. This impairment losses are related mainly to the decline in or loss of the recoverable value of certain computer systems and applications as a result of the processes initiated by the Group to adapt to the various regulatory changes and to transform or integrate businesses.

19. Other assets

The detail of 'Other assets' is as follows:

EUR million

	2022	2021	2020
Transactions in transit	83	157	88
Net pension plan assets (note 25)	1,345	1,990	635
Prepayments and accrued income	3,003	2,610	2,806
Other (note 2.n)	5,536	3,683	7,362
	9,967	8,440	10,891



20. Deposits from central banks and credit institutions

The detail, by classification, counterparty, type and currency, of Deposits from central banks and 'Deposits from credit institutions' in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
CENTRAL BANKS			
Classification			
Financial liabilities held for trading	5,757	1,038	—
Financial liabilities designated at fair value through profit or loss	1,740	607	2,490
Financial liabilities at amortized cost	76,952	139,757	112,804
	84,449	141,402	115,294
Type			
Deposits on demand	—	10	10
Time deposits	72,320	134,439	108,090
Reverse repurchase agreements	12,129	6,953	7,194
	84,449	141,402	115,294
CREDIT INSTITUTIONS			
Classification			
Financial liabilities held for trading	9,796	6,488	—
Financial liabilities designated at fair value through profit or loss	1,958	1,064	6,765
Financial liabilities at amortized cost	68,582	52,235	62,620
	80,336	59,787	69,385
Type			
Deposits on demand	6,808	6,139	5,727
Time deposits	49,221	37,332	43,308
Reverse repurchase agreements	24,245	16,198	20,179
Subordinated deposits	62	118	171
	80,336	59,787	69,385
Currency			
Euro	65,133	107,908	104,499
Pound sterling	35,357	42,451	23,339
US dollar	30,924	24,012	26,581
Brazilian real	14,195	11,297	12,356
Other currencies	19,176	15,521	17,904
TOTAL	164,785	201,189	184,679

At 31 December 2022, the balance of the conditional long-term financing of the European Central Bank (TLTRO- Targeted Long-Term Refinancing Operation-) amounts to EUR 33,536 million, which corresponds to TLRO III (EUR 88,894 million and EUR 77,732 million at 31 December 2021 and 2020, respectively).

At 31 December 2022, the income recognized in the consolidated income statement corresponding to TLRO III amounts to EUR 489 million (EUR 868 million and EUR 391 million at 31 December 2021 and 2020, respectively).

Note 50 contains a detail of the residual maturity periods of financial liabilities at amortised cost.

21. Customer deposits

The detail, by classification, geographical area and type, of Customer deposits is as follows:

EUR million	2022	2021	2020
Classification			
Financial liabilities held for trading	12,226	6,141	—
Financial liabilities designated at fair value through profit or loss	46,822	25,608	34,343
Financial liabilities at amortized cost	966,353	886,595	814,967
	1,025,401	918,344	849,310
Geographical area			
Spain	399,112	319,565	294,516
European Union (excluding Spain)	115,323	112,361	106,013
United Kingdom	232,364	243,734	232,840
United States and Puerto Rico	87,497	73,814	59,057
Rest of America	181,782	159,381	147,300
Rest of the world	9,323	9,489	9,584
	1,025,401	918,344	849,310
Type			
Demand deposits-	710,232	717,728	642,897
<i>Current accounts</i>	477,739	482,649	418,752
<i>Savings accounts</i>	225,445	227,318	216,500
<i>Other demand deposits</i>	7,048	7,761	7,645
Time deposits-	251,778	164,259	171,939
<i>Fixed-term deposits and other term deposits</i>	248,298	162,172	170,127
<i>Home-purchase savings accounts</i>	38	38	43
<i>Discount deposits</i>	—	3	3
<i>Hybrid financial liabilities</i>	3,296	1,906	1,743
<i>Subordinated liabilities</i>	146	140	23
Repurchase agreements	63,391	36,357	34,474
	1,025,401	918,344	849,310

Note 50 contains a detail of the residual maturity periods of financial liabilities at amortised cost.



22. Marketable debt securities

a) Breakdown

The detail, by classification and type, of Marketable debt securities is as follows:

EUR million			
	2022	2021	2020
Classification			
Financial liabilities held for trading	—	—	—
Financial liabilities designated at fair value through profit or loss	5,427	5,454	4,440
Financial liabilities at amortized cost	274,912	240,709	230,829
	280,339	246,163	235,269
Type			
Bonds and debentures outstanding	211,597	194,362	191,577
Subordinated	25,717	25,938	21,686
Notes and other securities	43,025	25,863	22,006
	280,339	246,163	235,269

The distribution of the book value of debt securities issued by contractual maturity at 31 December 2022 is shown below:

EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Subordinated debt	—	678	3,706	3,774	17,559	25,717
Senior unsecured debt	5,224	13,924	48,113	31,854	28,342	127,457
Senior secured debt	4,204	15,445	30,808	20,786	12,897	84,140
Promissory notes and other securities	25,659	17,366	—	—	—	43,025
Debt securities issued	35,087	47,413	82,627	56,414	58,798	280,339

The distribution by contractual maturity of the notional amounts of these debt securities issued at 31 December 2022 is as follows:

EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Subordinated debt	—	663	3,728	3,810	17,502	25,703
Senior unsecured debt	5,255	14,006	48,398	32,042	28,510	128,211
Senior secured debt	4,203	15,440	30,799	20,780	12,892	84,114
Promissory notes and other securities	25,647	17,358	—	—	—	43,005
Debt securities issued	35,105	47,467	82,925	56,632	58,904	281,033

**b) Bonds and debentures outstanding**

The detail, by currency of issue, of 'Bonds and debentures outstanding' is as follows:

Currency of issue	EUR million			2022	
	2022	2021	2020	Outstanding issue amount in foreign currency (Million)	Annual interest rate (%)
Euro	87,295	90,348	89,031	87,295	1.38%
US dollar	75,798	66,581	61,174	80,930	3.10%
Pound sterling	15,883	13,340	16,569	14,084	2.81%
Brazilian real	18,024	9,131	8,398	101,835	12.52%
Chilean peso	4,653	3,757	5,624	4,230,507	2.74%
Other currencies	9,944	11,205	10,781		
Balance at end of year	211,597	194,362	191,577		



The changes in 'Bonds and debentures outstanding' were as follows:

EUR million

	2022	2021	2020
Balance at beginning of year	194,362	191,577	208,455
Net inclusion of entities in the Group	—	—	785
Issues	66,033	59,937	54,905
<i>Of which:</i>			
<i>Banco Santander, S.A.</i>	19,243	11,766	10,220
<i>Santander Consumer USA Holdings Inc.</i>	13,315	15,771	12,246
<i>Banco Santander (Brasil) S.A.</i>	11,233	14,996	11,036
<i>Santander UK Group Holdings plc</i>	10,178	3,372	6,320
<i>Santander Holdings USA, Inc.</i>	2,315	—	1,269
<i>Banco Santander - Chile</i>	1,486	1,158	766
<i>Santander Consumer Finance, S.A.</i>	1,293	1,169	2,394
<i>Santander Bank, National Association</i>	1,222	252	—
<i>SC Germany S.A., Compartment Consumer 2022-1</i>	972	—	—
<i>Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México</i>	837	541	1,770
<i>PSA Financial Services Spain, E.F.C., S.A.</i>	706	—	605
<i>Santander Consumer Bank AS</i>	619	779	773
<i>Santander International Products, Plc.</i>	599	914	1,588
<i>PSA Banque France</i>	60	815	385
<i>Santander Factoring Sp. z o.o.</i>	32	819	391
<i>PSA Bank Deutschland GmbH</i>	20	600	—
<i>Santander Consumo 4, F.T.</i>	—	1,531	—
<i>SC Germany S.A., Compartment Consumer 2021-1</i>	—	1,496	—
<i>Auto ABS French Lease Master Compartment 2016</i>	—	900	300
<i>SC Germany S.A., Compartment Consumer 2020-1</i>	—	—	1,800
<i>SCF Rahoituspalvelut IX DAC</i>	—	—	650
Redemptions and repurchases	(49,903)	(61,846)	(62,699)
<i>Of which:</i>			
<i>Santander Consumer USA Holdings Inc.</i>	(15,252)	(15,151)	(13,959)
<i>Banco Santander, S.A.</i>	(9,297)	(3,185)	(5,991)
<i>Santander UK Group Holdings plc</i>	(5,267)	(14,695)	(14,102)
<i>Santander Consumer Finance, S.A.</i>	(3,357)	(3,779)	(4,371)
<i>Santander Holdings USA, Inc.</i>	(3,153)	(778)	(1,201)
<i>Banco Santander (Brasil) S.A.</i>	(2,721)	(15,182)	(14,211)
<i>Banco Santander - Chile</i>	(1,452)	(1,030)	(1,974)
<i>Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México</i>	(1,316)	(411)	(415)
<i>PSA Banque France</i>	(1,165)	(335)	(684)
<i>Santander Consumer Bank AS</i>	(972)	(348)	(936)
<i>SC Germany S.A., Compartment Consumer 2020-1</i>	(724)	(92)	—
<i>Santander Leasing S.A.</i>	(590)	(291)	(460)
<i>Santander Consumer Bank AG</i>	(500)	—	—
<i>Santander Factoring Sp. z o.o.</i>	(142)	(920)	(299)
<i>Banco Santander Totta, S.A.</i>	(62)	(9)	(784)
<i>Auto ABS French Lease Master Compartment 2016</i>	—	(900)	—
Exchange differences and other movements	1,105	4,694	(9,869)
Balance at year-end	211,597	194,362	191,577



c) Notes and other securities

The notes of the Group (see Note 22.a) were issued basically by Santander Consumer Finance, S.A., Santander UK plc, Banco Santander (México), S.A. Institución de Banca Múltiple, Grupo Financiero Santander México, Banco Santander, S.A., Santander Consumer Bank AG, PSA Banque France, Banco Santander - Chile and Banco Santander S.A. - Uruguay.

d) Guarantees

Set forth below is information on the liabilities secured by assets:

EUR million	2022	2021	2020
Asset-backed securities	40,138	40,519	35,753
Of which, mortgage-backed securities	1,549	1,487	2,274
Other mortgage securities	43,650	41,779	49,425
Of which: mortgage-backed bonds	22,049	23,197	24,736
Territorial covered bond	352	630	869
	84,140	82,928	86,047

The main characteristics of the assets securing the aforementioned financial liabilities are as follows:

1. Asset-backed securities

- a. Mortgage-backed securities- these securities are secured by mortgage assets (see Note 10.e) with average maturities of more than ten years that must: be a first mortgage for acquisition of principal or second residence, be current in payments, have a loan-to-value ratio below 80% and have a liability insurance policy in force covering at least the appraisal value. The value of the financial liabilities broken down in the foregoing table is lower than the balance of the assets securing them —securitised assets retained on the balance sheet— mainly because the Group repurchases a portion of the bonds issued, and in such cases they are not recognised on the liability side of the consolidated balance sheet.
- b. Other asset - backed securities: includes asset-backed securities, notes issued by securitization funds collateralized mainly by mortgage loans that do not meet the above requirements and other loans (mainly personal loans with an average maturity of five years and loans to SMEs with average maturities of seven years) and private issues of Santander Consumer USA Holdings Inc collateralized by vehicles assigned under operating leases.

2. Other mortgage securities include mainly:

- a. Mortgage-backed bonds with average maturities of more than ten years that are secured by a portfolio of mortgage loans and credits (included in secured loans —see note 10.b —) which must: not be classified as of procedural stage; have available appraisals performed by specialised entities; have a loan-to-value (LTV) ratio below 80% in the case of home loans and below 60% for loans for other assets and have sufficient liability insurance.
- b. Other debt securities issued as part of the Group's liquidity strategy in the UK, mainly covered bonds in the UK secured by mortgage loans and other assets.

Additionally, Banco Santander, S.A. issues internationalization certificates, which are securities whose capital and interest are guaranteed by loans and credits that are linked to the financing of export contracts or the internationalization of companies. These internationalization certificates have been fully repurchased by Banco Santander, S.A.

The fair value of the guarantees received by the Group (financial and non-financial assets) which the Group is authorised to sell or pledge even if the owner of the guarantee has not defaulted is scantily material taking into account the Consolidated financial statements as a whole.

e) Mortgage-backed bonds

The members of the board of directors state that Banco Santander operates in the field of issuances in the Spanish mortgage market, has and has established express policies and procedures that cover all the activities carried out and that guarantee strict compliance with the mortgage market regulations applicable to these activities for the purposes of the provisions of Bank of Spain Circular 4/2017.

The risk policies applicable to mortgage market transactions envisage maximum loan-to-value (LTV) ratios, and specific policies are also in place adapted to each mortgage product, which occasionally require the application of stricter limits.

Grupo Santander's general policies in this respect require the repayment capacity of each potential customer (the effort ratio in loan approval) to be analysed using specific indicators that must be met. This analysis must determine whether each customer's income is sufficient to meet the repayments of the loan requested. In addition, the analysis of each customer must include a conclusion on the stability over time of the customer's income considered with respect to the life of the loan. The aforementioned indicator used to measure the repayment capacity (effort ratio) of each potential customer takes into account mainly the relationship between the potential debt and the income generated, considering on the one hand the monthly repayments of the loan requested and other transactions and, on the other, the monthly salary income and duly supported income.

Grupo Santander entities have specialised document comparison procedures and tools for verifying customer information and solvency (see note 53).

Grupo Santander entities' procedures envisage that each mortgage originated in the mortgage market must be individually valued by an appraisal company not related to the Group.



In accordance with Articles 18.1 and 21 of RDL 24/2021, any appraisal company approved by the Bank of Spain may issue valid appraisal reports. However, as permitted by this same article, the Group entities perform several checks and select, from among these companies, a small group with which they enter into cooperation agreements with special conditions and automated control mechanisms. The Group's internal regulations specify, in detail, each of the internally approved companies, as well as the approval requirements and procedures and the controls established to uphold them. In this connection, the regulations establish the functions of an appraisal company committee on which the various areas of the Group related to these companies are represented. The aim of the committee is to regulate and adapt the internal regulations and the activities of the appraisal companies to the current market and business situation (see note 2.i).

Basically, the companies wishing to cooperate with the Group must have a significant level of activity in the mortgage market in the area in which they operate, they must pass a preliminary screening process based on criteria of independence, technical capacity and solvency -in order to ascertain the continuity of their business- and, lastly, they must pass a series of tests prior to obtaining definitive approval.

In order to fully comply with the legislation, any appraisal provided by the customer is reviewed, irrespective of which appraisal company issues it, to check that the requirements, procedures and methods used to prepare it are formally adapted to the valued asset pursuant to current legislation and that the values reported are customary in the market.

The information currently required by Bank of Spain circular 4/2017:

EUR million	2022	2021	2020
Face value of the outstanding mortgage loans and credits that support the issuance of mortgage-backed and mortgage bonds pursuant to Royal Decree 716/2009 (excluding securitised bonds)	80,946	83,088	76,554
<i>Of which:</i>			
<i>Loans eligible to cover issues of mortgage-backed securities</i>	65,779	64,896	57,382
<i>Transfers of assets retained on balance sheet: mortgage-backed certificates and other securitised mortgage assets</i>	9,769	11,133	17,610

The mortgage bonds issued by Banco Santander are securities that, without prejudice to the universal patrimonial responsibility of the issuer, and in accordance with the provisions of RDL 24/2021, are specially guaranteed, together with the rest of the issuer's obligations under a preferential right on all the assets that make up the Mortgage Bonds Coverage Set at any time without the need to affect said assets as collateral by means of a public deed, or any registration in any public registry or any other formality.

The Mortgage Bonds Coverage Set is made up of: (i) admissible mortgage loans in accordance with the provisions of article 23 of RDL 24/2021, although it may also be made up of, likewise, (ii) admissible liquid assets in accordance with the contained in article 11 of RDL 24/2021, (iii) admissible substitution assets in accordance with the provisions of the third section of article 23 of RDL 24/2021 and (iv) admissible derivative instruments in accordance with the provisions of article 12 of the RDL 24/2021, in the quantity and with the characteristics provided for in RDL 24/2021.

Mortgage bonds incorporate the credit right of their holder against the issuing entity, guaranteed in the manner indicated in the previous paragraph, and are accompanied by execution to claim payment from the issuer after its expiration. The holders of these titles have the character of singularly privileged creditors, with the preference currently indicated in numbers 8 of article 1,922 and 6 of article 1,923 of the Civil Code over any other creditors, in relation to all the assets that integrate the Mortgage Bonds Coverage Set. Pursuant to current regulations, all holders of the Issuer's covered bonds, regardless of their issuance date, will have the same priority over the assets included in the Mortgage Bonds Coverage Set.

In the event of bankruptcy, holders of identity cards, as long as they are not considered 'persons specially related' to the issuing entity in accordance with Royal Legislative Decree 1/2020, of May 5, which approves the consolidated text of the Bankruptcy Law (the 'Bankruptcy Law'), would enjoy the special privilege established in number 7 of article 270 of the aforementioned Bankruptcy Law, which will only apply to the part of the bankruptcy credit that does not exceed the value of the guarantee (calculated in accordance with article 44 of RDL 24/2021). Pursuant to the provisions of said Chapter, in the event of bankruptcy of the Issuer, the coverage assets of the Mortgage Bonds Coverage Set individualized and identified in the special register where the Mortgage Bonds Coverage Set is segregated in accordance with the certification issued by the mortgage bond control body will be materially segregated from the issuer's equity and will form a separate equity that will operate in legal transactions represented by a special administrator.



Once the segregation has been carried out, in accordance with the provisions of article 44.2 of RDL 24/2021, if the total value of the assets that make up each separate patrimony is greater than the total value of the liabilities guaranteed by said separate patrimony plus the legal over-guarantee, contractual or voluntary and the liquidity requirement, the special administrator may decide whether to continue with the current management of the corresponding separate equity until its maturity or make a total or partial assignment of the separate equity to another entity issuing guaranteed bonds. Otherwise, the special administrator will request the liquidation of said separate patrimony following the ordinary bankruptcy procedure. The request for liquidation of the separate patrimony will produce (a) the early maturity of all the issuer's securities guaranteed by the assets that make up the separate patrimony and (b) the beginning of the liquidation of the assets of the separate patrimony. With the amount obtained in the liquidation of the separate patrimony, after deducting the expenses and costs derived from the liquidation of the same, including the remuneration of the special administrator, the holders of the mortgage bonds and the counterparties of derivative contracts included in the Mortgage Bonds Coverage Set (if applicable), in proportion to their credits regardless of the age of the debt. If, once the liquidation of the separate equity has been completed or all its liabilities have expired, there is a remainder, this will correspond to the active mass of the issuer's bankruptcy. If, on the contrary, full satisfaction of the credit is not achieved, in accordance with the provisions of article 42.1 of RDL 24/2021, the unsatisfied part will be recognized in the issuer's bankruptcy with the same priority as that of the rights of credit of the ordinary unsecured creditors of the issuer.

Grupo Santander has a balance corresponding to mortgage bonds at December 31, 2022 of EUR 22,049 million (all of them issued in euros), which correspond to issues of Banco Santander, SA (with an outstanding face value of EUR 22,099 million). The individual annual accounts of this company detail the issues at 31 December of 2022 and 2021.

The issuing entity may repay the mortgage bonds early, if this has been expressly established in the final conditions of the issue in question and in the conditions established there.

None of the mortgage bonds issued by Banco Santander have replacement assets involved.

23. Subordinated liabilities

a) Breakdown

The detail, by currency of issue, of Subordinated liabilities, deposits and marketable debt securities, in the consolidated balance sheets is as follows:

Currency of issue	EUR million			2022	
	2022	2021	2020	Outstanding issue amount in foreign currency (million)	Annual interest rate (%)
Euro	12,940	13,857	13,570	12,940	3.40%
US dollar	8,438	8,236	5,991	9,009	4.91%
Pound sterling	1,358	1,535	565	1,204	4.18%
Brazilian real	1,127	879	—	6,367	14.77%
Other currencies	2,063	1,689	1,754		
Balance at end of year	25,926	26,196	21,880		

Note 50 contains a detail of the residual maturity periods of subordinated liabilities at each year-end.

b) Changes

The movement in the balance of subordinated liabilities in the last three years were as follows:

EUR million	2022	2021	2020
Balance at beginning of year	26,196	21,880	21,062
Issuances ^A	119	5,340	4,075
<i>Of which:</i>			
<i>Banco Santander - Chile</i>	113	—	353
<i>Banco Santander, S.A.</i>	—	4,469	3,722
<i>Banco Santander (Brasil) S.A.</i>	—	871	—
Redemptions and repurchases ^A	(1,040)	(1,500)	(2,838)
<i>Of which:</i>			
<i>Banco Santander, S.A.</i>	(889)	(1,500)	(1,671)
<i>Santander UK plc</i>	(98)	—	(740)
<i>Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México</i>	(52)	—	—
<i>Santander UK Group Holdings plc</i>	—	—	(316)
Santander Bank, National Association	—	—	(111)
Exchange differences and other movements	651	476	(419)
Balance at end of year	25,926	26,196	21,880

A. The balance relating to issuances, redemptions and repurchases (EUR 921 million), together with the interest paid in remuneration of these issuances including PPCC (EUR 1,251 million), is included in the cash flow from financing activities.

c) Other disclosures

This caption includes contingent convertible preferred participations, as well as other subordinated financial instruments issued by consolidated companies, which do not qualify as equity (preferred shares).

Preferred shares do not have voting rights and are non-cumulative. They have been subscribed by third parties outside the Group, and except for the issues of Santander UK plc, the rest are redeemable by decision of the issuer, according to the terms of each issue.

Banco Santander's contingently convertible preferred participations are subordinated debentures and rank after common creditors and any other subordinated credit that by law and/or by their terms, to the extent permitted by Spanish law, ranks higher than the contingently convertible preferred participations. Their remuneration is conditioned to the obtainment of sufficient distributable profits, and to the limitations imposed by the regulations on shareholders' equity, and they have no voting rights. The other issues of Banco Santander, S.A. mentioned in this caption are also subordinated debentures and, for credit ranking purposes, they rank behind all the common creditors of the issuing entities and ahead of any other subordinated credit that ranks pari passu with the Bank's contingently convertible preferred participations.

The main issues of subordinated debt securities issued, broken down by company, are detailed below:



Issues by Banco Santander, S.A.

On July 6, 2022 and July 20, 2022, two subordinated issues matured for a nominal amount of EUR 114 million and EUR 25 million, respectively.

At 25 April 2022, Banco Santander, S.A. proceeded to prepay all the Tier 1 Contingently Convertible Preferred Securities with ISIN code XS1602466424 and common code 160246642 in circulation, for a total nominal amount of EUR 750 million and which were traded on the Irish Stock Market 'Global Exchange Market' (the 'PPCC').

At 22 November 2021, Banco Santander, S.A. issued subordinated debentures for a term of eleven years, with a redemption option on the tenth anniversary of the issue date, in the amount of USD 1,000 million (EUR 1,007 million at the exchange rate on the day of issue). The issue bears interest at an annual rate of 3.225%, payable semi-annually, for the first ten years (then repricing at a margin of 160 points over the one-year US government bond).

At 4 October 2021, Banco Santander, S.A. issued subordinated debentures for a term of eleven years, with a redemption option on the sixth anniversary of the issue date, amounting to GBP 850 million (EUR 887 million at the exchange rate on the day of issue). The issue bears interest at an annual rate of 2.25%, payable annually for the first six years (then repricing at a margin of 165 points over the 5-year UK government bond).

At 21 September 2021, Banco Santander, S.A. carried out a placement of preferential shares contingently convertible into newly issued ordinary shares of the Bank ('PPCC') for a nominal amount of EUR 1,000 million (issue placed on the market EUR 997 million). The issuance was carried out at par and the remuneration of the PPCC, whose payment is subject to certain conditions and is also discretionary, was set at 3.625% per year for the first eight years, being reviewed every five years applying a margin of 376 basis points over the 5-year Mid-Swap Rate.

At 11 September 2021, Banco Santander, S.A. proceeded to redeem early and voluntarily the entire issue made on 11 September 2014 of tier 1 contingently convertible preference shares (PPCC) with ISIN code XS110729154 which are traded in the Irish Stock Exchange Market 'Global Exchange Market', for a total nominal amount of EUR 1,500 million.

At 12 May 2021, Banco Santander placed the issue of preference shares contingently convertible into newly issued ordinary shares of the Bank, previously announced, for a total nominal amount of EUR 1,578 million, issued in a Series in Dollars of USD 1,000 million (EUR 828 million at the exchange rate on the day of issue) and a Series in Euros for an amount of EUR 750 million. The issuance is carried out at par and the remuneration of the PPCC, whose payment is subject to certain conditions and is also discretionary, has been set (i) for the Series in Dollars at 4.750% per annum for the first six years, being revised every five years applying a margin of 375.3 basis points over the 5-year UST rate and (ii) for the Series in Euros by 4.125% per annum for the first seven years, being revised every five years applying a margin of 431.1 basis points over the applicable 5-year euro mid-swap.

At 3 December 2020, Banco Santander, S.A. issued subordinated debentures with a ten-year term of USD 1,500 million (EUR 1,222 million at the date of issue). The issue bears interest at an annual rate of 2.749%, payable semiannually.

At 22 October 2020, it carried out a ten-year subordinated debenture issue for an amount of EUR 1,000 million. The issue bears interest at an annual rate of 1.625%, payable annually.

At 12 March 2020, it proceeded to redeem early and voluntarily the entire outstanding issue of Tier 1 Contingently Convertible Preferred Participations Series I/2014, for a total nominal amount of EUR 1,500 million.

At 14 January 2020, it carried out a placement of contingently convertible preferred participations into newly issued ordinary shares of the Bank (the 'PPCCs'), excluding the pre-emptive subscription rights of its shareholders and for a nominal amount of EUR 1,500 million (the 'Issue' and the 'PPCCs'). The Issue was made at par and the remuneration of the PPCCs, the payment of which is subject to certain conditions and is also discretionary, was set at 4.375% per annum for the first six years, revised every five years thereafter by applying a margin of 453.4 basis points over the 5-year Mid-Swap Rate (5-year Mid-Swap Rate).

At 8 February 2019, Banco Santander, S.A. carried out an issue of PPCC for a nominal amount of USD 1,200 million (EUR 1,056 million). The remuneration of the issues whose payment is subject to certain conditions and is also discretionary was set at 7.50% per annum, for the first five years (revised thereafter by applying a margin of 498.9 points over the mid-swap rate).

At 19 March 2018, a 'PPCC' issue was carried out, for a nominal amount of EUR 1,500 million. The remuneration of the issue, the payment of which is subject to certain conditions and is also discretionary, was set at 4.75% per annum, payable quarterly, for the first seven years (revised thereafter by applying a margin of 410 basis points over the Mid-swap rate).

At 8 February 2018, a ten-year subordinated debenture issue of EUR 1,250 million was carried out. The issue accrues annual interest of 2.125% payable annually.

At 29 September 2017, Banco Santander, S.A. carried out issues of 'PPCCs', for a nominal amount of EUR 1,000 million. The remuneration of the PPCC, the payment of which is subject to certain conditions and is also discretionary, was set at 5.25% per annum for the first six years (revised thereafter by applying a margin of 499.9 basis points over the 5 years Mid-Swap Rate).

Issues by Banco Santander - Chile

In January 2022, Banco Santander Chile carried out an issuance, in the local market, of subordinated obligations with a term of 6 years, for an amount of UF 3.3 million (equivalent to USD 105 million), which accrues an annual interest of 1.25%.

In June 2020, Banco Santander - Chile issued subordinated debentures for a term of fifteen years, in the amount of UF 5 million (equivalent to USD 185 million). The issue bears annual interest at 3.5%.



In April 2020, Banco Santander - Chile issued two subordinated debentures, the first for a term of fourteen years, for an amount of UF 3 million (equivalent to USD 100 million), bearing annual interest at 3%, and the second for a term of nineteen years, for an amount of UF 3 million (equivalent to USD 100 million), bearing annual interest at 3.15%.

Issues Banco Santander (Brasil) S.A.

At the end of November 2021, Banco Santander (Brasil) S.A. carried out an issue of Subordinated Financial Bills (TIER II) in its local market for a 10-year term, with a repurchase option as of the fifth anniversary of the issue date, in the amount of BRL 5,500 million. The issue price was CDI +2% per annum, payable at maturity.

Issues by Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México

In January 2022, Banco Santander México, S.A. Multiple Institution, Grupo Financiero Santander México proceeded to redeem early a perpetual issue carried out at 30 December 2016 for a nominal amount of USD 500 million, of which 88.2% of the issue had been acquired by the Group.

At 1 October 2018, a ten-year subordinated debenture issue was made by Banco Santander México, S.A. Institución de Banca Múltiple, Grupo Financiero Santander México for a nominal amount of USD 1,300 million and at an interest rate of 5.95%, with the group having acquired 75% of the issue.

Issues by Santander Bank Polska S.A.

At 20 April 2018, Santander Bank Polska S.A. carried out a ten-year subordinated debenture issue with a redemption option on the fifth anniversary of the issue date in the amount of PLN 1,000 million. The issue bears floating interest at Wibor (6M) + 160 basis points payable semi-annually.

The accrued interests from the subordinated liabilities during 2022 amounted to EUR 992 million (EUR 648 million and EUR 571 million during 2021 and 2020, respectively).

In addition, interests from the PPCC and PPCA during 2022 amounted to EUR 529 million (EUR 566 million and EUR 552 million in 2021 and 2020, respectively).

24. Other financial liabilities

The detail of Other financial liabilities in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Trade payables	1,563	1,475	1,177
Clearing houses	1,200	650	599
Tax collection accounts:			
Public Institutions	5,796	5,315	4,122
Factoring accounts payable	262	275	222
Unsettled financial transactions	5,429	3,779	5,080
Lease liabilities (note 2.l)	2,622	2,856	3,049
Other financial liabilities	20,187	15,523	12,719
	37,059	29,873	26,968

Note 50 contains a detail of the residual maturity periods of other financial liabilities at each year-end.

Lease liabilities

The cash outflow of leases in 2022 was EUR 710 million (EUR 715 million and EUR 789 million in 2021 and 2020, respectively).

The analysis of the maturities of lease liabilities at 31 December 2022, 2021 and 2020 is shown below:

EUR million	2022	2021	2020
Maturity Analysis - Discounted payments			
Within 1 year	707	690	594
Between 1 and 3 years	1,005	933	981
Between 3 and 5 years	454	534	637
Later than 5 years	456	699	837
Total discounted payments at the end of the year	2,622	2,856	3,049

During 2022, 2021 and 2020 there were no significant variable lease payments not included in the valuation of lease liabilities.



25. Provisions

a) Breakdown

The detail of Provisions in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Provision for pensions and other obligations post-employments	2,392	3,185	3,976
Other long term employee benefits	950	1,242	1,751
Provisions for taxes and other legal contingencies	2,074	1,996	2,200
Contingent liabilities and commitments (note 2)	734	733	700
Other provisions	1,999	2,427	2,225
Provisions	8,149	9,583	10,852

b) Changes

The changes in 'Provisions' in the last three years were as follows:

EUR million	2022				
	Post employment plans	Long term employee benefits	Contingent liabilities and commitments	Other provisions	Total
Balances at beginning of year	3,185	1,242	733	4,423	9,583
Incorporation of Group companies, net	—	—	—	—	—
Additions charged to income	128	69	(27)	1,876	2,046
Interest expense (note 39)	73	27	—	—	100
Staff costs (note 46)	57	8	—	—	65
Provisions or reversion of provisions	(2)	34	(27)	1,876	1,881
Addition	10	105	618	3,484	4,217
Release	(12)	(71)	(645)	(1,608)	(2,336)
Other additions arising from insurance contracts linked to pensions	(33)	—	—	—	(33)
Changes in value recognised in equity	242	—	—	—	242
Payments to pensioners and pre-retirees with a charge to internal provisions	(229)	(363)	—	—	(592)
Insurance premiums paid	(3)	—	—	—	(3)
Payments to external funds	(451)	—	—	—	(451)
Amounts used	—	—	—	(2,817)	(2,817)
Transfer, exchange differences and other changes	(447)	2	28	591	174
Balances at end of year	2,392	950	734	4,073	8,149



EUR million

	2021					2020				
	Post employment plans	Long term employee benefits	Contingent liabilities and commitments	Other provisions	Total	Post employment plans	Long term employee benefits	Contingent liabilities and commitments	Other provisions	Total
Balances at beginning of year	3,976	1,751	700	4,425	10,852	6,358	1,382	739	5,508	13,987
Incorporation of Group companies, net	—	—	—	—	—	(5)	—	(1)	(2)	(8)
Additions charged to income	100	101	29	2,748	2,978	(217)	782	50	1,934	2,549
Interest expense (note 39)	78	13	—	—	91	84	11	—	—	95
Staff costs (note 46)	67	6	—	—	73	69	7	—	—	76
Provisions or reversion of provisions	(45)	82	29	2,748	2,814	(370)	764	50	1,934	2,378
Addition	21	154	473	3,065	3,713	6	787	490	2,258	3,541
Release	(66)	(72)	(444)	(317)	(899)	(376)	(23)	(440)	(324)	(1,163)
Other additions arising from insurance contracts linked to pensions	(8)	—	—	—	(8)	2	—	—	—	2
Changes in value recognised in equity	(1,705)	—	—	—	(1,705)	547	—	—	—	547
Payments to pensioners and pre-retirees with a charge to internal provisions	(201)	(605)	—	—	(806)	(303)	(408)	—	—	(711)
Benefits paid due to settlements	—	—	—	—	—	(1,551)	—	—	—	(1,551)
Insurance premiums paid	—	—	—	—	—	(1)	—	—	—	(1)
Payments to external funds	(440)	—	—	—	(440)	(333)	—	—	—	(333)
Amounts used	—	—	—	(2,961)	(2,961)	—	—	—	(2,485)	(2,485)
Transfer, exchange differences and other changes	1,463	(5)	4	211	1,673	(521)	(5)	(88)	(530)	(1,144)
Balances at end of year	3,185	1,242	733	4,423	9,583	3,976	1,751	700	4,425	10,852

c) Provision for pensions and other obligations post-employments and Other long term employee benefits

The detail of Provisions for pensions and similar obligations is as follows:

EUR million

	2022	2021	2020
Provisions for post-employment plans - Spanish entities	1,245	1,709	1,881
Provisions for other similar obligations - Spanish entities	895	1,188	1,695
Of which pre-retirements	884	1,176	1,676
Provisions for post-employment plans - United Kingdom	29	44	449
Provisions for post-employment plans - Other subsidiaries	1,118	1,432	1,646
Provisions for other similar obligations - Other subsidiaries	55	54	56
Provision for pensions and other obligations post-employments and Other long term employee benefits	3,342	4,427	5,727
Of which defined benefits	3,335	4,419	5,719

i. Spanish entities - Post-employment plans and other similar obligations

At 31 December 2022, 2021 and 2020, the Spanish entities had post-employment benefit obligations under defined contribution and defined benefit plans. In addition, in various years some of the consolidated entities offered certain of their employees the possibility of taking pre-retirement and, therefore, provisions are recognised each year for the obligations to employees taking pre-retirement -in terms of salaries and other employee benefit costs- from the date of their pre-retirement to the agreed end date.

In December 2020, Banco Santander reached an agreement with the workers' representatives to implement an early retirement and incentivized dismissals plan, which was expected to benefit 3,572 employees during 2021, constituting a provision to cover these commitments amounting to EUR 688 million. In addition to this plan, in 2020, 443 employees took advantage of the offer of early retirement and incentivized dismissals, increasing the provision made to cover these commitments to EUR 84 million. In 2021, to complete the plan announced in 2020, an amount of EUR 139 million was recognised, increasing the number of early retirements and incentivized dismissals plan to 3,915 employees in the total period.

In 2022, the provision made to cover the commitments with 446 employees covered by early retirement plans and incentivized dismissals plan amounted to EUR 92 million.

In December 2019, Banco Santander reached an agreement with the workers' representatives to offer during 2020 to part of its passive personnel, the possibility of receiving the pensionable rights derived from the collective bargaining agreement in the form of a single consideration or divided into a maximum of 5 equal annuities. The proposal was also extended to personnel with pensionable rights recognized under individual contracts or agreements. The number of beneficiaries who exercised the voluntary option of accepting the substitution of the life annuity for the payment of a lump sum in the form of a capital sum or in instalments of a maximum of 5 annuities amounted to 15,613 people. The effect of the reduction of the aforementioned commitments is shown in the tables below under the headings 'Benefits paid in settlement' in the amount of EUR 1,551 million and 'Effect of reduction/settlement' in the amount of EUR 362 million.



On 8 July 2021, Banco Santander reached an agreement with the employee representatives for the transformation of defined benefit pension commitments into defined contributions for certain retired personnel from Banco Popular and Banco Pastor. Through the aforementioned Collective Agreement, it was agreed to carry out an offer to replace the life annuities that the passive personnel included in the scope of application of said Collective Agreement had been receiving, for a capitalization fund in the Santander Employees pension plan. The number of beneficiaries who exercised the voluntary option to accept the substitution of the life annuity for a capitalization fund in the Santander Employees pension plan amounted to 1,468 people.

The effect of the reduction of the aforementioned commitments is shown in the tables below under the headings 'Benefits paid by settlement' amounting to EUR 166 million and 'Effect reduction / settlement' amounting to EUR 38 million.

The expenses incurred by the Spanish companies in 2022, 2021 and 2020 in respect of contributions to defined contribution plans amounted to EUR 101 million, EUR 91 million and EUR 89 million, respectively.

The amount of the defined benefit obligations was determined on the basis of the work performed by independent actuaries using the following actuarial techniques:

1. Valuation method: projected unit credit method, which sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately.
2. Actuarial assumptions used: unbiased and mutually compatible. Specifically, the most significant actuarial assumptions used in the calculations were as follows:

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Annual discount rate	3.80%	0.90%	0.60%	3.80%	0.90%	0.60%
Mortality tables	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1
Cumulative annual CPI growth	2.00%	1.00%	1.00%	2.00%	1.00%	1.00%
Annual salary increase rate	1.25% ^A	1.25% ^A	1.25% ^A	N/A	N/A	N/A
Annual social security pension increase rate	2.00%	1.00%	1.00%	N/A	N/A	N/A
Annual benefit increase rate	N/A	N/A	N/A	0%	0%	0%

A. Corresponds to the group's defined-benefit obligations.

The discount rate used for the flows was determined by reference to high-quality corporate bonds (at least AA in euros) matching the durations of the commitments. From the bond portfolio considered, callable, puttable and sinkable bonds, which could distort the rates, are excluded.

Any changes in the main assumptions could affect the calculation of the obligations. At 31 December 2022, if the discount rate used had been decreased or increased by 50 basis points (bp), there would have been an increase or decrease in the present value of the post-employment obligations of 3.80% (-50 bp) to -3.60% (+50 bp), respectively, and an increase or decrease in the present value of the long-term obligations of 1.04% (-50 bp) to -1.02% (+50 bp), respectively.



These changes would be offset in part by increases or decreases in the fair value of the assets and insurance contracts linked to pensions.

3. The estimated retirement age of each employee is the first at which the employee is entitled to retire or the agreed-upon age, as appropriate.

The fair value of insurance contracts was determined as the present value of the related payment obligations, taking into account the following assumptions:

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Expected rate of return on plan assets	3.80%	0.90%	0.60%	3.80%	0.90%	0.60%
Expected rate of return on reimbursement rights	3.80%	0.90%	0.60%	N/A	N/A	N/A

The funding status of the defined benefit obligations in 2022 and the two preceding years is as follows:

EUR million

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Present value of the obligations						
To current employees	25	29	60	—	—	—
Vested obligations to retired employees	2,005	2,797	3,318	—	—	—
To pre-retirees employees	—	—	—	892	1,186	1,688
Long-service bonuses and other benefits	—	—	—	11	12	18
Other	46	65	41	—	—	1
	2,076	2,891	3,419	903	1,198	1,707
Less - Fair value of plan assets	861	1,217	1,542	8	10	12
Provisions - Provisions for pensions	1,215	1,674	1,877	895	1,188	1,695
<i>Of which:</i>						
<i>Internal provisions for pensions</i>	1,141	1,560	1,707	895	1,188	1,695
<i>Net pension assets</i>	(24)	(30)	—	—	—	—
<i>Insurance contracts linked to pensions (note 14)</i>	104	149	174	—	—	—
<i>Unrecognised net assets for pensions</i>	(6)	(5)	(4)	—	—	—



The amounts recognised in the consolidated income statements in relation to the aforementioned defined benefit obligations are as follows:

EUR million

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Current service cost	3	5	10	1	1	1
Interest cost (net)	48	24	26	25	11	9
Expected return on insurance contracts linked to pensions	(4)	(1)	(1)	—	—	—
Provisions or reversion of provisions						
<i>Actuarial (gains)/losses recognised in the year</i>	—	—	—	(67)	(15)	(3)
<i>Past service cost</i>	2	13	2	—	—	—
<i>Pre-retirement cost</i>	—	—	—	92	139	772
<i>Other^A</i>	(8)	(39)	(372)	—	(55)	(15)
	41	2	(335)	51	81	764

A. Including reduction/settlement effect

In addition, in 2022 'Other comprehensive income – Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans' has decreased by EUR 295 million with respect to defined benefit obligations (decrease of EUR 37 and increase of EUR 84 million in 2021 and 2020, respectively).

The changes in the present value of the accrued defined benefit obligations were as follows:

EUR million

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Present value of the obligations at beginning of year	2,891	3,419	5,494	1,198	1,707	1,335
Incorporation of Group companies, net	—	6	—	—	—	—
Current service cost	3	5	10	1	1	1
Interest cost	78	36	39	25	11	9
Pre-retirement cost	—	—	—	92	139	772
Effect of curtailment/settlement	(8)	(61)	(372)	—	(55)	(15)
Benefits paid	(258)	(248)	(359)	(346)	(589)	(392)
Benefits paid due to settlements	—	(166)	(1,551)	—	—	—
Past service cost	2	13	2	—	—	—
Actuarial (gains)/losses	(631)	(121)	163	(68)	(15)	(3)
<i>Demographic actuarial (gains)/losses</i>	2	9	91	(5)	(8)	(8)
<i>Financial actuarial (gains)/losses</i>	(633)	(130)	72	(63)	(7)	5
Exchange differences and other items	(1)	8	(7)	1	(1)	—
Present value of the obligations at end of year	2,076	2,891	3,419	903	1,198	1,707

The changes in the fair value of plan assets and of insurance contracts linked to pensions were as follows:

Plan Assets

EUR million

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Fair value of plan assets at beginning of year	1,217	1,542	1,547	10	12	14
Incorporation of Group companies, net	—	6	—	—	—	—
Expected return on plan assets	30	12	13	—	—	—
Gains/(losses) on settlements	—	(22)	—	—	—	—
Benefits paid	(78)	(263)	(94)	(2)	(2)	(2)
Contributions/(surrenders)	2	15	5	—	—	—
Actuarial gains/(losses)	(303)	(76)	76	(1)	—	—
Exchange differences and other items	(7)	3	(5)	1	—	—
Fair value of plan assets at end of year	861	1,217	1,542	8	10	12

Insurance Contracts linked to pensions

EUR million

	Post-employment plans			Other similar obligations		
	2022	2021	2020	2022	2021	2020
Fair value of insurance contracts linked to pensions at beginning of year	149	174	192	—	—	—
Incorporation of Group companies, net	—	—	—	—	—	—
Expected return on insurance contracts linked to pensions	4	1	1	—	—	—
Benefits paid	(16)	(19)	(21)	—	—	—
Paid premiums	—	1	—	—	—	—
Actuarial gains/(losses)	(33)	(8)	2	—	—	—
Fair value of insurance contracts linked to pensions at end of year	104	149	174	—	—	—

In view of the conversion of the defined-benefit obligations to defined-contribution obligations, the Group will not make material current contributions in Spain in 2023 to fund its defined-benefit pension obligations.

The plan assets and the insurance contracts linked to pensions are instrumented mainly through insurance policies.

The following table shows the estimated benefits payable at 31 December 2022 for the next ten years:

EUR million

2023	498
2024	426
2025	358
2026	307
2027	251
2028 to 2032	807



ii. United Kingdom

At the end of each of the last three years, the businesses in the United Kingdom had post-employment benefit obligations under defined contribution and defined benefit plans. The expenses incurred in respect of contributions to defined contribution plans amounted to EUR 77 million in 2022 (EUR 89 million in 2021 and EUR 91 million in 2020).

The amount of the defined benefit obligations was determined on the basis of the work performed by independent actuaries using the following actuarial techniques:

1. Valuation method: projected unit credit method, which sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately.
2. Actuarial assumptions used: unbiased and mutually compatible. Specifically, the most significant actuarial assumptions used in the calculations were as follows:

	2022	2021	2020
Annual discount rate	4.88%	1.90%	1.28%
Mortality tables	The S3 Middle tables weighted at 84% of the CMI_2021 projection with an initial addition of 0.25%, smoothing parameter 7 and improving 1.25%.	The S3 Middle tables weighted at 84% of the CMI_2020 projection with an initial addition of 0.15%, smoothing parameter 7 and improving 1.25%.	The S3 Middle tables weighted at 84% of the CMI_2018 projection with an initial addition of 0.15%, smoothing parameter 7 and improving 1.25%.
Cumulative annual CPI growth	3.11%	3.37%	2.95%
Annual salary increase rate	1.00%	1.00%	1.00%
Annual pension increase rate	2.98%	3.21%	2.85%

The discount rate used for the flows was determined by reference to high-quality corporate bonds (at least AA in pounds sterling) that coincide with the terms of the obligations.

Any changes in the main assumptions could affect the calculation of the obligations. At 31 December 2022, if the discount rate used had been decreased or increased by 50 basis points, there would have been an increase or decrease in the present value of the obligations of 7.05% (-50 bp) and -6.31% (+50 bp), respectively. If the inflation assumption had been increased or decreased by 50 basis points, there would have been an increase or decrease in the present value of the obligations of 4.72% (+50 bp) and -4.60% (-50 bp), respectively. These changes would be offset in part by increases or decreases in the fair value of the assets.

The funding status of the defined benefit obligations in 2022 and the two preceding years is as follows:

EUR million	2022	2021	2020
Present value of the obligations	8,982	15,392	15,472
Less-			
Fair value of plan assets	10,152	17,244	15,575
Provisions - Provisions for pensions	(1,170)	(1,852)	(103)
<i>Of which:</i>			
Internal provisions for pensions	29	44	449
Net assets for pensions	(1,199)	(1,896)	(552)

The amounts recognised in the consolidated income statements in relation to the aforementioned defined benefit obligations are as follows:

EUR million	2022	2021	2020
Current service cost	30	33	30
Interest cost (net)	(37)	(6)	(12)
Provisions or reversal of provisions, net			
Cost of services provided	—	6	—
Others	—	—	(1)
	(7)	33	17

In addition, in 2022 'Other comprehensive income – Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans' increased by EUR 857 million with respect to defined benefit obligations (decrease of EUR 1,475 million and increase of EUR 568 million in 2021 and 2020, respectively).

The changes in the present value of the accrued defined benefit obligations were as follows:

EUR million	2022	2021	2020
Present value of the obligations at beginning of year	15,392	15,472	14,297
Current service cost	30	33	30
Interest cost	283	219	284
Benefits paid	(487)	(465)	(445)
Contributions made by employees	9	18	17
Past service cost	—	6	—
Actuarial (gains)/losses	(5,660)	(933)	2,060
Demographic actuarial (gains)/losses	(144)	(17)	34
Financial actuarial (gains)/losses	(5,516)	(916)	2,026
Exchange differences and other items	(585)	1,042	(771)
Present value of the obligations at end of year	8,982	15,392	15,472

The changes in the fair value of the plan assets were as follows:

EUR million	2022	2021	2020
Fair value of plan assets at beginning of year	17,244	15,575	14,755
Expected return on plan assets	320	225	296
Benefits paid	(487)	(463)	(443)
Contributions	262	285	274
Actuarial gains/(losses)	(6,517)	541	1,492
Exchange differences and other items	(670)	1,081	(799)
Fair value of plan assets at end of year	10,152	17,244	15,575

In 2023 the Group expects to make current contributions to fund these obligations for amounts similar to those made in 2022.

The main categories of plan assets as a percentage of total plan assets are as follows:

	2022	2021	2020
Equity instruments	—	10%	9%
Debt instruments	51%	51%	55%
Properties	13%	10%	10%
Other	36%	29%	26%

The following table shows the estimated benefits payable at 31 December 2022 for the next ten years:

EUR million	
2023	471
2024	408
2025	432
2026	457
2027	481
2028 to 2032	2,632

iii. Other foreign subsidiaries

Certain of the consolidated foreign entities have acquired commitments to their employees similar to post-employment benefits.

At 31 December 2022, 2021 and 2020, these entities had defined-contribution and defined-benefit post-employment benefit obligations. The expenses incurred in respect of contributions to defined contribution plans amounted to EUR 118 million in 2022 (EUR 106 million at 31 December 2021 and EUR 103 million at 31 December 2020).

The actuarial assumptions used by these entities (discount rates, mortality tables and cumulative annual CPI growth) are consistent with the economic and social conditions prevailing in the countries in which they are located.

Specifically, the discount rate used for the flows was determined by reference to high-quality corporate bonds, except in the case of Brazil where there is no extensive corporate bond market and, accordingly the discount rate was determined by reference to the series B bonds issued by the Brazilian National Treasury Secretariat for a term coinciding with that of the obligations. In Brazil the discount rate used was between 9.44% and 9.64%, the CPI 3.00% and the mortality table the AT-2000 Basic.

Any changes in the main assumptions could affect the calculation of the obligations. At 31 December 2022, if the discount rate used had been decreased or increased by 50 basis points, there would have been an increase or decrease in the present value of the obligations of 4.27% (-50 bp) and -3.95% (+50 bp), respectively. These changes would be offset in part by increases or decreases in the fair value of the assets.



The funding status of the obligations similar to post-employment benefits and other long-term benefits in 2022 and the two preceding years is as follows:

EUR million

	2022	Of which business in Brazil	2021	2020
Present value of the obligations	7,578	5,185	8,018	8,434
Less-				
<i>Of which: with a charge to the participants</i>	107	107	106	112
Fair value of plan assets	7,321	5,710	7,167	7,182
Provisions - Provisions for pensions	150	(632)	745	1,140
<i>Of which:</i>				
<i>Internal provisions for pensions</i>	1,166	314	1,478	1,694
<i>Net assets for pensions</i>	(122)	(52)	(64)	(83)
<i>Unrecognised net assets for pensions</i>	(894)	(894)	(669)	(471)

The amounts recognised in the consolidated income statements in relation to these obligations are as follows:

EUR million

	2022	2021	2020
Current service cost	31	34	35
Interest cost (net)	64	62	72
Provisions or reversion of provisions			
<i>(Actuarial gains)/losses recognised in the year</i>	8	11	11
Past service cost	8	3	5
Pre-retirement cost	—	(24)	—
Other	(3)	(3)	(5)
	108	83	118

In addition, in 2022 'Other comprehensive income – Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans' decreased by EUR 320 million with respect to defined benefit obligations (decreased EUR 193 million and EUR 105 million in 2021 and 2020, respectively).

The changes in the present value of the accrued obligations were as follows:

EUR million

	2022	2021	2020
Present value of the obligations at beginning of year	8,018	8,434	10,717
Incorporation of Group companies, net	—	(5)	(84)
Current service cost	31	34	35
Interest cost	546	429	465
Pre-retirement cost	—	(24)	—
Effect of curtailment/settlement	(3)	(3)	(5)
Benefits paid	(653)	(538)	(544)
Benefits paid due to settlements	(179)	—	—
Contributions made by employees	5	3	3
Past service cost	8	3	5
Actuarial (gains)/losses	(876)	(486)	176
<i>Demographic actuarial (gains)/losses</i>	5	16	23
<i>Financial actuarial (gains)/losses</i>	(881)	(502)	153
Exchange differences and other items	681	171	(2,334)
Present value of the obligations at end of year	7,578	8,018	8,434

The changes in the fair value of the plan assets were as follows:

EUR million

	2022	2021	2020
Fair value of plan assets at beginning of year	7,167	7,182	8,826
Incorporation of Group companies, net	—	(6)	(86)
Expected return on plan assets	570	411	410
Benefits paid	(766)	(478)	(488)
Contributions	198	152	63
Actuarial gains/(losses)	(498)	(155)	536
Exchange differences and other items	650	61	(2,079)
Fair value of plan assets at end of year	7,321	7,167	7,182

In 2023 the Group expects to make contributions to fund these obligations for amounts similar to those made in 2022.



The main categories of plan assets as a percentage of total plan assets are as follows:

	2022	2021	2020
Equity instruments	11%	12%	11%
Debt instruments	83%	83%	84%
Properties	1%	1%	1%
Other	5%	4%	4%

The following table shows the estimated benefits payable at 31 December 2022 for the next ten years:

EUR million	
2023	602
2024	610
2025	620
2026	626
2027	632
2028 to 2032	3,228

d) Provisions for taxes and other legal contingencies and Other provisions

'Provisions - Provisions for taxes and other legal contingencies' and 'Provisions - Other provisions', which include, inter alia, provisions for restructuring costs and tax-related and non-tax-related proceedings, were estimated using prudent calculation procedures in keeping with the uncertainty inherent to the obligations covered. The definitive date of the outflow of resources embodying economic benefits for the Group depends on each obligation. In certain cases, these obligations have no fixed settlement period and, in other cases, depend on the legal proceedings in progress.

The detail, by geographical area, of Provisions for taxes and other legal contingencies and Other provisions is as follows:

EUR million	2022	2021	2020
Recognised by Spanish companies	1,768	1,595	1,647
Recognised by other EU companies	328	779	539
Recognised by other companies	1,977	2,049	2,239
<i>Of which:</i>			
<i>Brazil</i>	1,243	1,339	1,475
	4,073	4,423	4,425

Set forth below is the detail, by type of provision, of the balance at 31 December 2022, 2021 and 2020 of Provisions for taxes and other legal contingencies and Other provisions.

The types of provision were determined by grouping together items of a similar nature:

EUR million	2022	2021	2020
Provisions for taxes	679	564	600
Provisions for employment-related proceedings (Brazil)	301	328	437
Provisions for other legal proceedings	1,094	1,104	1,163
Provision for customer remediation	349	745	395
Regulatory framework-related provisions	19	36	69
Provision for restructuring	641	749	810
Other	990	897	951
	4,073	4,423	4,425

Relevant information is set forth below in relation to each type of provision shown in the preceding table.

The provisions for taxes include provisions for tax-related proceedings.

The provisions for employment-related proceedings (Brazil) relate to claims filed by trade unions, associations, the prosecutor's office and ex-employees claiming employment rights to which, in their view, they are entitled, particularly the payment of overtime and other employment rights, including litigation concerning retirement benefits. The number and nature of these proceedings, which are common for banks in Brazil, justify the classification of these provisions in a separate category or as a separate type from the rest. The Group calculates the provisions associated with these claims in accordance with past experience of payments made in relation to claims for similar items. When claims do not fall within these categories, a case-by-case assessment is performed and the amount of the provision is calculated in accordance with the status of each proceeding and the risk assessment carried out by the legal advisers.

The provisions for other legal proceedings include provisions for court, arbitration or administrative proceedings (other than those included in other categories or types of provisions disclosed separately) brought against Grupo Santander companies.

The provisions for customer remediation include mainly the estimated cost of payments to remedy errors relating to the sale of certain products in the UK, as well as the estimated amount related to the floor clauses of Banco Popular Español, S.A.U. To calculate the provision for customer remediation, the best estimate of the provision made by management is used, which is based on the estimated number of claims to be received and, of these, the number that will be accepted, as well as the estimated average payment per case.

The regulatory framework-related provisions include those related to the banking tax in Poland and Bank Levy in United Kingdom.

The provisions for restructuring include only the costs arising from restructuring processes carried out by the various Group companies.



Lastly, the Other heading contains very atomized and individually insignificant provisions, such as the provisions to cover the operational risk of the different offices of the Group.

Qualitative information on the main litigation is provided in Note 25 e to the consolidated financial statements.

The Group's general policy is to record provisions for tax and legal proceedings in which the Group assesses the chances of loss to be probable and the Group does not record provisions when the chances of loss are possible or remote. Grupo Santander determines the amounts to be provided for as its best estimate of the expenditure required to settle the corresponding claim based, among other factors, on a case-by-case analysis of the facts and the legal opinion of internal and external counsel or by considering the historical average amount of the loss incurred in claims of the same nature. The definitive date of the outflow of resources embodying economic benefits for the Group depends on each obligation. In certain cases, the obligations do not have a fixed settlement term and, in others, they depend on legal proceedings in progress.

The main movements during the 2022 of the breakdown provisions are shown below:

With respect to provisions for labor and other legal proceedings, in Brazil, provisions of EUR 174 million and EUR 161 million were recorded, making payments of EUR 241 million and EUR 252 million, respectively.

With respect to provisions for customer compensation, and based on the best information available, the gross amount of mortgage loans denominated and indexed to foreign currencies in Poland has been adjusted, in accordance with IFRS 9, by the new estimated cash flows, as described in Note 25.e.

On the regulatory framework side, EUR 53 million were provisioned in the United Kingdom and a utilization of EUR 70 million was made in the year (Bank Levy). In addition, in Poland, EUR 161 million were recorded under the regulatory framework and paid during the year.

In December 2022, Santander UK plc paid a EUR 127 million financial penalty to settle the Financial Conduct Authority's (FCA) enforcement investigation into the anti-money laundering systems and controls in the Business Banking division in the period between 31 December 2012 and 18 October 2017. This settlement concluded the FCA's investigation.

e) Litigation and other matters

i. Tax-related litigation

At 31 December 2022 the main tax-related proceedings concerning the Group were as follows:

- Legal actions filed by Banco Santander (Brasil) S.A. and other Group entities to avoid the application of Law 9.718/98, which modifies the basis to calculate Programa de Integração Social (PIS) and Contribuição para Financiamento da Seguridade Social (COFINS), extending it to all the entities income, and not only to the income from the provision of services. In relation of Banco Santander (Brasil) S.A. process, in May 2015 the Federal Supreme Court (FSC) admitted the extraordinary appeal filed by the Federal Union regarding PIS, and dismissed the extraordinary appeal lodged by the Brazilian Public Prosecutor's Office regarding COFINS contribution, confirming the decision of Federal Regional Court favourable to Banco Santander (Brasil) S.A. of August 2007. The appeals filed by the other entities before the Federal Supreme Court, both for PIS and COFINS, are still pending and fully provisioned.
- Banco Santander (Brasil) S.A. and other Group companies in Brazil have appealed against the assessments issued by the Brazilian tax authorities questioning the deduction of loan losses in their income tax returns (Imposto sobre a Renda das Pessoas Jurídicas - IRPJ - and Contribuição Social sobre o Lucro Líquido -CSLL-) in relation to different administrative processes of various years on the ground that the requirements under the applicable legislation were not met. The appeals are pending decision in the administrative Court, the Conselho Administrativo de Recursos Fiscais (CARF). No provision was recognised in connection with the amount considered to be a contingent liability.
- Banco Santander (Brasil) S.A. and other Group companies in Brazil are involved in administrative and legal proceedings against several municipalities that demand payment of the Service Tax on certain items of income from transactions not classified as provisions of services. There are several cases in different judicial instances. A provision was recognised in connection with the amount of the estimated loss.
- Banco Santander (Brasil) S.A. and other Group companies in Brazil are involved in administrative and legal proceedings against the tax authorities in connection with the taxation for social security purposes of certain items which are not considered to be employee remuneration. There are several cases in different judicial instances. A provision was recognised in connection with the amount of the estimated loss.



- In May 2003 the Brazilian tax authorities issued separate infringement notices against Santander Distribuidora de Títulos e Valores Mobiliários, Ltda. (DTVM, actually Santander Brasil Tecnologia S.A.) and Banco Santander (Brasil) S.A. in relation to the Provisional Tax on Financial Movements (Contribuição Provisória sobre Movimentação Financeira) of the years 2000 to 2002. The administrative discussion ended unfavourably for both companies, and on July 3, 2015, filed a lawsuit requesting the cancellation of both tax assessments. The lawsuit was judged unfavourably in first instance. Therefore, both plaintiffs appealed to the court of second instance. On December 2020, the appeal was decided unfavourably. Against the judgment, the bank filed a motion for clarification which has not been accepted. Currently it is appealed to higher courts. There is a provision recognized for the estimated loss.
 - In December 2010 the Brazilian tax authorities issued an infringement notice against Santander Seguros S.A. (Brazil), currently Zurich Santander Brasil Seguros e Previdência S.A., as the successor by merger to ABN AMRO Brasil dois Participações S.A., in relation to income tax (IRPJ and CSLL) for 2005, questioning the tax treatment applied to a sale of shares of Real Seguros, S.A. The administrative discussion ended unfavourably, and the CARF decision has been appealed at the Federal Justice. As the former parent of Santander Seguros S.A. (Brasil), Banco Santander (Brasil) S.A. is liable in the event of any adverse outcome of this proceeding. No provision was recognised in connection with this proceeding as it is considered to be a contingent liability.
 - In November 2014 the Brazilian tax authorities issued an infringement notice against Banco Santander (Brasil) S.A. in relation to corporate income tax (IRPJ and CSLL) for 2009 questioning the tax-deductibility of the amortisation of the goodwill of Banco ABN AMRO Real S.A. performed prior to the absorption of this bank by Banco Santander (Brasil) S.A., but accepting the amortisation performed after the merger. Actually it is appealed before the Higher Chamber of CARF. No provision was recognised in connection with this proceeding as it was considered to be a contingent liability.
 - Banco Santander (Brasil) S.A. has also appealed against infringement notices issued by the tax authorities questioning the tax deductibility of the amortisation of the goodwill arising on the acquisition of Banco Comercial e de Investimento Sudameris S.A from years 2007 to 2012. No provision was recognised in connection with this matter as it was considered to be a contingent liability.
 - Banco Santander (Brasil) S.A. and other companies of the Group in Brazil are undergoing administrative and judicial procedures against Brazilian tax authorities for not admitting tax compensation with credits derived from other tax concepts, not having registered a provision for the amount considered to be a contingent liability.
 - Banco Santander (Brasil) S.A. is involved in appeals in relation to infringement notices initiated by tax authorities regarding the offsetting of tax losses in the CSLL of year 2009. The appeal is pending decision in CARF. No provision was recognised in connection with this matter as it is considered to be a contingent liability.
 - Banco Santander (Brasil) S.A. filed a suspensive judicial measure aiming to avoid the withholding income tax (Imposto sobre a Renda Retido na Fonte - IRRF), on payments derived from technology services provided by Group foreign entities. A favorable decision was handed down and an appeal was filed by the tax authority at the Federal Regional Court, where it awaits judgment. No provision was recognized as it is considered to be a contingent liability
 - Brazilian tax authorities have issued infringement notices against Getnet Adquirência e Serviços para Meios de Pagamento S.A and Banco Santander (Brasil) S.A. as jointly liable in relation to corporate income tax (IRPJ and CSLL) for 2014 to 2018 questioning the tax-deductibility of the amortization of the goodwill from the acquisition of Getnet Tecnologia Proces S.A., considering that the company would not have complied with the legal requirements for such amortization. A defense against the tax assessment notices were submitted, and the appeal is pending decision in CARF. No provision was recognized as it is considered to be a contingent liability.
- The total amount for the aforementioned Brazil lawsuits that are fully provisioned is EUR 691 million, and for lawsuits that qualify as contingent liabilities is EUR 4,977 million.
- Banco Santander appealed before European Courts the Decisions 2011/5/CE of 28 October 2009 (First Decision), and 2011/282/UE of 12 January 2011 (Second Decision) of the European Commission, ruling that the deduction of the financial goodwill regulated pursuant to Article 12.5 of the Corporate Income Tax Law constituted illegal State aid. On October 2021 the Court of Justice definitively confirmed these Decisions. The dismissal of the appeal, that only affects these two decisions, had no impact on results.
- At the date of approval of these consolidated annual accounts, there are other less significant tax disputes.
- ii. Non-tax-related proceedings**
- At 31 December 2022 the main non-tax-related proceedings concerning the Group were as follows:
- Payment Protection Insurance (PPI): In recent years Santander UK plc has processed customer claims associated with the sale of payment protection insurance (PPI), derived from the Financial Conduct Authority guidelines. As of 31 December 2022 there is no provision related to those claims as the deadline for presenting them has already expired. However, customers can still commence in-court litigation for the mis-sale of PPI and a provision for the best estimate of any obligation to pay compensation in respect of current and future claims is recognized for this purpose.
- In addition, there is a legal dispute regarding allocation of liability for pre-2005 PPI policies that two entities of the Axa Group (hereinafter "Axa France" acquired from Genworth Financial International Holdings, Inc. in September 2015). The dispute involves Santander Cards UK Limited (formerly known as GE Capital Bank Limited which was acquired by Banco Santander, S.A. from GE Capital group in 2008) which was the distributor of the policies in dispute and Santander Insurance Services UK Limited (the Santander Entities).



In July 2017, the Santander Entities notified Axa France that they did not accept liability for losses on PPI policies relating to the referred period. Santander UK plc entered in a Complaints Handling Agreement –that included a standstill agreement- agreeing to handle complaints on Axa France, whilst Axa France accepted paying redress assessed to be due to relevant policyholders on a without prejudice basis.

After the termination of the Complaints Handling Agreement, on 30 December 2020 Axa France provided written notice to the Santander Entities to terminate the standstill agreement. On 5 March 2021, the Santander Entities were served with a Claim Form and Brief Details of Claim by Axa France, claiming that the Santander Entities are liable to reimburse Axa France for pre-2005 PPI mis-selling losses, currently estimated at GBP 636 million (EUR 717.2 million). On 22 March 2021, the Santander Entities acknowledged service of the claim and notified the court of their intention to defend the claim in full and issued an application for Axa France's claim to be struck out/summarily dismissed, which was heard by the Commercial Court on 22 and 23 February 2022 with judgement reserved. Judgment was handed down by the Commercial Court on 12 July 2022. The Commercial Court upheld a significant part of the Santander Entities' strike-out plead. The Santander Entities have sought permission to appeal aspects of the strike out decision on which they were unsuccessful. Axa France updated the amount of losses claimed from GBP 636 million (EUR 717.2 million) to GBP 670 million (EUR 755.5 million) in their Amended Particulars of Claim dated 21 October 2022.

Regarding those claims admitted or those that may eventually be made in the aforementioned appeal, there are factual issues that will be resolved during the processing of the trial that may have legal consequences including in relation to liability. These issues create uncertainties which mean that it is difficult to reliably predict the outcome or the timing of the resolution of the matter. The provision includes our best estimate of the Santander Entities' liability for this matter.

- Delforca: dispute arising from equity swaps entered into by Gaesco (now Delforca 2008, S.A.) on shares of Inmobiliaria Colonial, S.A. Banco Santander, S.A. is claiming to Delforca before the Court of Barcelona in charge of the bankruptcy proceedings, a total of EUR 66 million from the liquidation resulting from the early termination of financial transactions due to Delforca's non-payment of the equity swaps. In the same bankruptcy proceedings, Delforca and Mobiliaria Monesa have in turn claimed the Bank to repay EUR 57 million, which the Bank received for the enforcement of the agreed guarantee, as a result of the aforementioned liquidation. On 16 September 2021 the Commercial Court Number 10 of Barcelona has ordered Delforca to pay the Bank EUR 66 million plus EUR 11 million in interest and has dismissed the claims filed by Delforca. This decision has been appealed by Delforca, Mobiliaria Monesa and the bankruptcy administrator. The appeal which the Bank has already opposed to will be resolved by the Provincial Court of Barcelona.

Separately, Mobiliaria Monesa, S.A. (parent of Delforca) filed in 2009 a civil procedure with the Courts of Santander against the Bank claiming damages that have not been specified to date. The procedure is suspended.

- Former employees of Banco do Estado de São Paulo S.A., Santander Banespa, Cia. de Arrendamiento Mercantil: claim initiated in 1998 by the association of retired Banespa employees (AFABESP) requesting the payment of a half-yearly bonus contemplated in the by-laws of Banespa in the event that Banespa obtained a profit and that the distribution of this profit were approved by the Board of Directors. The bonus was not paid in 1994 and 1995 since Banespa had not made a profit during those years. Partial payments were made from 1996 to 2000, as approved by the Board of Directors. The relevant clause was eliminated in 2001. The Tribunal Regional do Trabalho (Regional Labour Court) and the High Employment Court (TST) ordered Santander Brazil, as successor to Banespa, to pay this half-yearly bonus for the period from 1996 to the present. On 20 March 2019, the Supreme Federal Court (STF) rejected the extraordinary appeal filed by Santander Brazil.

Santander Bank Brazil filed a rescissory action before the TST to nullify the decisions of the main proceedings and suspend the execution of the judgment, which was deemed inadmissible, therefore its execution was suspended. The rescissory action was dismissed and a motion for clarification was filed, due to the absence of an explicit argument to deny the rescissory action filed by Santander Brazil. After the decision of the motion for clarification, Santander Brazil filed an extraordinary appeal in the rescissory action in February 2021, which was denied in an interlocutory decision in June 2021 by the TST. As Santander Brazil understands there is a conflict between the TST decision and the doctrine set by the STF, Santander Brazil appealed this decision. This appeal is pending.

In August 2021, a first instance court ruled that the enforcement of the TST decision shall be carried out individually, at the jurisdiction pertaining to each person. AFABESP appealed this decision. In December 2021, the Regional Labor Court denied the appeal filed by AFABESP. This decision has not been appealed by AFABESP, and therefore it has become firm.

Santander Brazil external advisers have classified the risk as probable. The recorded provisions are considered sufficient to cover the risks associated with the legal claims that are being substantiated as of 31 December 2022.



- 'Planos Económicos': like the rest of the banking system in Brasil, Santander Brazil has been the target of customer complaints and collective civil suits stemming mainly from legislative changes and its application to bank deposits ('economic plans'). At the end of 2017, an agreement between regulatory entities and the Brazilian Federation of Banks (Febraban) with the purpose of closing the lawsuits was reached and was approved by the Supremo Tribunal Federal. Discussions focused on specifying the amount to be paid to each affected client according to the balance in their notebook at the time of the Plan. Finally, the total value of the payments will depend on the number of adhesions there may be and the number of savers who have demonstrated the existence of the account and its balance on the date the indexes were changed. In November 2018, the STF ordered the suspension of all economic plan proceedings for two years from May 2018. On 29 May 2020, the STF approved the extension of the agreement for 5 additional years starting from 3 June 2020. Condition for this extension was to include in the agreement actions related to the 'Collor I Plan'. On 31 December 2022, the provision recorded for the economic plan proceedings amounts to EUR 220 million.
- Floor clauses: as a consequence of the acquisition of Banco Popular Español, S.A.U. ('Banco Popular'), the Group has been exposed to a material number of transactions with floor clauses. The so-called "floor clauses" are those under which the borrower accepts a minimum interest rate to be paid to the lender, regardless of the applicable reference interest rate. Banco Popular included "floor clauses" in certain asset-side transactions with customers. In relation to this type of clauses, and after several rulings made by the Court of Justice of the European Union and the Spanish Supreme Court, and the extrajudicial process established by the Spanish Royal Decree-Law 1/2017, of 20 January, Banco Popular made provisions that were updated in order to cover the effect of the potential return of the excess interest charged for the application of the floor clauses between the contract date of the corresponding mortgage loans and May 2013. At 31 December 2022, after having processed most of the customer requests, the potential residual loss associated with ongoing court proceedings is estimated at EUR 60.1 million, amount which is fully covered by provisions.
- Banco Popular's acquisition: After the declaration of the resolution of Banco Popular, some investors filed claims against the EU's Single Resolution Board decision, and the FROB's resolution executed in accordance to the aforementioned decision. Likewise, numerous appeals were filed against Banco Santander, S.A. alleging that the information provided by Banco Popular was erroneous and requesting from Banco Santander, S.A. the restitution of the price paid for the acquisition of the investment instruments or, where appropriate, the corresponding compensation.

In relation to these appeals, on the one hand, the General Court of the European Union ("GCUE") selected 5 appeals from among all those filed before the European courts by various investors against the European institutions and processed them as pilot cases. On 1 June 2022, the GCUE has rendered five judgements in which it has completely dismissed the appeals, (i) supporting the legality of the resolution framework applied to Banco Popular, (ii) confirming the legality of the action of the European institutions in the resolution of Banco Popular and (iii) rejecting, in particular, all the allegations that there were irregularities in the sale process of Banco Popular to Banco Santander, S.A. Four of these judgments have been appealed before the Court of Justice of the European Union ("CJEU").

On the other hand, in relation to the lawsuits initiated by investors directly against Banco Santander, S.A. derived from the acquisition of Banco Popular, on 2 September 2020, the Provincial Court of La Coruña submitted a preliminary ruling to the CJEU in which it asked for the correct interpretation of the Article 60, section 2 of Directive 2014/59/EU of the European Parliament and of the Council of 15 May, establishing a framework for the restructuring and resolution of credit institutions and investment services companies. Said article establishes that, in the cases of redemption of capital instruments in a bank resolution, no liability will subsist in relation to the amount of the instrument that has been redeemed. On 5 May 2022, the CJEU has rendered its judgement confirming that Directive 2014/59/EU of the European Parliament and of the Council does not allow that, after the total redemption of the shares of the share capital of a credit institution or an investment services company subject to a resolution procedure, the shareholders who have acquired shares within the framework of a public subscription offer issued by said company before the start of such a resolution procedure, exercise against that entity or against its successor, an action for liability for the information contained in the prospectus, under Directive 2003/71/EC of the European Parliament and of the Council, or an action for annulment of the subscription contract for those shares, which, taking into account its retroactive effects, gives rise to the restitution of the equivalent value of said shares, plus the interest accrued from the date of execution of said contract. In respect to this judgement, in December 2022 the Spanish Supreme Court submitted pre-judicial issues before the CJEU in respect of its applicability to subordinated obligations amortized with the resolution and to subordinated obligations and/or preferred shares converted into shares before resolution.



Separately, the Central Court of Instruction 4 is currently conducting preliminary proceedings 42/2017, in which, amongst other things, is being investigated the following: (i) the accuracy of the prospectus for the capital increase with subscription rights carried out by Banco Popular in 2016; and (ii) the alleged manipulation of the share price of Banco Popular until the resolution of the bank, in June 2017. During the course of the proceedings, on 30 April 2019, the Spanish National Court, ruled in favour of Banco Santander, S.A. declaring that Banco Santander, S.A. cannot inherit Banco Popular's potential criminal liability. This ruling was appealed before the Supreme Court, which rejected it. In these proceedings, Banco Santander, S.A. could potentially be subsidiarily liable for the civil consequences. In view of the CJEU ruling of 5 May 2022, the Bank has requested confirmation of the exclusion of its subsidiary civil liability status in this criminal proceeding. On 26 July 2022, the Court has rejected this request stating that it is a matter to be determined at a later procedural time. This decision has been confirmed on appeal by the Chamber of the National Court by sentence of 5 October 2022. The estimated cost of any compensation to shareholders and bondholders of Banco Popular recognized in the 2017 accounts amounted to EUR 680 million, of which EUR 535 million were applied to the commercial loyalty program. The CJEU judgement of 5 May represents a very significant reduction in the risk associated with these claims.

- German shares investigation: the Cologne Public Prosecution Office is conducting an investigation against the Bank, and other group entities based in UK - Santander UK plc, Santander Financial Services Plc and Cater Allen International Limited -, in relation to a particular type of tax dividend linked transactions known as cum-ex transactions.

The Group is cooperating with the German authorities. According to the state of the investigations, the result and the effects for the Group, which may potentially include the imposition of material financial penalties, cannot be anticipated. For this reason, the Bank has not recognized any provisions in relation to the potential imposition of financial penalties.

- Banco Santander, S.A. was sued in a legal proceeding in which the plaintiff alleges that the Bank breached his contract as CEO of the institution. In the lawsuit, the claimant mainly requested a declaratory ruling that upholds the existence, validity and effectiveness of such contract and its enforcement together with the payment of certain amounts. If the main request is not granted, the claimant sought a compensation for a total amount of approximately EUR 112 million or, an alternative relief for other minor amounts. Banco Santander, S.A. answered to the legal action stating that the conditions to which the appointment of that position was subject to were not met; that the executive services contract required by law was not concluded; and that in any case, the parties could terminate the contract without any justified cause. On 17 May 2021, the plaintiff reduced his claims for compensation to EUR 61.9 million.

On 9 December 2021, the Court upheld the claim and ordered the Bank to compensate the claimant in the amount of EUR 67.8 million. By court order of 13 January 2022, the Court corrected and supplemented its judgment, reducing the total amount to be paid by the Bank to EUR 51.4 million and clarifying the part of this amount (buy out) was to be paid under the terms of the offer letter, i.e., entirely in Banco Santander shares, within the deferral period for this type of remuneration at the plaintiff's former employer and subject to the performance metrics or parameters of the plan in force at the Bank, which was that of 2018. As explained in note 5 of the report, the degree of performance of these objectives was 33.3%.

The Bank filed an appeal against the judgment before the Madrid Court of Appeal, which was opposed by the plaintiff. At the same time, the plaintiff filed an application for provisional enforcement of the judgment in the first instance court. A court order was issued ordering enforcement of the judgment, and the Bank deposited in the court bank account the full amount provisionally awarded to the claimant, including interest, for an approximate sum of EUR 35.5 million, within the voluntary compliance period.

On 6 February 2023, Banco Santander was notified of the judgment of 20 January 2023 by which the Madrid Court of Appeal partially upheld the appeal filed by the Bank. The judgment has reduced the amount to be paid by EUR 8 million, which, to the extent that this amount was already paid in the provisional partial enforcement of the judgement of first instance court, must be returned to the Bank together with other amounts for interest, which the appeal judgement also rejects.

The Bank has submitted a brief requesting a supplement to the Madrid Court of Appeal's judgment, as it understands that it has not ruled on some substantial allegations over the merits of the case made in the Bank's appeal. The Bank will file an extraordinary appeal for procedural infringement and an appeal in cassation against the Madrid Court of Appeal's judgment before Spanish Supreme Court. Existing provisions cover the estimated risk of loss.

- Universalpay Entidad de Pago, S.L. has filed a lawsuit against Banco Santander, S.A. for breach of the marketing alliance agreement (MAA) and claim payment (EUR 1,050 million). The MAA was originally entered into by Banco Popular and its purpose is the rendering of acquiring services (point of sale payment terminals) for businesses in the Spanish market. The lawsuit was mainly based on the potential breach of clause 6 of the MAA, which establishes certain obligations of exclusivity, non-competition and customer referral. On 16 December 2022, the Court ruled in favour of the Bank and dismissed the plaintiff's claim in its entirety. The decision has been appealed.

Taking into account the decision at first instance and following the analysis carried out by the Bank's external lawyers, with the best information available to date, it is considered that no provision needs to be registered.



- CHF Polish Mortgage Loans: On 3 October 2019, the CJEU rendered its decision in relation to a judicial proceeding against an unrelated bank in Poland considering that certain contractual clauses in CHF-Indexed loan agreements were abusive. The CJEU has left to Polish courts the decision on whether the whole contract can be maintained once the abusive terms have been removed, which should in turn decide whether the effects of the annulment of the contract are prejudicial to the consumer. In case of maintenance of the contract, the court may only integrate the contract with subsidiary provisions of national law and decide, in accordance with those provisions, on the applicable rate.

In 2021, the Supreme Court was expected to take a position regarding the key issues in disputes concerning loans based on foreign currency, clarifying the discrepancies and unifying case law. The Supreme Court met several times, with the last session taking place on 2 September 2021. However, the resolution was not adopted and instead, the Supreme Court referred questions to the CJEU on constitutional issues of the Polish judiciary system. No new date for consideration of the issue has been set and no comprehensive decision by the Supreme Court of the issue is expected in the near future. In the absence of a comprehensive position of the Supreme Court, it is difficult to expect a full unification of judicial decisions, and decisions of the Supreme Court and CJEU issued on particular issues may be important for shaping further case law on CHF matters.

At the date of the Group's consolidated financial statements, it is not possible to predict the Supreme Court's and CJEU decisions on individual cases. Santander Bank Polska and Santander Consumer Bank Poland estimate legal risk using a model which considers different possible outcomes and regularly monitor court rulings on foreign currency loans to verify changes in case law practice.

As of 31 December 2022, Santander Bank Polska S.A. and Santander Consumer Bank S.A. maintain a portfolio of mortgages denominated in or indexed to CHF for an approximate gross amount of PLN 8,393.7 million (EUR 1,791.8 million). As of 1 January 2022, in accordance with IFRS 9 and based on the new best available information, the accounting methodology was adapted so that the gross carrying amount of mortgage loans denominated and indexed in foreign currencies is reduced by the amount in which the estimated cash flows are not expected to cover the gross amount of loans, including as a result of legal controversies relating to these loans. In the absence of exposure or insufficient gross exposure, a provision according to IAS 37 is recorded.

As of 31 December 2022, the total value of adjustment to gross carrying amount in accordance with IFRS9 as well as provisions recorded under IAS37, amount to PLN 3,557.3 million (EUR 759.4 million) of which PLN 3,136.3 million (EUR 669.5 million) corresponds to adjustment to gross carrying amount under IFRS 9 and PLN 421 million (EUR 89.9 million) to provisions recognized in accordance with IAS 37. Throughout 2022, the adjustment to gross carrying amount in accordance with IFRS9 amounted to PLN 1,283.3 million (EUR 274 million), the additional provisions under IAS37 amounted to PLN 236.8 million (EUR 50.6 million) and other costs related to the dispute amounted to PLN 218.1 million (EUR 46.6 million).

These provisions represent the best estimate as at 31 December 2022. Santander Bank Polska and Santander Consumer Bank Poland will continue to monitor and assess appropriateness of those provisions.

In December 2020, the Chairman of the Polish Financial Supervision Authority ('KNF') presented a proposal for voluntary settlements between banks and borrowers under which CHF loans would be retrospectively settled as PLN loans bearing an interest rate based on WIBOR plus margin. The Bank has been testing such settlements in relation to different customer groups in parallel with own settlement solutions. The results of the current tests have been incorporated into the provision calculation model.

On February 16, 2023, the CJEU General Advocate ("AG") issued his opinion in case no. C-520/21 pending before the CJEU, where it considers that Directive 93/13/EEC does not oppose national legislative provisions, or the national jurisprudence that interprets them, that allow the consumer to exercise claims that go beyond the reimbursement of the loan instalments disbursed under the mortgage loan contract that is declared null and the payment of default interest at the legal rate accrued from the date of the payment request. However, it corresponds to the Polish courts to verify, in the light of their national law, whether consumers have the right to exercise this type of claim and, where appropriate, rule on its admissibility. With regard to banks, the opinion of the AG is that the Directive prevents a bank from exercising claims against a consumer that go beyond the repayment of the principal of the loan granted declared null and the payment of default interest at the legal rate accrued from the date of the payment request. The opinion is non-binding, so it does not definitively resolve these issues, which will be decided in the CJEU ruling that is expected in 2023. At the date of the consolidated annual accounts, it is not possible to predict a reliable estimate of the potential impact for the Group if the CJEU assumed the opinion of the AG, since this would also depend on the criterion adopted by the national courts.

On 17 February 2023, the KNF has issued a statement in which upholds in full the opinion expressed by the Chairman of the KNF before the CJEU on 12 October 2022, disagreeing with the conclusions of the AG.

- Banco Santander Mexico. Dispute regarding a testamentary trust constituted in 1994 by Mr. Roberto Garza Sada in Banca Serfin (currently Santander Mexico) in favor of his four sons in which he affected shares of Alfa, S.A.B. de C.V. (respectively, "Alfa" and the "Trust"). During 1999, Mr. Roberto Garza Sada instructed Santander México in its capacity as trustee to transfer 36,700,000 shares from the Trust's assets to his sons and daughters and himself. These instructions were ratified in 2004 by Mr. Roberto Garza Sada before a Notary Public.



Mr. Roberto Garza Sada passed away on 14 August 2010 and subsequently, in 2012, his daughters filed a complaint against Santander Mexico alleging it had been negligent in its trustee role. The lawsuit was dismissed at first instance in April 2017 and on appeal in 2018. In May 2018, the plaintiffs filed an appeal (recurso de amparo) before the First Collegiate Court of the Fourth Circuit based in Nuevo León, which ruled in favor of the plaintiffs on 7 May 2021, annulling the 2018 appeal judgment and condemning Santander Mexico to the petitions claimed, consisting of the recovery of the amount of 36,700,000 Alfa shares, together with dividends, interest and damages.

Santander Mexico has filed various constitutional review and appeals against the recurso de amparo referred to above, which have been dismissed by the Supreme Court of Justice of the Nation. As of this date, an amparo review filed by the Bank is pending to be resolved in the Collegiate Courts in the State of Nuevo León, thus the judgment is not final. On 29 June 2022, Santander México, within the framework of the amparo review filed by the Bank, requested the First Collegiate Court in Civil Matters of the Fourth Circuit of Nuevo León the recusal of two of the three Magistrates who rendered against Santander Mexico, which has been resolved in favour of Santander Mexico. Plaintiffs have requested the recusal of the third Magistrate who ruled with a dissenting vote against the recurso de amparo referred above.

Santander México believes that the actions taken should prevail and reverse the decision against it. The impact of a potential unfavorable resolution for Santander México will be determined in a subsequent proceeding and will also depend on the additional actions that Santander México may take in its defense, so it is not possible to determine it at this time. At the current stage of the proceedings, the provisions recorded are considered to be sufficient to cover the risks deriving from this claim.

- URO Property Holdings, SOCIMI SA: on 16 February 2022, legal proceedings were commenced in the Commercial Court of London against Uro Property Holdings SOCIMI SA ("Uro"), a subsidiary of Banco Santander, S.A., by BNP Paribas Trust Corporation UK Limited ("BNP") in its capacity as trustee on behalf of certain bondholders and beneficiaries of security rights. The litigation concerns certain terms of a financing granted to Uro which was supported by a bond issue in 2015. The claimant seeks a declaration by the Court and a monetary award against Uro, in connection with an additional premium above the nominal value of the financing repayment as a consequence of Uro having lost its status as SOCIMI (Sociedad Anónima Cotizada de Inversión Inmobiliaria), such loss causing the prepayment of the bond issue and, in the opinion of the claimant BNP, also the obligation to pay the additional premium by Uro. Uro denies being liable to pay that additional premium and filed its defense statement and announced a counterclaim against the claimant. The trial hearing has not been scheduled yet. Furthermore, Uro filed a summary judgement application for BNP's claim to be dismissed before trial. The Commercial Court dismissed the application and Uro is seeking permission to appeal this decision. It is estimated that the maximum loss associated with this possible contingency, amounts to approximately EUR 250 million.

Banco Santander and the other Group companies are subject to claims and, therefore, are party to certain legal proceedings incidental to the normal course of their business including those in connection with lending activities, relationships with employees and other commercial or tax matters additional to those referred to here.

With the information available to it, the Group considers that, at 31 December 2022, it had reliably estimated the obligations associated with each proceeding and had recognized, where necessary, sufficient provisions to cover reasonably any liabilities that may arise as a result of these tax and legal risks. Disputes in which provisions have been registered but are not disclosed is justified on the basis that it would be prejudicial to the proper defense of the Group. Subject to the qualifications made, it also believes that any liability arising from such claims and proceedings will not have, overall, a material adverse effect on the Group's business, financial position, or results of operations.

26. Other liabilities

The detail of Other liabilities in the consolidated balance sheets is as follows:

EUR million	2022	2021	2020
Transactions in transit	457	545	498
Accrued expenses and deferred income	8,445	7,084	6,309
Other	5,707	5,069	5,529
	14,609	12,698	12,336



27. Tax matters

a) Consolidated Tax Group

Pursuant to current legislation, the Consolidated Tax Group includes Banco Santander, S.A. (as the parent) and the Spanish subsidiaries that meet the requirements provided for in Spanish legislation regulating the taxation of the consolidated profits of corporate groups (as the controlled entities).

The other Group companies file income tax returns in accordance with the tax regulations applicable to them.

b) Years open for review by the tax authorities

In June and November 2021 Spanish tax authorities formalized acts with agreement, conformity and non-conformity relating to the corporate income tax financial years 2012 to 2015. The adjustments signed in conformity and with agreement had not impact on results and, in relation to the concepts signed in disconformity both in this year and in previous years (corporate income tax 2003 to 2011), Banco Santander, S.A., as the Parent of the Consolidated Tax Group, considers, in accordance with the advice of its external lawyers, that the adjustments made should not have a significant impact on the consolidated financial statements, as there are sound arguments as proof in the appeals filed against them pending at the National Appellate Court (tax years 2003 to 2011) and at the Central Economic Administrative Court (tax years 2012-2015). Consequently, no provision has been recorded for this concept. It should also be noted that, in those cases where it has been considered appropriate, the mechanisms available to avoid international double taxation have been used.

At the date of approval of these consolidated annual accounts, the Corporate Income Tax and other taxes audit for periods 2017 to 2019 are ongoing, and subsequent years up to and including 2022, are subject to review.

The other entities have the corresponding years open for review, pursuant to their respective tax regulations.

Because of the possible different interpretations which can be made of the tax regulations, the outcome of the tax audits of the rest of years subject to review might give rise to contingent tax liabilities which cannot be objectively quantified. However, the Group's tax advisers consider that it is unlikely that such tax liabilities will materialize, and that in any event the tax charge arising therefrom would not materially affect the Group's consolidated financial statements.

c) Reconciliation

The reconciliation of the income tax expense calculated at the tax rate applicable in Spain (30%) to the income tax expense recognised and the detail of the effective tax rate are as follows:

EUR million	2022	2021	2020
Consolidated profit (loss) before tax:			
From continuing operations	15,250	14,547	(2,076)
From discontinued operations	—	—	—
	15,250	14,547	(2,076)
Income tax at tax rate applicable in Spain (30%)	4,575	4,364	(623)
By the effect of application of the various tax rates applicable in each country ^A	61	210	362
Of which:			
Brazil	472	634	560
United Kingdom	(161)	(158)	(43)
United States	(99)	(179)	(71)
Chile	(30)	(34)	(24)
Poland	(101)	—	—
Effect of profit or loss of associates and joint ventures	(210)	(130)	29
Effect of reassessment of deferred taxes	—	9	2,500
Permanent differences and other	60	441	3,364
Current income tax	4,486	4,894	5,632
Effective tax rate	29.42%	33.64%	—
Of which:			
Continuing operations	4,486	4,894	5,632
Discontinued operations (note 37)	—	—	—
Of which:			
Current taxes	4,272	3,799	4,214
Deferred taxes	214	1,095	1,418
Income tax (receipts)/payments	5,498	4,012	2,946

A. Calculated by applying the difference between the tax rate applicable in Spain and the tax rate applicable in each jurisdiction to the profit or loss contributed to the Group by the entities which operate in each jurisdiction.

B. In 2020 it includes mainly the impairment of goodwill.



d) Tax recognised in equity

In addition to the income tax recognised in the consolidated income statement, the Group recognised the following amounts in consolidated equity in 2022, 2021 and 2020:

EUR million	2022	2021	2020
Other comprehensive income			
Items not reclassified to profit or loss	49	(510)	(82)
Actuarial gains or (-) losses on defined benefit pension plans	96	(530)	(165)
Changes in the fair value of equity instruments measured at fair value through other comprehensive income	(19)	(13)	92
Financial liabilities at fair value with changes in results attributable to changes in credit risk	(26)	33	(9)
Other recognised income and expense of investments in subsidiaries, joint ventures and associates	(2)	—	—
Items that may be reclassified to profit or loss	1,522	1,136	208
Cash flow hedges	912	278	5
Changes in the fair value of debt instruments through other comprehensive income	661	857	195
Other recognised income and expense of investments in subsidiaries, joint ventures and associates	(51)	1	8
Total	1,571	626	126

e) Deferred taxes

'Tax assets' in the consolidated balance sheets includes debit balances with the Public Treasury relating to deferred tax assets. 'Tax liabilities' includes the liability for the Group's various deferred tax liabilities.

In accordance with the Basel III legal framework included in European law through Directive 2013/36 (CRD IV) and EU Regulation 575/2013 on prudential requirements for credit institutions and investment firms (CRR), and subsequently amended by EU Regulation 2019/876 of the European Parliament and of the Council, deferred tax assets which use does not rely on obtaining future profits (referred to hereinafter as 'monetizable tax assets') generated before 23 November 2016 are exempt from deduction from regulatory capital.

The detail of deferred tax assets, by classification as monetizable or non-monetizable assets, and of deferred tax liabilities at 31 December 2022, 2021 and 2020 is as follows:

EUR million

	2022		2021		2020	
	Monetizable ^A	Other	Monetizable ^A	Other	Monetizable ^A	Other
Tax assets	10,660	10,127	10,473	8,967	10,721	8,525
Tax losses and tax credits	—	1,778	—	1,249	—	1,093
Temporary differences	10,660	8,349	10,473	7,718	10,721	7,432
<i>Of which:</i>						
<i>Non-deductible provisions</i>	—	2,182	—	2,256	—	2,139
<i>Valuation of financial instruments</i>	—	1,535	—	600	—	483
<i>Loan losses</i>	7,696	1,232	6,888	988	7,134	1,007
<i>Pensions</i>	2,964	560	3,585	669	3,587	875
<i>Valuation of tangible and intangible assets</i>	—	1,270	—	1,509	—	1,373
Tax liabilities	—	6,428	—	6,462	—	5,933
Temporary differences	—	6,428	—	6,462	—	5,933
<i>Of which:</i>						
<i>Valuation of financial instruments</i>	—	1,792	—	1,419	—	1,791
<i>Valuation of tangible and intangible assets</i>	—	3,169	—	3,081	—	2,311
<i>Investments in Group companies</i>	—	359	—	337	—	440

A. Banco Popular Español, S.A.U. considered that part of its monetizable assets were converted into credit against the Tax Administration in 2017 Income Tax return, as the circumstances which determined such conversion were met at the end of that year (EUR 995 million). The Spanish tax authorities have expressly confirmed the nature of these assets as monetizables, but they considered that conditions for conversion were not met at the end of 2017, without prejudice to the conversion in future years. The Tax Administration position is being discussed at the Courts.

Besides, due to losses incurred in 2020, the Consolidated Tax Group in Spain converted EUR 642 million of monetizable tax assets into credit against the Tax Administration in its corporate income tax return.

Grupo Santander only recognises deferred tax assets for temporary differences or tax loss and tax credit carryforwards where it is considered probable that the consolidated entities that generated them will have sufficient future taxable profits against which they can be utilised.

The deferred tax assets and liabilities are reassessed at the reporting date in order to ascertain whether any adjustments need to be made on the basis of the findings of the analyses performed.

These analyses take into consideration all evidence, both positive and negative, of the recoverability of such deferred tax assets, among which we can find, (i) the results generated by the different entities in previous years, (ii) the projections of results of each entity or fiscal group, (iii) the estimation of the reversal of the different temporary differences according to their nature and (iv) the period and limits established under the applicable legislation of each country for the recovery of the different deferred tax assets, thus concluding on the ability of each entity or fiscal group to recover the deferred tax assets registered.

The projections of results used in this analysis are based on the financial budgets approved by both the local directions of the corresponding units and by the Group's directors. The Group's budget estimation process is common for all units. The Group's management prepares its financial budgets based on the following key assumptions:

- Microeconomic variables of the entities that make up the fiscal group in each location: the existing balance structure, the mix of products offered and the commercial strategy at each moment defined by local directions are taken into account, based on the competition, regulatory and market environment.
- Macroeconomic variables: estimated growths are based on the evolution of the economic environment considering the expected evolution in the gross domestic product of each location, and the forecasts of interest rates, inflation and exchange rates fluctuations. These data is provided by the Group's Studies Service, based on external sources of information.

Additionally, the Group performs retrospective contrasts (backtesting) on the variables projected in the past. The differential behaviour of these variables with respect to the real market data is considered in the projections estimated in each fiscal year. Thus, and in relation to Spain, the deviations identified by the Directors in recent past years are due to non-recurring events outside the operation of the business, such as the impacts due to the first application of new regulations, the costs assumed for the acceleration of the restructuring plans and the changing effect of the current macroeconomic environment.



During 2020, taking into account the uncertainties about the economic impacts derived from the covid-19 health crisis, the Group reassessed the ability to generate future taxable income in relation to the recoverability of deferred tax assets recorded in the main Group companies. Management considered that the recovery period of these assets would not be affected and that it was not necessary to make adjustments to the deferred tax assets recognised in the Group on the basis of the results of the analyses performed, except in Spain, where the changes in the key assumptions on which the projected results of its tax group are based, arising from the impact of covid-19, resulted in the recognition of an impairment of EUR 2,500 million of deferred tax assets under 'Income Tax' in the income statement.

Finally, and given the degree of uncertainty of these assumption on the referred variables, the Group conducts a sensitivity analysis of the most significant assumptions considered in the deferred tax assets' recoverability analysis, considering any reasonable change in the key assumptions on which the projections of results of each entity or fiscal group and the estimation of the reversal of the different temporary differences are based.

In relation to Spain, the sensitivity analysis has consisted of making reasonable changes to the key assumptions, mainly by adjusting 50 basis points for growth (gross domestic product) and adjusting 50 basis points for inflation.

Relevant information is set forth below for the main countries which have recognised deferred tax assets:

Spain

The deferred tax assets recognised at the Consolidated Tax Group total EUR 9,455 million, of which EUR 6,777 million were for monetizable temporary differences with the right to conversion into a credit against the Public Finance, EUR 1,847 million for other temporary differences and EUR 830 million for tax losses and credits.

Brazil

The deferred tax assets recognised in Brazil total EUR 6,461 million, of which EUR 3,759 million were for monetizable temporary differences, EUR 1,950 million for other temporary differences and EUR 752 million for tax losses and credits.

United States

The deferred tax assets recognised in the United States total EUR 1,578 million, of which EUR 1,398 million were for temporary differences and EUR 180 million for tax losses and credits.

The Group estimates that the recognised deferred tax assets for temporary differences, tax losses and credits in the different jurisdictions will be recovered in a maximum period of 15 years.



The changes in Tax assets - Deferred and Tax liabilities - Deferred in the last three years were as follows:

EUR million

	Balances at 31 December 2021	(Charge)/Credit to income	Foreign currency balance translation differences and other items	(Charge)/Credit to asset and liability valuation adjustments	Acquisition for the year (net)	Balances at 31 December 2022
Deferred tax assets	19,440	273	376	697	1	20,787
Tax losses and tax credits	1,250	211	317	—	—	1,778
Temporary differences	18,190	62	59	697	1	19,009
Of which monetizable	10,473	507	(320)	—	—	10,660
Deferred tax liabilities	(6,462)	(487)	(149)	684	(14)	(6,428)
Temporary differences	(6,462)	(487)	(149)	684	(14)	(6,428)
	12,978	(214)	227	1,381	(13)	14,359

EUR million

	Balance at 31 December 2020	(Charge)/Credit to income	Foreign currency balance translation differences and other items	(Charge)/Credit to asset and liability valuation adjustments	Acquisition for the year (net)	Balance at 31 December 2021
Deferred tax assets	19,246	(209)	193	209	1	19,440
Tax losses and tax credits	1,093	129	28	—	—	1,250
Temporary differences	18,153	(338)	165	209	1	18,190
Of which monetizable	10,721	(273)	25	—	—	10,473
Deferred tax liabilities	(5,933)	(886)	(170)	528	(1)	(6,462)
Temporary differences	(5,933)	(886)	(170)	528	(1)	(6,462)
	13,313	(1,095)	23	737	0	12,978

EUR million

	Balances at 31 December 2019	(Charge)/Credit to income	Foreign currency balance translation differences and other items	(Charge)/Credit to asset and liability valuation adjustments	Acquisition for the year (net)	Balances at 31 December 2020
Deferred tax assets	22,758	(1,016)	(2,465)	38	(69)	19,246
Tax losses and tax credits	3,427	(2,065)	(266)	—	(3)	1,093
Temporary differences	19,331	1,049	(2,199)	38	(66)	18,153
Of which monetizable	11,233	613	(1,125)	—	—	10,721
Deferred tax liabilities	(6,522)	(402)	851	156	(16)	(5,933)
Temporary differences	(6,522)	(402)	851	156	(16)	(5,933)
	16,236	(1,418)	(1,614)	194	(85)	13,313

Also, the Group did not recognise deferred tax assets relating to tax losses and deductions and other incentives amounting to approximately EUR 10,800 million the use of which EUR 490 million is subject, among other requirements, to time limits.



f) Tax reforms

The following significant tax reforms were approved in 2022 and previous years:

In Spain, in 2020 the General State Budget Law for 2021 established, among other tax measures, the non deductibility in Corporation Tax of management fees on participations whose dividends or capital gains are exempt, determining the amount of these expenses as a 5% of the dividends or capital gains. Likewise in 2021 the General State Budget Law for 2022 was approved. This law establishes a minimum effective tax rate of 15% (18% for financial entities) on Corporation Tax base. In addition, during 2022, Law 38/2022 established a new temporary levy on credit institutions and financial credit institutions for fiscal years 2023 and 2024. The levy will be calculated as 4.8% of net interest and fees earned in the business carried out in Spain in the precedent year and the payment obligation will arise on the first day of each period. Additionally, this law also established a 50% limitation on the integration of negative individual taxable bases into the consolidated tax group's tax base. This limitation is expected to be in force only in 2023, with a 10 year deadline for the reversal of this positive adjustment.

In the United Kingdom, the Budget Act for 2021 increased the main Corporation Tax rate from 19% to 25% with effect from 1 April 2023. In addition, and also with effect from 1 April 2023, the Bank Surcharge tax rate was reduced from 8% to 3%, so the corporate tax rate for banks is set at 28%.

In Brazil, Provisional Measure 1.115/2022 and the subsequent Law 14,446, established a temporary increase from 31 August 2022 to 31 December 2022 in the rate of contribution on net income (CSLL) of banks from 20% to 21% and for other financial institutions, from 15% to 16%. This increase lifted the aggregate tax rate -sum of CSLL and the corporate income tax (IRPJ)- for banks to 46% (25% for income tax and 21% for CSLL), and 41% for other financial institutions. In addition, Law 14,467/2022, with effect from 2025, amends the rules on the tax deductibility of credit provisions in financial institutions, bringing those rules closer to the accounting recognition criterion. In the tax on financial operations (IOF) as of 1 January 2021, the rate of 0,38% on credit operations was reinstated (0% for part of 2020), and for settled transactions from 20 September to 31 December 2021, a temporary increase in the IOF rates applicable for credit transactions was approved (annual rate 1.5% to 2.04% for legal persons and 3% to 4.08% for natural persons). In 2022 Decree 10.997/2022 has established the reduction to 0% of the IOF applicable to foreign financing and lending transactions, regardless of the term of the transaction, as from 21 March 2022, and a gradual reduction in the rates applicable to foreign exchange transactions until their reduction to 0% as from 2 January 2029.

In Argentina, Law n.º 27630 (National Bulletin of 16 June 2021) amended, with retroactive effect to 1 January 2021, the rate applicable to the Corporate Income Tax, establishing a progressive rate scale which for Banco Santander Argentina S.A. represents an increase from 30% to 35%. In addition, the 7% withholding on dividend distribution is maintained (however, the distribution of pre-2018 reserves is not subject to withholding tax). In addition, during the first quarter of the year 2021, there was an increase in the tax on gross income to financial institutions in both, the City of Buenos Aires (from 7% to 8%) and the Province of Buenos Aires (from 7% to 9%) and also reducing certain exemptions. Finally, since 2019, different laws on the adjustment for tax inflation have been approved in order to partially defer the adjustment.

In the United States, during 2022, the Inflation Reduction Act (IRA) has been approved, which, among other measures, imposes a minimum taxation on the accounting performance of certain large companies, through the introduction of a new Alternative Minimum Tax (AMT) as of 2023, calculated by applying a rate of 15% on the profit determined on the basis of the adjusted financial statements. The amount to be paid is deductible in future years from the tax rate of ordinary corporation tax.

In Chile, Law n.º 21,210 on modernization of Chilean tax law was enacted in 2020. It includes several modifications to different tax laws in force in Chile. Among the aspects included, it is worth highlighting the substitute tax that on a temporary basis until 30 April 2022 allows taxing at 30% (instead of the generally applicable 35%) with a credit of the first category tax paid, the tax profits generated up to the 31 December 2016, reducing the fiscal cost of its distribution and other measures about asset depreciation and indirect taxes.

On 22 December 2022, the European Commission approved Directive 2022/2523 ensuring a minimum effective tax rate for the global activities of large multinational groups. The Directive that follows closely the OECD Inclusive Framework on Base Erosion and Profit Shifting should be transposed by the Member States throughout 2023, entering into force on 1 January 2024.

g) Other information

In compliance with the disclosure requirement established in the listing rules instrument 2005 published by the UK Financial Conduct Authority, it is hereby stated that shareholders of the Bank resident in the United Kingdom will be entitled to a tax credit for taxes paid abroad in respect of withholdings that the Bank has to pay on the dividends to be paid to such shareholders if the total income of the dividend exceeds the amount of exempt dividends of GBP 2,000 for the year 2022/23. The shareholders of the Bank resident in the United Kingdom who hold their ownership interest in the Bank through Santander Nominee Service will be informed directly of the amount thus withheld and of any other data they may require to complete their tax returns in the United Kingdom. The other shareholders of the Bank resident in the United Kingdom should contact their bank or securities broker.



Banco Santander, S.A., is part of the Large Business Forum and has adhered since 2010 to the Code of Good Tax Practices in Spain. Also Santander UK is a member of the HMRC's (His Majesty's Revenue and Customs) Code of Practice on Taxation in the United Kingdom, actively participating in both cases in the cooperative compliance programs being developed by these Tax Administrations.

28. Non-controlling interests

Non-controlling interests include the net amount of the equity of subsidiaries attributable to equity instruments that do not belong, directly or indirectly, to the Bank, including the portion attributed to them of profit for the year.

a) Breakdown

The detail, by Group company, of 'Equity - Non-controlling interests' is as follows:

EUR million	2022	2021	2020
Santander Bank Polska S.A.	1,603	1,559	1,676
Grupo PSA	1,728	1,543	1,622
Santander Consumer USA Holdings Inc.	—	1,255	986
Banco Santander - Chile	1,317	1,042	1,218
Banco Santander (Brasil) S.A.	1,210	1,023	1,014
Banco Santander México, S.A. Institución de Banca Múltiple, Grupo Financiero Santander México	251	202	461
Other companies ^A	1,213	1,970	1,806
	7,322	8,594	8,783
Profit/(Loss) for the year attributable to non-controlling interests	1,159	1,529	1,063
Of which:			
Santander Consumer USA Holdings Inc.	—	494	201
Grupo PSA	323	311	255
Banco Santander - Chile	280	292	198
Banco Santander (Brasil) S.A.	259	251	233
Santander Bank Polska S.A.	196	75	81
Banco Santander México, S.A. Institución de Banca Múltiple, Grupo Financiero Santander México	42	62	61
Other companies	59	44	34
TOTAL	8,481	10,123	9,846

A. Includes perpetual Santander UK plc equity instruments convertible at the option of Santander UK plc into preferred shares of Santander UK plc. During 2022, three issues were redeemed early for a nominal amount of GBP 1,700 million (EUR 1,977 million) of which the Group had repurchased GBP 1,050 million (EUR 1,221 million). At year-end, the outstanding balance on these equity instruments amounted to GBP 500 million (EUR 564 million) (EUR 1,363 million and EUR 1,275 million in 2021 and 2020, respectively).

b) Changes

The changes in Non-controlling interests are summarised as follows:

EUR million	2022	2021	2020
Balance at the end of the previous year	10,123	9,846	10,588
Balance at beginning of year	10,123	9,846	10,588
Other comprehensive income	248	(304)	(818)
Other	(1,890)	581	76
Profit attributable to non-controlling interests	1,159	1,529	1,063
Modification of participation rates ^A	(1,811)	(390)	(632)
Change of perimeter	31	(5)	(54)
Dividends paid to minority shareholders	(500)	(648)	(465)
Changes in capital and other concepts ^B	(769)	95	164
Balance at end of year	8,481	10,123	9,846

A. Include the effects of the purchase of shares of Santander Holdings USA, Inc. on Santander Consumer USA Holdings Inc. that occurred in 2022 and of the public offer for the acquisition of shares of Banco Santander México, SA, Institución de Multiple Banking, Grupo Financiero Santander México that occurred in 2021 (see note 3.b).

B. Includes the effect of the amortization of AT1 UK by EUR 756 million.

The foregoing changes are shown in the consolidated statement of changes in total equity.



c) Other information

The financial information on the subsidiaries with significant non-controlling interests at 31 December 2022 is summarised below:

EUR million^A

	Santander Bank Polska S.A.	Banco Santander (Brasil) S.A.	Banco Santander - Chile	Grupo Financiero Santander México, S.A.B. de C.V.	Santander Consumer USA
Total assets	52,665	184,165	78,425	92,636	40,681
Total liabilities	47,506	168,627	72,845	84,416	30,130
Net assets	5,159	15,538	5,580	8,220	10,551
Total income	2,474	12,910	2,449	4,623	4,300
Total profit	542	2,822	956	1,257	1,407

A. Information prepared in accordance with the segment reporting criteria described in note 51 and, therefore, it may not coincide with the information published separately by each entity.

29. Other comprehensive income

The balances of 'Other comprehensive income' include the amounts, net of the related tax effect, of the adjustments to assets and liabilities recognised in equity through the consolidated statement of recognised income and expense. The amounts arising from subsidiaries are presented, on a line by line basis, in the appropriate items according to their nature.

Respect to items that may be reclassified to profit or loss, the consolidated statement of recognised income and expense includes changes in other comprehensive income as follows:

- Revaluation gains (losses): includes the amount of the income, net of the expenses incurred in the year, recognised directly in equity. The amounts recognised in equity in the year remain under this item, even if in the same year they are transferred to the income statement or to the initial carrying amount of the assets or liabilities or are reclassified to another line item.
- Amounts transferred to income statement: includes the amount of the revaluation gains and losses previously recognised in equity, even in the same year, which are recognised in the income statement.
- Amounts transferred to initial carrying amount of hedged items: includes the amount of the revaluation gains and losses previously recognised in equity, even in the same year, which are recognised in the initial carrying amount of assets or liabilities as a result of cash flow hedges.
- Other reclassifications: includes the amount of the transfers made in the year between the various valuation adjustment items.



a) Breakdown of Other comprehensive income - Items that will not be reclassified in results and Items that can be classified in results

EUR million

	2022	2021	2020
Other comprehensive income	(35,628)	(32,719)	(33,144)
Items that will not be reclassified to profit or loss	(4,635)	(4,241)	(5,328)
Actuarial gains and losses on defined benefit pension plans	(3,945)	(3,986)	(5,002)
Non-current assets held for sale	—	—	—
Share in other income and expenses recognised in investments, joint ventures and associates	10	(8)	(2)
Other valuation adjustments	—	—	—
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income	(672)	(157)	(308)
Inefficiency of fair value hedges of equity instruments measured at fair value with changes in other comprehensive income	—	—	—
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income (hedged item)	293	275	159
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income (hedging instrument)	(293)	(275)	(159)
Changes in the fair value of financial liabilities measured at fair value through profit or loss attributable to changes in credit risk	(28)	(90)	(16)
Items that may be reclassified to profit or loss	(30,993)	(28,478)	(27,816)
Hedges of net investments in foreign operations (Effective portion)	(6,750)	(4,283)	(3,124)
Exchange differences	(20,420)	(23,887)	(26,911)
Hedging derivatives. Cash flow hedges (Effective portion)	(2,437)	(276)	295
Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income	(1,002)	436	2,411
Hedging instruments (items not designated)	—	—	—
Non-current assets classified as held for sale	—	—	—
Share in other income and expenses recognised in investments, joint ventures and associates	(384)	(468)	(487)

b) Other comprehensive income- Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans

'Other comprehensive income —Items not reclassified to profit or loss— Actuarial gains or (-) losses on defined benefit pension plans' include the actuarial gains and losses and the return on plan assets, less the administrative expenses and taxes inherent to the plan, and any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset).

Its variation (increase of EUR 56 million in the year) is shown in the consolidated statement of recognised income.

The endowment against equity in 2022 amounts to EUR 242 million - see note 25.b -, with the following breakdown:

- Reduction of EUR 295 million in the accumulates actuarial losses relating to the Group's entities in Spain, mainly due to the evolution experienced by the discount rate -increase from 0.90% to 3.80%.
- Reduction of EUR 171 million in the accumulates actuarial losses relating to the Group's entities in Germany, mainly due to the evolution experienced by the discount rate -increase from 1.45% to 4.21%.

- Reduction of EUR 113 million in the accumulates actuarial losses relating to the Group's entities in Portugal, mainly due to the evolution experienced by the discount rate -increase from 1.10% to 3.70%.
- Increase of EUR 857 million in the cumulative actuarial losses relating to the Group's businesses in the UK, mainly due to the evolution of the asset portfolio and inflation in the short term. These actuarial losses have been partially offset in the obligations due to the evolution of the discount rate - increase from 1.90% to 4.88%- and inflation in the long term - reduction from 3.37% to 3.11%.
- Reduction of EUR 39 million in accumulated actuarial losses corresponding to the Group's business in Brazil, mainly due to the increase in the discount rate -increase from 8.39% to 9.44% in the main pension benefits and 8.44% to 9.46% in the main medical benefit.
- Increase of EUR 3 million in the accumulated actuarial losses corresponding to the Group's businesses in other geographical areas.

The other modification in accumulated actuarial profit or losses is a reduction of EUR 186 million as a result of the evolution of exchange rates and other movements.



c) Other comprehensive income - Items that will not be reclassified in results - Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income

Since the entry into force of IFRS 9, no impairment analysis is performed of equity instruments recognised under 'Other comprehensive income'. IFRS 9 eliminates the need to carry out the impairment estimate on this class of equity instruments and the reclassification to profit and loss on the disposal of these assets, being recognised at fair value with changes in equity.

The following is a breakdown of the composition of the balance as of 31 December 2022, 2021 and 2020 under 'Other comprehensive income - Items that will not be reclassified to profit or loss - Changes in the fair value of equity instruments measured at fair value with changes in other global result' depending on the geographical origin of the issuer:

EUR million

	2022			Fair Value
	Capital gains by valuation	Capital losses by valuation	Net gains/losses by valuation	
Equity instruments				
<i>Domestic</i>				
Spain	30	(926)	(896)	500
<i>International</i>				
Rest of Europe	84	(60)	24	225
United States	15	—	15	29
Latin America and rest	244	(59)	185	1,187
	373	(1,045)	(672)	1,941
<i>Of which:</i>				
Publicly listed	246	(113)	133	1,200
Non publicly listed	127	(932)	(805)	741

EUR million

	2021			Fair Value
	Capital gains by valuation	Capital losses by valuation	Net gains/losses by valuation	
Equity instruments				
<i>Domestic</i>				
Spain	25	(663)	(638)	759
<i>International</i>				
Rest of Europe	39	(58)	(19)	170
United States	13	(4)	9	31
Latin America and rest	496	(5)	491	1,493
	573	(730)	(157)	2,453
<i>Of which:</i>				
Publicly listed	500	(44)	456	1,521
Non publicly listed	73	(686)	(613)	932



EUR million

	2020			Fair Value
	Capital gains by valuation	Capital losses by valuation	Net gains/losses by valuation	
Equity instruments				
Domestic				
Spain	28	(849)	(821)	1,032
International				
Rest of Europe	65	(76)	(11)	314
United States	7	(4)	3	25
Latin America and rest	525	(4)	521	1,412
	625	(933)	(308)	2,783
Of which:				
Publicly listed	525	(31)	494	1,424
Non publicly listed	100	(902)	(802)	1359

d) Other comprehensive income - Items that may be reclassified to profit or loss - Hedge of net investments in foreign operations (effective portion) and exchange differences

The change in 2022 reflects the positive effect of the appreciation of the Brazilian real, the US dollar and the Mexican peso and the negative effect of the depreciation of the pound sterling whereas the change in 2021 reflected the positive effect of the generalized appreciation of the main currencies, especially the Brazilian real, the pound sterling, the US dollar and the Mexican peso. The change in 2020 reflected the negative effect of the generalized depreciation of the main currencies, especially the Brazilian real, the pound sterling and the US dollar.

Of the change in the balance in these years, a profit of EUR 496 million, a profit of EUR 167 million and a loss of EUR 2,104 million in 2022, 2021 and 2020, respectively relate to the measurement of goodwill.

The detail, by country is as follows:

EUR million

	2022	2021	2020
Net balance at end of year	(27,170)	(28,170)	(30,035)
Of which:			
Brazilian real	(16,735)	(17,440)	(17,417)
Pound sterling	(4,219)	(3,415)	(4,205)
Mexican peso	(3,010)	(3,088)	(3,091)
Argentine peso	(1,755)	(2,109)	(2,288)
Chilean peso	(2,081)	(2,039)	(1,776)
US dollar	2,384	1,536	387
Polish zloty	(999)	(809)	(788)
Other	(755)	(806)	(857)



The breakdown of translation differences by currency is as follows:

EUR million

Currency	Balance at the beginning of the year	Balance at the end of the year	Movement	Of which:		
				From goodwill	From results ^A	From net assets
2022						
Brazilian real	(15,913)	(14,199)	1,714	376	(98)	1,436
Pound sterling	(3,504)	(4,446)	(942)	(51)	(67)	(824)
Mexican peso	(2,012)	(1,132)	880	56	18	806
Argentine peso	(2,109)	(1,754)	355	—	—	355
Chilean peso	(1,852)	(1,605)	247	31	5	211
US dollar	2,775	4,062	1,287	102	(24)	1,209
Polish zloty	(678)	(776)	(98)	(21)	—	(77)
Other	(594)	(570)	24	3	(7)	28
Total Group	(23,887)	(20,420)	3,467	496	(173)	3,144

A. Profit and loss items are translated into euros at the average exchange rate for the year as described in note 2 a) ii.

EUR million

Currency	Balance at the beginning of the year	Balance at the end of the year	Movement	Of which:		
				From goodwill	From results ^A	From net assets
2021						
Brazilian real	(16,032)	(15,913)	119	30	19	70
Pound sterling	(4,602)	(3,504)	1,098	41	38	1,019
Mexican peso	(2,393)	(2,012)	381	26	29	326
Argentine peso	(2,287)	(2,109)	178	—	—	178
Chilean peso	(1,450)	(1,852)	(402)	(55)	(43)	(304)
US dollar	1,253	2,775	1,522	125	102	1,295
Polish zloty	(638)	(678)	(40)	(9)	(1)	(30)
Other	(762)	(594)	168	9	11	148
Total Group	(26,911)	(23,887)	3,024	167	155	2,702

A. Profit and loss items are translated into euros at the average exchange rate for the year as described in note 2 a) ii.

EUR million

Currency	Balance at the beginning of the year	Balance at the end of the year	Movement	Of which:		
				From goodwill	From results ^A	From net assets
2020						
Brazilian real	(10,704)	(16,032)	(5,328)	(1,280)	(190)	(3,858)
Pound sterling	(3,329)	(4,602)	(1,273)	(455)	(4)	(814)
Mexican peso	(1,547)	(2,393)	(846)	(59)	(2)	(785)
Argentine peso	(2,094)	(2,287)	(193)	—	—	(193)
Chilean peso	(1,181)	(1,450)	(269)	(18)	15	(266)
US dollar	2,833	1,253	(1,580)	(143)	(58)	(1,379)
Polish zloty	(249)	(638)	(389)	(133)	(5)	(251)
Other	(430)	(762)	(332)	(16)	(10)	(306)
Total Group	(16,701)	(26,911)	(10,210)	(2,104)	(254)	(7,852)

A. Profit and loss items are translated into euros at the average exchange rate for the year as described in note 2 a) ii.



e) Other comprehensive income - Items that may be reclassified to profit or loss - Hedging derivatives - Cash flow hedges (Effective portion)

Other comprehensive income – Items that may be reclassified to profit or loss - Cash flow hedges includes the gains or losses attributable to hedging instruments that qualify as effective hedges. These amounts will remain under this heading until they are recognised in the consolidated income statement in the periods in which the hedged items affect it.

f) Other comprehensive income - Items that may be reclassified to profit or loss - Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income

Includes the net amount of unrealised changes in the fair value of assets classified as Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income (see note 7).

The breakdown, by type of instrument and geographical origin of the issuer, of 'Other comprehensive income – Items that may be reclassified to profit or loss - Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income' at 31 December 2022, 2021 and 2020 is as follows:

EUR million

	31 December 2022			
	Revaluation gains	Revaluation losses	Net revaluation gains/ (losses)	Fair value
Debt instruments				
Issued by Public-sector				
Spain	26	(1)	25	9,312
Rest of Europe	268	(199)	69	17,593
Latin America and rest of the world	196	(937)	(741)	40,873
Issued by Private-sector				
Spain	—	(24)	(24)	5,727
Rest of Europe ^A	11	(68)	(57)	5,203
Latin America and rest of the world	16	(290)	(274)	4,590
	517	(1,519)	(1,002)	83,298

EUR million

	31 December 2021			
	Revaluation gains	Revaluation losses	Net revaluation gains/ (losses)	Fair value
Debt instruments				
Issued by Public-sector				
Spain	271	—	271	12,917
Rest of Europe	544	(118)	426	20,397
Latin America and rest of the world	334	(438)	(104)	49,847
Issued by Private-sector				
Spain	2	(20)	(18)	4,759
Rest of Europe	47	(171)	(124)	11,708
Latin America and rest of the world	31	(46)	(15)	5,957
	1,229	(793)	436	105,585

EUR million

	31 December 2020			Fair value
	Revaluation gains	Revaluation losses	Net revaluation gains/ (losses)	
Debt instruments				
Issued by Public-sector				
Spain	693	—	693	19,314
Rest of Europe	915	(69)	846	23,116
Latin America and rest of the world	785	(73)	712	51,026
Issued by Private-sector				
Spain	2	(7)	(5)	6,454
Rest of Europe	100	(11)	89	12,191
Latin America and rest of the world	79	(3)	76	6,069
	2,574	(163)	2,411	118,170

A. The revaluation losses decrease includes the effect of the transfer made by Santander Bank Polska, S.A. during 2022, from debt securities under the heading 'Financial assets at fair value through other comprehensive income' to 'Financial assets at amortised cost' which has amounted for EUR 219 million in the Group's consolidated annual accounts.

Santander Bank Polska, S.A. has decided to carry out a change of strategy in its business model which has entailed the cessation of a significant element of its commercial activity corresponding to customer deposits. This decision has been publicly communicated. As a result, the assets, which corresponded to a business model whose objective was to collect the principal and interest flows and the sale of such assets, which were directly related in origin to such liabilities, have to be reclassified to a new business model whose objective is achieved through the collection of the principal and interest flows.

As established in IFRS 9, the transfer has been made prospectively; the financial asset has been reclassified to its fair value at the reclassification date and the cumulative gain or loss previously recognized in other comprehensive income has been eliminated from equity. Consequently, the financial asset is measured at the reclassification date as if it had always been measured at amortized cost and the cumulative gain or loss previously recognized in 'Other comprehensive income' (see consolidated statement of recognized income and expense) is adjusted against the fair value of the financial asset at the reclassification date.

Since the entry into force of IFRS 9, the Group estimates the expected losses on debt instruments measured at fair value with changes in other comprehensive income. These losses are recorded with a charge to the consolidated income statement for the period.

At the end of the years 2022, 2021 and 2020, the Group recorded under 'Impairment or reversal of impairment on financial assets not measured at fair value through profit or loss', net due to modification of the consolidated income statement, in the line of financial assets at fair value with changes in other comprehensive income a provision of EUR 7 million, EUR 19 million and EUR 19 million in 2022, 2021 and 2020, respectively.

g) Other comprehensive income - Items that may be reclassified to profit or loss and Items not reclassified to profit or loss - Other recognised income and expense of investments in subsidiaries, joint ventures and associates

The changes in other comprehensive income - Entities accounted for using the equity method were as follows:

EUR million	2022	2021	2020
Balance at beginning of year	(476)	(489)	(335)
Revaluation gains/(losses)	117	7	(170)
Net amounts transferred to profit or loss	(15)	6	16
Balance at end of year	(374)	(476)	(489)
<i>Of which:</i>			
Zurich Santander Insurance América, S.L.	(315)	(332)	(298)

30. Shareholders' equity

The changes in Shareholders' equity are presented in the consolidated statement of changes in total equity. Significant information on certain items of Shareholders' equity and the changes during the year are set forth below.

31. Issued capital

a) Changes

At 31 December 2019, Banco Santander's share capital consisted of EUR 8,309 million at 31 December 2019, represented by 16,618,114,582 shares of EUR 0.50 of nominal value each one and all of them from a unique class and series.

On 3 December 2020, a capital increase of EUR 361 million was made, with a charge to the share premium, through the issue of 722,526,720 shares (4.35% of the share capital).

Therefore, Banco Santander's share capital at 31 December 2020 consisted of EUR 8,670 million, represented by 17,340,641,302 shares of EUR 0.50 of nominal value each and all of them of a unique class and series.

Likewise, Banco Santander's share capital at 31 December 2021 consisted of EUR 8,670 million, represented by 17,340,641,302 shares of EUR 0.50 of nominal value each and all of them of a unique class and series.

On 1 April 2022, there was a capital reduction amounting to EUR 129,965,136.50 through the redemption of 259,930,273 shares, corresponding to the share buyback program carried out in 2021.

Likewise, on 28 June 2022, Banco Santander decreased its capital by an amount of EUR 143,154,722.50 through the redemption of 286,309,445 shares, corresponding to the share buyback program carried out during the first half of 2022.



Both operations have not entailed the return of contributions to the shareholders as Banco Santander was the owner of the redeemed shares.

Therefore, Banco Santander's share capital at 31 December 2022 consisted of EUR 8,397 million, represented by 16,794,401,584 shares of EUR 0.50 of nominal value each and all of them of a unique class and series. It includes 340,406,572 shares corresponding to the first 2022 share buyback program (see note 1.g).

Banco Santander's shares are listed on the Spanish Stock Market Interconnection System and on the New York, London, Mexico and Warsaw Stock Exchanges, and all of them have the same features and rights. Santander shares are listed on the London Stock Exchange under Crest Depository Interest (CDI), each CDI representing one Bank's share. They are also listed on the New York Stock Exchange under American Depository Receipts (ADR), each ADR representing one share. During 2019 and 2018 the number of markets where the Bank is listed was reduced; the Bank's shares was delisted from Buenos Aires, Milan, Lisboa and São Paulo's markets.

As of 31 December 2022, Norges Bank was registered with the CNMV with a direct significant shareholding of 3.006% of voting shares of Banco Santander (3% is the commonly lowest threshold provided under Spanish law to disclose a significant holding in a listed company), as it had announced on 5 May 2022. Even though at 31 December 2022, certain custodians appeared in our shareholder registry as holding more than 3% of our share capital, we understand that those shares were held in custody on behalf of other investors, none of whom exceeded that threshold individually. These custodians were State Street Bank (14.23%), Chase Nominees Limited (6.88%), The Bank of New York Mellon Corporation (4.82%), Citibank New York (3.90%), BNP (3.28%) and EC Nominees Limited (3.04%).

At 31 December 2022, neither Banco Santander's shareholder registry nor the CNMV's registry showed any shareholder residing in a non-cooperative jurisdiction with a shareholding equal to, or greater than, 1% of our share capital (which is the other threshold applicable under Spanish regulations).

b) Other considerations

Under Spanish law, only shareholders at the general meeting have the authority to increase share capital. However, they may delegate the authority to approve or execute capital increases to the board of directors. Banco Santander's Bylaws are fully aligned with Spanish law and do not establish any different conditions for share capital increases.

At 31 December 2022 the shares of the following companies were listed on official stock markets: Banco Santander Argentina S.A.; Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México; Banco Santander - Chile; Banco Santander (Brasil) S.A., Santander Bank Polska S.A. and Getnet Adquirência e Serviços para Meios de Pagamento S.A. - Instituição de Pagamento.

At 31 December 2022 the number of Banco Santander shares owned by third parties and managed by Group management companies (mainly portfolio, collective investment undertaking and pension fund managers) or jointly managed was 50 million shares, which represented 0.30% of Banco Santander's share capital (45 and 39 million shares, representing 0.26% and 0.22% of the share capital in 2021 and 2020, respectively). In addition, the number of Banco Santander shares owned by third parties and received as security was 232 million shares (equal to 1.38% of the Bank's share capital).

At 31 December 2022 the capital increases in progress at Group companies and the additional capital authorised by their shareholders at the respective general meetings were not material at Group level (see appendix V).

32. Share premium

Share premium includes the amount paid up by the Bank's shareholders in capital issues in excess of the par value.

The Corporate Enterprises Act expressly permits the use of the share premium account balance to increase capital at the entities at which it is recognised and does not establish any specific restrictions as to its use.

The change in the balance of share premium corresponds to the capital increases detailed in note 31.a).

The decrease in 2020 was due to the reduction of EUR 361 million to cover the capital increase on 3 December (see note 31). Also, in 2020 an amount of EUR 72 million, was transferred from the Share premium account to the Legal reserve (see note 33.b.i).

The decreased produced in 2021 for an amount of EUR 4,034 million was the consequence of applying the result obtained by Banco Santander during the financial year 2020, consisting of losses of EUR 3,557 million, as reflected in the consolidated statements of changes in total equity, and the charge of the dividend for the fiscal year 2020 for an amount of EUR 477 million (see note 31).

The decreased produced in 2022 by an amount of EUR 1,433 million has been the consequence of the difference between the purchase value of the redeemed shares (EUR 1,706 million) and the par value of said shares (EUR 273 million) (see note 4.a and consolidated statements of changes in total equity) as a consequence of the capital decreases described in note 31.a).

Likewise, in accordance with the applicable legislation, a reserve has been provided for amortized capital charged to the issue premium for an amount equal to the nominal value of said amortized shares (EUR 273 million).



33. Accumulated retained earnings

a) Definitions

The balance of 'Equity - Accumulated gains and Other reserves' includes the net amount of the accumulated results (profits or losses) recognised in previous years through the consolidated income statement which in the profit distribution were allocated in equity, the expenses of own equity instrument issues, the differences between the amount for which the treasury shares are sold and their acquisition price, as well as the net amount of the results accumulated in previous years, generated by the result of non-current assets held for sale, recognised through the consolidated income statement.

b) Breakdown

The detail of Accumulated retained earnings and Reserves of entities accounted for using the equity method is as follows:

EUR million	2022	2021	2020
Restricted reserves	2,798	2,543	2,460
Legal reserve ^A	1,734	1,734	1,734
Own shares	737	755	672
Revaluation reserve Royal Decree-Law 7/1996	43	43	43
Reserve for retired capital	284	11	11
Unrestricted reserves	7,701	4,243	10,422
Voluntary reserves ^B	7,917	6,123	6,128
Consolidation reserves attributable to the Bank	(216)	(1,880)	4,294
Reserves of subsidiaries	49,196	47,438	47,601
Reserves of entities accounted for using the equity method	1,553	1,572	1,504
	61,248	55,796	61,987

A. The board of directors has proposed to the general shareholders' meeting the reclassification of the excess that the amount of the balance of the legal reserve account shows over the figure that is equivalent to 20% of the resulting share capital after the executed capital reductions, to be included in the voluntary reserves account.

B. In accordance with the commercial regulations in force in Spain.

i. Legal reserve

Under the Consolidated Spanish Corporate Enterprises Act, 10% of net profit for each year must be transferred to the legal reserve. These transfers must be made until the balance of this reserve reaches 20% of the share capital. The legal reserve can be used to increase capital provided that the remaining reserve balance does not fall below 10% of the increased share capital amount.

Also, in 2020 an amount of EUR 72 million, was transferred from the Share premium account to the Legal reserve.

Consequently, once again, after the capital increases described in note 31 had been carried out, the balance of the legal reserve met the percentage of 20% of the share capital, and at 31 December 2022 the Legal reserve was at the stipulated level.

ii. Reserve for treasury shares

According to the Consolidated Text of the Corporate Enterprises Act, an unavailable reserve equivalent to the amount for which Banco Santander's shares owned by subsidiaries are recorded. This reservation shall be freely available when the circumstances which have obliged its constitution disappear. In addition, this reserve covers the outstanding balance of loans granted by the Group with Banco Santander's share guarantee and the amount equivalent to the credits granted by the Group companies to third parties for the acquisition of own shares.

iii. Revaluation reserve Royal Decree Law 7/1996, of 7 June

The balance of Revaluation reserve Royal Decree-Law 7/1996 can be used, free of tax, to increase share capital. From 1 January 2007, the balance of this account can be taken to unrestricted reserves, provided that the monetary surplus has been realised. The surplus will be deemed to have been realised in respect of the portion on which depreciation has been taken for accounting purposes or when the revalued assets have been transferred or derecognised.

If the balance of this reserve were used in a manner other than that provided for in Royal Decree law 7/1996, of 7 June, it would be subject to taxation.

iv. Reserves of subsidiaries

The detail, by company, of Reserves of subsidiaries, based on the companies' contribution to the Group (considering the effect of consolidation adjustments) is as follows:

EUR million	2022	2021	2020
Banco Santander (Brasil) S.A. (Consolidated Group)	14,663	14,325	14,067
Santander UK Group	8,358	8,558	8,447
Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México	5,437	4,753	4,230
Grupo Santander Holdings USA	4,324	4,913	4,793
Banco Santander - Chile	3,875	3,194	3,404
Santander Consumer Finance Group	3,858	3,502	4,186
Banco Santander Totta, S.A. (Consolidated Group)	3,297	2,940	2,960
Banco Santander Argentina S.A.	2,527	2,318	2,161
Santander Bank Polska S.A.	2,140	1,990	1,748
Santander Investment, S.A.	1,316	1,307	1,335
Santander Seguros y Reaseguros, Compañía Aseguradora, S.A.	1,050	869	695
Banco Santander International SA (former Banco Santander (Suisse) S.A)	310	277	247
Other companies and consolidation adjustments	(1,959)	(1,508)	(672)
	49,196	47,438	47,601
<i>Of which, restricted</i>	<i>3,614</i>	<i>3,392</i>	<i>3,155</i>



34. Other equity instruments and own shares

a) Equity instruments issued not capital and other equity instruments

Other equity instruments includes the equity component of compound financial instruments, the increase in equity due to personnel remuneration, and other items not recognised in other "Shareholders' equity" items.

On 8 September 2017, Banco Santander, S.A. issued contingent redeemable perpetual bonds (the fidelity bonds) amounting to EUR 981 million nominal value -EUR 686 million fair value. On 31 December 2022 amounted to EUR 688 million.

Additionally, at 31 December 2022 the Group had other equity instruments amounting to EUR 175 million.

b) Own shares

'Shareholders' equity - Own shares' includes the amount of own equity instruments held by all the Group entities.

Transactions involving own equity instruments, including their issuance and cancellation, are recognised directly in equity, and no profit or loss may be recognised on these transactions. The costs of any transaction involving own equity instruments are deducted directly from equity, net of any related tax effect.

At 31 December 2020, the number of treasury shares held by the Group was 28,439,022 (0.164% of the issued share capital).

During 2021, 524,312,848 shares of the Bank were acquired at an average price of EUR 3.14 per share, of which 259,930,273 shares (1.499% of the issued share capital) relate to the First Share Buyback Program at a weighted average price of EUR 3.235 per share; and 275,159,930 shares were transferred at an average price of EUR 3.10 per share - of which 55,750,000 shares correspond to two donations on an extraordinary basis made by Banco Santander to the Banco Santander Foundation.

At 31 December 2021, the number of treasury shares held by the Group was 277,591,940 (1.60% of the issued share capital).

During 2022, 713,359,786 shares of the Bank were acquired at an average price of EUR 2.87 per share, of which 286,309,445 relate to the Share Buyback Program carried out during the first half of 2022, and 220,942,806 relate to the new Share Buyback Program started on November 22. Likewise, 546,239,718 shares were amortised (note 31) and 201,022,983 shares have been transferred (of which 36,700,000 shares correspond to two donations made by Banco Santander to the Banco Santander Foundation) at an average price of EUR 2.85 per share (excluding in the calculation of the average price the transfers made by Banco Santander in the aforementioned donations).

At 31 December 2022, the Group holds 243,689,025 shares of the Bank's issued share capital (1.45%).

The effect on equity, net of tax, arising from the purchase and sale of Bank shares is of EUR 7 million profit in 2022 (EUR 23 million and EUR 1 million profit in 2021 and 2020, respectively).

35. Memorandum items

Memorandum items relates to balances representing rights, obligations and other legal situations that in the future may have an impact on net assets, as well as any other balances needed to reflect all transactions performed by the consolidated entities although they may not impinge on their net assets.

a) Guarantees and contingent commitments granted

Contingent liabilities includes all transactions under which an entity guarantees the obligations of a third party and which result from financial guarantees granted by the entity or from other types of contract. The detail is as follows:

	2022	2021	2020
Loans commitment granted	274,075	262,737	241,230
<i>Of which impaired</i>	653	615	274
Financial guarantees granted	12,856	10,758	12,377
<i>Of which impaired</i>	521	188	124
Financial guarantees	12,813	10,715	12,358
Credit derivatives sold	43	43	19
Other commitments granted	92,672	75,733	64,538
<i>Of which impaired</i>	608	781	548
Technical guarantees	50,508	40,158	33,526
Other	42,164	35,575	31,012

The breakdown as at 31 December 2022 of the exposures and the provision fund (see note 25) out of balance sheet by impairment stage is EUR 370,729 million and EUR 331 million (EUR 337,113 million and EUR 372 million in 2021 and EUR 310,435 million and EUR 377 million in 2020) in stage 1, EUR 7,092 million and EUR 191 million (EUR 10,531 million and EUR 200 million in 2021 and EUR 6,764 million and EUR 182 million in 2020) in stage 2 and EUR 1,782 million and EUR 212 million (EUR 1,584 million and EUR 161 million in 2021 and EUR 946 million and EUR 141 million in 2020) in stage 3, respectively.

Income from guarantee instruments is recognised under 'Fee and commission income' in the consolidated income statements and is calculated by applying the rate established in the related contract to the nominal amount of the guarantee.

i. Loan commitments granted

Loan commitments granted: firm commitments of grating of credit under predefined terms and conditions, except for those that comply with the definition of derivatives as these can be settled in cash or through the delivery of issuance of another financial instrument. They include stand-by credit lines and long-term deposits.

ii. Financial guarantees granted

Financial guarantees includes, inter alia, financial guarantee contracts such as financial bank guarantees, credit derivatives sold, and risks arising from derivatives arranged for the account of third parties.



iii. Other commitments granted

Other contingent liabilities include all commitments that could give rise to the recognition of financial assets not included in the above items, such as technical guarantees and guarantees for the import and export of goods and services.

b) Memorandum items

i. Off-balance-sheet funds under management

The detail of off-balance-sheet funds managed by the Group and by joint ventures is as follows:

EUR million	2022	2021	2020
Investment funds	142,189	145,987	131,965
Pension funds	14,021	16,078	15,577
Assets under management	25,670	24,862	20,712
	181,880	186,927	168,254

ii. Non-managed marketed funds

Additionally, at 31 December 2022 there are non-managed marketed funds totalling EUR 48,379 million (EUR 48,385 million and EUR 38,563 million at 31 December 2021 and 2020, respectively).

c) Third-party securities held in custody

At 31 December 2022 the Group held in custody debt securities and equity instruments totalling EUR 231,263 million (EUR 236,153 million and EUR 209,269 million at 31 December 2021 and 2020, respectively) entrusted to it by third parties.

36. Hedging derivatives

Grupo Santander, within its financial risk management strategy, and in order to reduce asymmetries in the accounting treatment of its operations, enters into hedging derivatives on interest, exchange rate, credit risk or variation of stock prices, depending on the nature of the risk covered.

Based on its objective, Grupo Santander classifies its hedges in the following categories:

- Cash flow hedges: cover the exposure to the variation of the cash flows associated with an asset, liability or a highly probable forecast transaction. This cover the variable-rate issues in foreign currencies, fixed-rate issues in non-local currency, variable-rate interbank financing and variable-rate assets (bonds, commercial loans, mortgages, etc.).
- Fair value hedges: cover the exposure to the variation in the fair value of assets or liabilities, attributable to an identified and hedged risk. This covers the interest risk of assets or liabilities (bonds, loans, bills, issues, deposits, etc.) with coupons or fixed interest rates, interests in entities, issues in foreign currencies and deposits or other fixed rate liabilities.
- Hedging of net investments abroad: cover the exchange rate risk of the investments in subsidiaries domiciled in a country with a different currency from the functional one of the Group.

Due to the replacement of the current rates by the alternative rates defined in the note 53 of this report, in the section 'IBOR Reform', the nominal amount of hedging instruments corresponding to the hedging relationships directly affected by the uncertainties related to the IBOR reforms is shown below. The percentage of the nominal amount of derivatives affected with a maturity date after the transition date of the reform represents 6.83% of the total hedging derivatives:

EUR million	USD LIBOR
Total hedging instruments affected	
Fair value hedges	17,001
Interest rate risk	13,907
Interest rate and foreign exchange risk	3,094
Cash flow hedges	12,740
Interest rate risk	9,454
Interest rate and foreign exchange risk	3,278
Exchange rate risk	8
	29,741
Post-transition date agreement	
Fair value hedges	14,879
Interest rate risk	11,785
Interest rate and foreign exchange risk	3,094
Cash flow hedges	11,573
Interest rate risk	8,295
Interest rate and foreign exchange risk	3,278
	26,452

As for the hedged items directly affected by the uncertainties related to the IBOR reforms, their nominal amount is shown below, which represents 2.17% of the total notional amount hedged:

EUR million	USD LIBOR
Total hedge items directly affected	
Fair value hedges	201
Interest rate risk	201
Cash flow hedges	9,357
Interest rate risk	9,349
Exchange rate risk	8
	9,558
Post-transition date agreement	
Fair value hedges	201
Interest rate risk	201
Cash flow hedges	8,202
Interest rate risk	8,202
	8,403



The following tables contains the detail of the hedging derivatives according to the type of hedging, the hedge risk and the main products used as of 31 December 2022, 2021 and 2020:

EUR million

	2022				Changes in fair value used for calculating hedge ineffectiveness	Balance sheet line items
	Carrying amount			Nominal value		
	Assets	Liabilities				
Fair value hedges	214,473	5,095	4,630		3,351	
Interest rate risk	190,513	4,405	4,239		2,554	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	87,477	2,950	3,203		(716)	
<i>Call money swap</i>	88,059	1,367	623		3,468	
Exchange rate risk	4,492	147	25		(9)	Hedging derivatives
<i>Fx forward</i>	3,745	147	25		(36)	
<i>Future interest rate</i>	747	—	—		27	
Interest rate and exchange rate risk	19,412	543	366		805	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	905	4	80		(79)	
<i>Future interest rate</i>	8,679	261	—		922	
<i>Currency swap</i>	9,522	266	286		(61)	
Credit risk	56	—	—		1	Hedging derivatives
<i>CDS</i>	56	—	—		1	
Cash flow hedges	149,756	2,730	3,767		(520)	
Interest rate risk	81,626	137	1,325		(2,461)	
<i>Of which:</i>						
<i>Future interest rate</i>	2,027	—	—		51	
<i>Interest rate swap</i>	55,886	59	1,494		(1,439)	
<i>Call money swap</i>	20,784	49	(184)		(1,151)	
Exchange rate risk	34,973	1,358	746		1,760	Hedging derivatives
<i>Of which:</i>						
<i>FX forward</i>	10,754	267	172		773	
<i>Currency swap</i>	20,005	951	455		982	
Interest rate and exchange rate risk	16,175	1,046	292		(80)	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	3,361	—	161		(333)	
<i>Currency swap</i>	12,814	1,046	131		249	
Inflation risk	16,924	180	1,403		261	Hedging derivatives
<i>Of which:</i>						
<i>Currency swap</i>	14,096	179	1,364		241	
Equity risk	58	9	1		—	Hedging derivatives
<i>Option</i>	58	9	1		—	
Hedges of net investments in foreign operations	22,614	244	831		(2,467)	
Exchange rate risk	22,614	244	831		(2,467)	Hedging derivatives
<i>FX forward</i>	22,614	244	831		(2,467)	
	386,843	8,069	9,228		364	

EUR million

	2021				Changes in fair value used for calculating hedge ineffectiveness	Balance sheet line items
	Nominal value	Carrying amount				
		Assets	Liabilities			
Fair value hedges	206,957	2,528	2,656		1,079	
Interest rate risk	176,176	2,227	1,778		591	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	66,904	1,668	920		(377)	
<i>Call money swap</i>	97,321	1	734		714	
Exchange rate risk	21,238	7	423		287	Hedging derivatives
<i>Of which:</i>						
<i>FX forward</i>	13,909	7	423		22	
<i>Future interest rate</i>	7,329	—	—		265	
Interest rate and exchange rate risk	9,326	294	452		200	Hedging derivatives
<i>Of which:</i>						
<i>Currency swap</i>	7,397	281	443		192	
<i>Interest rate swap</i>	1,650	12	9		(7)	
Credit risk	173	—	2		1	Hedging derivatives
Inflation risk	44	—	1		—	Hedging derivatives
Cash flow hedges	160,397	2,034	2,157		(1,703)	
Interest rate risk	99,648	156	420		(526)	Hedging derivatives
<i>Of which:</i>						
<i>Future interest rate</i>	7,652	—	—		(155)	
<i>Interest rate swap</i>	69,471	70	155		(212)	
<i>Call money swap</i>	16,846	20	182		(409)	
Exchange rate risk	27,343	396	657		(112)	Hedging derivatives
<i>Of which:</i>						
<i>FX forward</i>	8,381	280	42		26	
<i>Currency swap</i>	15,004	100	606		(133)	
Interest rate and exchange rate risk	21,609	1,425	400		(815)	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	3,604	95	2		(112)	
<i>Currency swap</i>	17,005	1,330	393		(702)	
Inflation risk	11,741	52	679		(247)	Hedging derivatives
<i>Of which:</i>						
<i>Currency swap</i>	10,503	51	678		(232)	
Equity risk	56	5	1		(3)	Hedging derivatives
Hedges of net investments in foreign operations	25,594	199	650		(1,159)	
Exchange rate risk	25,594	199	650		(1,159)	Hedging derivatives
<i>FX forward</i>	25,594	199	650		(1,159)	
	392,948	4,761	5,463		(1,783)	

EUR million

	2020				Changes in fair value used for calculating hedge ineffectiveness	Balance sheet line items
	Nominal value	Carrying amount				
		Assets	Liabilities			
Fair value hedges	199,260	4,199	4,671		(451)	
Interest rate risk	181,582	3,528	3,850		(456)	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	94,713	2,985	2,747		(27)	
<i>Call money swap</i>	69,740	184	886		(486)	
Exchange rate risk	9,037	293	47		11	Hedging derivatives
<i>Of which:</i>						
<i>Fx forward</i>	8,422	210	47		11	
Interest rate and exchange rate risk	8,434	378	771		(11)	Hedging derivatives
<i>Of which:</i>						
<i>Currency swap</i>	7,704	370	757		(4)	
Credit risk	207	0	3		5	Hedging derivatives
Cash flow hedges	139,156	3,436	1,739		235	
Interest rate risk	74,731	478	522		78	Hedging derivatives
<i>Of which:</i>						
<i>Futures</i>	7,492	—	322		(208)	
<i>Interest rate swap</i>	46,547	237	108		135	
<i>Call money swap</i>	12,123	204	7		145	
Exchange rate risk	23,483	555	802		(401)	Hedging derivatives
<i>Of which:</i>						
<i>Fx forward</i>	9,151	265	195		(155)	
<i>Currency swap</i>	13,425	283	600		(103)	
Interest rate and exchange rate risk	27,021	2,362	275		679	Hedging derivatives
<i>Of which:</i>						
<i>Interest rate swap</i>	5,218	262	—		129	
<i>Currency swap</i>	19,682	2,100	264		550	
Inflation risk	13,907	36	140		(129)	Hedging derivatives
<i>Of which:</i>						
<i>Currency swap</i>	10,206	26	136		(132)	
Equity risk	14	5	—		8	Hedging derivatives
Hedges of net investments in foreign operations	22,210	690	459		2,340	
Exchange rate risk	22,210	690	459		2,340	Hedging derivatives
<i>Fx forward</i>	22,210	690	459		2,340	
	360,626	8,325	6,869		2,124	



Considering the main entities or groups within the Group by the weight of their hedging, the main types of hedging that are being carried out in Santander UK Group Holdings plc group and Banco Santander, S.A.

Santander UK Group Holdings plc group enters into fair value and cash flow hedging derivatives depending on the exposure of the underlying. Only designated risks are hedged and therefore other risks, such as credit risk, are managed but not hedged.

Within fair value hedges, Santander UK Group Holdings plc group has portfolios of assets and liabilities at fixed rate that are exposed to changes in fair value due to changes in market interest rates. These positions are managed by contracting mainly interest rate swaps. Effectiveness is assessed by comparing the changes in the fair value of these portfolios generated by the hedged risk with the changes in the fair value of the derivatives contracted.

Santander UK Group Holdings plc group also has access to international markets to obtain financing by issuing fixed-rate debt in its functional currency and other currencies. As such, they are exposed to changes in interest rates and exchange rates, mainly in EUR and USD. This risk is mitigated with Cross Currency Swaps e Interest Rate Swaps in which they pay a fixed rate and receive a variable rate. Effectiveness is evaluated using linear regression techniques to compare changes in the fair value of the debt at interest and exchange rates with changes in the fair value of interest rate swaps o loss cross currency swaps.

Within the cash flow hedges, Santander UK Group Holdings plc group has portfolios of assets and liabilities at variable rates, normally at SONIA or BoE base rate. To mitigate this market rate variability risk, it contracts Interest Rate Swaps.

As Santander UK Group Holdings plc group obtains financing in the international markets, it assumes a significant exposure to currency risk mainly USD and EUR. In addition, it also holds debt securities for liquidity purposes which assume exposure mainly in JPY. To manage this exchange rate risk, Spot, Forward y Cross Currency Swap are contracted to match the cash flow profile and the maturity of the estimated interest and principal repayments of the hedged item.

Effectiveness is assessed by comparing changes in the fair value of the derivatives with changes in the fair value of the hedged item attributable to the hedged risk by applying a hypothetical derivative method using linear regression techniques.

In addition, within the hedges that cover equity risk, Santander UK Group Holdings plc group offers employees the opportunity to purchase shares of the Bank at a discount under the Sharesave Scheme, exposing the Bank to share price risk. As such, options are purchased allowing them to purchase shares at a pre-set price.

Banco Santander, S.A. covers the risks of its balance sheet in a variety of ways. On the one hand, documented as fair value hedges, it covers the interest rate, foreign currency and credit risk of fixed-income portfolios at a fixed rate (REPOs are included in this category). Resulting, in an exposure to changes in their fair value due to variations in market conditions based on the various risks hedged, which has an impact on Banco Santander's income statement.

To mitigate these risks, Banco Santander contracts derivatives, mainly Interest Rate Swaps, Cross Currency Swaps, Cap&floors, Forex Forward y Credit Default Swaps.

On the other hand, the interest and exchange rate risk of loans granted to corporate clients at a fixed rate is generally covered. These hedges, are carried out through Interest Rate Swaps, Cross Currency Swaps and exchange rate derivatives (Forex Swaps and Forex Forward).

In addition, Banco Santander, S.A. manages the interest and exchange risk of debt issues in its various categories (issuing covered bonds, perpetual, subordinated and senior bond) and in different currencies, denominated at fixed rates, and therefore subject to changes in their fair value. These issues are covered through Interest Rate Swaps, Cross Currency Swaps or a mix of both by applying differentiated fair value hedging strategies for interest rate risk and cash flow hedging strategies to hedge foreign exchange risk.

The methodology used by Banco Santander, S.A. to measure the effectiveness of fair value hedges is based on comparing the market values of the hedged items (based on the objective risk of the hedge) and of the hedging instruments in order to analyse whether the changes in the market value of the hedged items are offset by the market value of the hedging instruments, thereby mitigating the hedged risk and minimizing volatility in the income statement. Prospectively, the same analysis is performed, measuring the theoretical market values in the event of parallel variations in the market curves of a positive basis point.

There is a macro hedge of structured loans in which the interest rate risk of fixed-rate loans (mortgage, personal or with other guarantees) granted to legal entities in commercial or corporate banking and wealth clients in the medium-long term is hedged. This hedge is instrumented as a macro hedge of fair value, the main hedging instruments being Interest Rate Swap and Cap&floors. In case of total or partial cancellation or early repayment, the customer is obliged to pay/receive the cost/ income of the cancellation of the interest rate risk hedge managed by the Bank.

Regarding cash flow hedges, the objective is to hedge the cash flow exposure to changes in interest rates and exchange rates.

For retrospective purposes, the hypothetical derivative methodology is used to measure effectiveness. By means of this methodology, the hedged risk is modelled as a derivative instrument -not real-, created exclusively for the purpose of measuring the effectiveness of the hedge, and which must comply with the fact that its main characteristics coincide with the critical terms of the hedged item throughout the period for which the hedging relationship is designated. This hypothetical derivative does not incorporate characteristics that are exclusive to the hedging instrument. Additionally, it is worth mentioning that any risk component not associated with the hedged objective risk and effectively documented at the beginning of the hedge is excluded for the purpose of calculating the effectiveness. The market value of the hypothetical derivative that replicates the hedged item is compared with the market value of the hedging instrument, verifying that the hedged risk is effectively mitigated and that the impact on the income statement due to potential ineffectiveness is residual.



Prospectively, the variations in the market values of the hedging instrument and the hedged item (represented by the hypothetical derivative) are measured in the event of parallel shifts of a positive basis point in the affected market curves.

There is another macro-hedge, this time of cash flows, the purpose of which is to actively manage the risk-free interest rate risk (excluding credit risk) of a portion of the floating rate assets of Banco Santander, S.A., through the arrangement of interest rate derivatives whereby the bank exchanges floating rate interest flows for others at a fixed rate agreed at the time the transactions are arranged. The items affected by the Macro-hedging have been designated as those in which their cash flows are exposed to interest rate risk, specifically the floating rate mortgages of the Banco Santander, S.A. network referenced to Euribor 12 Months or Euribor Mortgage, with annual renewal of rates, classified as sound risk and which do not have a contractual floor (or, if not, this floor is not activated). The hedged position affecting the Macro Cash Flow Hedge at the present time is EUR 28,200 million.

Regarding net foreign investments hedges, basically, they are allocated in Banco Santander, S.A. and Santander Consumer Finance Group. Grupo Santander assumes as a priority risk management objective to minimize -to the limit determined by the Group's Financial Management- the impact on the calculation of the capital ratio of its permanent investments included within the Group's consolidation perimeter, and whose shares or equity interests are legally denominated in a currency other than that of the Group's parent company. For this purpose, financial instruments (generally derivatives) are contracted to hedge the impact on the capital ratio of changes in forward exchange rates. Grupo Santander mainly hedges the risk for the following currencies: BRL, CLP, MXN, CAD, COP, CNY, GBP, CHF, NOK, USD, and PLN. The instruments used to hedge the risk of these investments are Forex Swaps, Forex Forward and Spot Currency purchases/sales.

For this type of hedges, ineffectiveness scenarios are considered to be of low probability, given that the hedging instrument is designated considering the position determined and the spot rate at which the position is located.



The following table sets out the maturity profile of the hedging instruments used in Grupo Santander non-dynamic hedging strategies:

EUR million

	31 December 2022					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges	6,588	9,811	37,723	136,223	24,128	214,473
Interest rate risk	5,120	8,822	34,074	120,829	21,668	190,513
<i>Of which:</i>						
<i>Interest rate swap</i>	2,535	3,005	8,854	56,868	16,215	87,477
<i>Call money swap</i>	2,492	5,039	23,511	54,786	2,231	88,059
Exchange rate risk	556	741	2,448	—	747	4,492
<i>Fx forward</i>	556	741	2,448	—	—	3,745
<i>Future interest rate</i>	—	—	—	—	747	747
Interest rate and exchange rate risk	912	238	1,193	15,356	1,713	19,412
<i>Of which:</i>						
<i>Interest rate swap</i>	—	—	405	192	308	905
<i>Interest Future rate</i>	—	—	—	8,679	—	8,679
<i>Currency swap</i>	912	238	788	6,188	1,396	9,522
Credit risk	—	10	8	38	—	56
<i>CDS</i>	—	10	8	38	—	56
Cash flow hedges	10,182	15,202	41,514	75,653	7,205	149,756
Interest rate risk	5,546	7,424	30,568	36,501	1,587	81,626
<i>Of which:</i>						
<i>Future interest rate</i>	2,027	—	—	—	—	2,027
<i>Interest rate swap</i>	2,292	4,877	28,103	20,568	46	55,886
<i>Call money swap</i>	1,175	2,471	1,196	14,728	1,214	20,784
Exchange rate risk	3,777	4,295	4,452	19,940	2,509	34,973
<i>Of which:</i>						
<i>FX forward</i>	1,996	2,487	1,982	4,289	—	10,754
<i>Currency swap</i>	1,313	1,809	2,470	13,028	1,385	20,005
Interest rate and exchange rate risk	182	509	3,982	10,294	1,208	16,175
<i>Of which:</i>						
<i>Interest rate swap</i>	—	—	659	2,468	234	3,361
<i>Currency swap</i>	182	509	3,323	7,826	974	12,814
Inflation risk	677	2,974	2,505	8,870	1,898	16,924
<i>Of which:</i>						
<i>Currency swap</i>	483	951	1,895	8,869	1,898	14,096
Equity risk	—	—	7	48	3	58
<i>Option</i>	—	—	7	48	3	58
Hedges of net investments in foreign operations:	2,249	5,393	14,972	—	—	22,614
Exchange rate risk	2,249	5,393	14,972	—	—	22,614
<i>FX forward</i>	2,249	5,393	14,972	—	—	22,614
	19,019	30,406	94,209	211,876	31,333	386,843



EUR million

	31 December 2021					
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Fair value hedges	5,546	11,786	45,119	114,828	29,678	206,957
Interest rate risk	4,324	9,978	33,873	103,216	24,785	176,176
<i>Of which:</i>						
Interest rate swap	267	2,138	4,189	42,398	17,912	66,904
Call money swap	3,716	7,527	25,588	56,120	4,370	97,321
Exchange rate risk	598	1,712	11,013	5,550	2,365	21,238
<i>Of which:</i>						
Fx forward	598	1,712	11,013	586	—	13,909
Future interest rate	—	—	—	4,964	2,365	7,329
Interest rate and exchange rate risk	624	77	199	5,898	2,528	9,326
<i>Of which:</i>						
Currency swap	624	72	198	4,437	2,066	7,397
Interest rate swap	—	—	—	1,232	418	1,650
Inflation risk	—	—	—	44	—	44
Credit risk	—	19	34	120	—	173
Cash flow hedges	17,674	3,208	20,459	102,833	16,223	160,397
Interest rate risk	13,047	1,061	9,875	68,867	6,798	99,648
<i>Of which:</i>						
Future interest rate	7,097	—	244	311	—	7,652
Interest rate swap	2,336	310	7,759	58,930	136	69,471
Call money swap	1,202	751	858	7,920	6,115	16,846
Exchange rate risk	3,438	1,348	3,195	15,506	3,856	27,343
<i>Of which:</i>						
FX forward	2,406	1,309	1,947	2,719	—	8,381
Currency swap	1,032	39	1,248	9,885	2,800	15,004
Interest rate and exchange rate risk	860	336	5,924	11,165	3,324	21,609
<i>Of which:</i>						
Interest rate swap	—	—	—	2,505	1,099	3,604
Currency swap	860	336	5,924	7,660	2,225	17,005
Inflation risk	329	463	1,463	7,246	2,240	11,741
<i>Of which:</i>						
Currency swap	82	339	597	7,245	2,240	10,503
Equity risk	—	—	2	49	5	56
Hedges of net investments in foreign operations:	4,097	5,346	13,235	2,916	—	25,594
Exchange rate risk	4,097	5,346	13,235	2,916	—	25,594
FX forward	4,097	5,346	13,235	2,916	—	25,594
	27,317	20,340	78,813	220,577	45,901	392,948



EUR million

	31 December 2020					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges	7,132	14,221	44,897	95,343	37,667	199,260
Interest rate risk	5,616	9,667	39,921	90,913	35,465	181,582
<i>Of which:</i>						
<i>Interest rate swap</i>	3,943	4,804	24,807	33,333	27,826	94,713
<i>Call money swap</i>	1,021	4,662	11,241	49,624	3,192	69,740
Exchange rate risk	1,516	4,264	3,257	—	—	9,037
<i>Of which:</i>						
<i>Fx forward</i>	901	4,264	3,257	—	—	8,422
Interest rate and exchange rate risk	—	282	1,711	4,239	2,202	8,434
<i>Of which:</i>						
<i>Currency swap</i>	—	282	1,711	3,607	2,104	7,704
Credit risk	—	8	8	191	—	207
Cash flow hedges	10,489	11,629	44,127	61,186	11,725	139,156
Interest rate risk	6,019	6,707	33,070	26,959	1,976	74,731
<i>Of which:</i>						
<i>Futures</i>	5,213	—	—	2,279	—	7,492
<i>Interest rate swap</i>	806	4,626	29,511	11,219	385	46,547
<i>Call money swap</i>	—	1,502	1,550	7,890	1,181	12,123
Exchange rate risk	1,746	2,336	4,616	13,071	1,714	23,483
<i>Of which:</i>						
<i>Future interest rate</i>						
<i>Fx forward</i>	1,532	2,243	3,040	2,336	—	9,151
<i>Currency swap</i>	214	93	1,576	9,828	1,714	13,425
Interest rate and exchange rate risk	1,691	972	5,634	15,687	3,037	27,021
<i>Of which:</i>						
<i>Interest rate swap</i>	816	—	981	2,402	1,019	5,218
<i>Currency swap</i>	875	972	4,653	11,164	2,018	19,682
Inflation risk	1,033	1,614	807	5,456	4,997	13,907
<i>Of which:</i>						
<i>Fx forward</i>						
<i>Currency swap</i>	33	181	229	4,766	4,997	10,206
Equity risk	—	—	—	13	1	14
Hedges of net investments in foreign operations	2,435	5,086	12,831	1,858	—	22,210
Exchange rate risk	2,435	5,086	12,831	1,858	—	22,210
<i>Fx forward</i>	2,435	5,086	12,831	1,858	—	22,210
	20,056	30,936	101,855	158,387	49,392	360,626

Additionally, for Santander UK Group Holdings plc and Banco Santander, S.A., both the maturity profile, the average interest and exchange rate of hedging instruments by maturity buckets are shown:

Santander UK Group Holdings plc group

	31 December 2022					Total
	EUR million					
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges						
Interest rate risk						
Interest rate instruments						
Nominal	2,492	5,039	24,447	51,257	4,294	87,529
Average fixed interest rate (%) GBP	2.580	0.880	0.560	2.070	3.780	
Average fixed interest rate (%) EUR	1.770	1.600	0.770	0.280	3.090	
Average fixed interest rate (%) USD	1.350	3.470	3.510	2.000	4.920	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	—	—	74	821	16	911
Average GBP/EUR exchange rate	—	—	1.212	1.157	1.100	
Average GBP/USD exchange rate	—	—	—	1.186	—	
Average fixed interest rate (%) EUR	—	—	3.420	2.060	—	
Average fixed interest rate (%) USD	—	—	—	4.630	—	
Cash flow hedges						
Interest rate risk						
Interest rate instruments						
Nominal	1,175	2,471	2,188	14,728	1,213	21,775
Average fixed interest rate (%) GBP	1.770	2.290	1.980	2.350	1.840	
Foreign exchange risk						
Exchange and interest rate instruments						
Nominal	3,063	3,536	2,685	14,583	2,436	26,303
Average GBP/JPY exchange rate	—	157.450	160.039	—	—	
Average GBP/CHF exchange rate	—	1.131	—	—	—	
Average GBP/EUR exchange rate	—	—	1.123	1.181	1.165	
Average GBP/USD exchange rate	1.224	1.253	1.171	1.314	1.388	
Equity risk						
Equity instruments						
Nominal	—	—	7	48	2	57
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	—	—	1,983	7,621	968	10,572
Average GBP/EUR exchange rate	—	—	1.185	1.210	1.196	
Average GBP/USD exchange rate	—	—	1.604	1.503	1.537	
Average fixed interest rate (%) GBP	—	—	3.270	2.580	4.590	

31 December 2021

EUR million

	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Fair value hedges						
Interest rate risk						
Interest rate instruments						
Nominal	3,716	7,408	25,525	53,427	5,942	96,018
Average fixed interest rate (%) GBP	0.590	0.420	0.090	0.910	3.130	
Average fixed interest rate (%) EUR	0.510	1.740	1.080	0.810	2.610	
Average fixed interest rate (%) USD	1.910	0.960	1.440	2.760	4.050	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	—	—	127	683	165	975
Average GBP/EUR exchange rate	—	—	1.205	1.159	1.171	
Average fixed interest rate (%) EUR	—	—	3.290	2.030	2.620	
Cash flow hedges						
Interest rate risk						
Interest rate instruments						
Nominal	1,203	572	1,036	8,967	6,115	17,893
Average fixed interest rate (%) GBP	1.970	0.440	0.080	1.290	0.970	
Foreign exchange risk						
Exchange and interest rate instruments						
Nominal	3,218	1,114	2,448	10,897	3,584	21,261
Average GBP/JPY exchange rate	—	142.905	148.856	—	—	
Average GBP/EUR exchange rate	1.165	—	1.185	1.159	1.174	
Average GBP/USD exchange rate	1.344	1.342	1.332	1.339	1.388	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	739	—	1,000	8,112	2,860	12,711
Average GBP/EUR exchange rate	1.277	—	1.386	1.202	1.200	
Average GBP/USD exchange rate	—	—	—	1.609	1.381	
Average fixed interest rate (%) GBP	2.260	—	1.170	2.720	3.410	

31 December 2020

EUR million

	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Fair value hedges						
Interest rate risk						
<i>Interest rate instruments</i>						
Nominal	2,704	8,481	30,946	53,170	9,050	104,351
Average fixed interest rate (%) GBP	0.690	0.650	0.820	0.730	3.720	
Average fixed interest rate (%) EUR	1.180	0.230	3.020	0.980	2.340	
Average fixed interest rate (%) USD	1.870	1.720	2.890	2.490	4.160	
Interest rate and foreign exchange rate risk						
<i>Exchange and interest rate instruments</i>						
Nominal	—	—	147	776	260	1,183
Average GBP/EUR exchange rate	—	—	1.141	1.170	1.167	
Average fixed interest rate (%) EUR	—	—	4.640	1.780	3.560	
Cash flow hedges						
Interest rate risk						
<i>Interest rate instruments</i>						
Nominal	—	999	2,815	8,869	1,180	13,863
Average fixed interest rate (%) GBP	—	0.460	0.570	1.450	1.330	
Foreign exchange risk						
<i>Exchange and interest rate instruments</i>						
Nominal	1,602	2,244	4,317	8,328	1,246	17,737
Average GBP/JPY exchange rate	—	137.977	135.607	132.271	—	
Average GBP/EUR exchange rate	—	—	—	1.163	1.179	
Average GBP/USD exchange rate	1.293	1.316	1.323	1.304	—	
Interest rate and foreign exchange rate risk						
<i>Exchange and interest rate instruments</i>						
Nominal	1,630	—	3,858	11,816	2,792	20,096
Average GBP/EUR exchange rate	—	—	1.354	1.253	1.197	
Average GBP/USD exchange rate	1.465	—	—	1.609	1.381	
Average fixed interest rate (%) GBP	2.010	—	3.180	2.480	3.390	

Banco Santander, S.A.

	31 December 2022					Total
	EUR million					
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges						
Interest rate risk						
Interest rate instruments						
Nominal	1,032	1,248	2,348	24,115	8,809	37,552
Average fixed interest rate (%) GBP	—	2.04	2.04	1.86	2.04	
Average fixed interest rate (%) EUR	0.569	(0.406)	0.278	2.396	1.674	
Average fixed interest rate (%) CHF	—	—	—	0.530	—	
Average fixed interest rate (%) JPY	—	—	—	0.465	—	
Average fixed interest rate (%) CZK	—	—	—	1.650	—	
Average fixed interest rate (%) NOK	—	—	—	—	2.327	
Average fixed interest rate (%) AUD	—	1.073	—	—	—	
Average fixed interest rate (%) USD	2.892	3.123	3.835	3.181	3.374	
Average fixed interest rate (%) RON	—	—	—	3.610	—	
Foreign exchange risk						
Exchange and interest rate instruments						
Nominal	250	899	2,064	—	—	3,213
Average GBP/EUR exchange rate	—	—	0.877	—	—	
Average USD/EUR exchange rate	1.040	—	0.992	—	—	
Average CNY/EUR exchange rate	7.172	7.252	7.159	—	—	
Average AUD/EUR exchange rate	—	1.587	—	—	—	
Average MXN/EUR exchange rate	—	21.529	—	—	—	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	912	38	1,101	3,767	988	6,806
Average fixed interest rate (%) AUD/EUR	4.000	—	—	4.800	3.824	
Average fixed interest rate (%) CZK/EUR	—	—	0.860	—	—	
Average fixed interest rate (%) RON/EUR	—	4.520	—	5.130	—	
Average fixed interest rate (%) HKD/EUR	—	—	—	2.580	—	
Average fixed interest rate (%) JPY/EUR	0.568	—	—	1.442	1.360	
Average fixed interest rate (%) NOK/EUR	—	—	—	3.010	3.762	
Average fixed interest rate (%) CHF/EUR	—	—	—	1.243	—	
Average fixed interest rate (%) EUR/GBP	—	5.170	—	—	—	
Average fixed interest rate (%) NZD/EUR	—	—	—	—	—	
Average fixed interest rate (%) USD/MXN	—	—	12.982	—	—	
Average fixed interest rate (%) USD/COP	—	—	15.452	13.614	7.150	
Average fixed interest rate (%) EUR/USD	—	—	—	(0.140)	—	
Average fixed interest rate (%) USD/CLP	—	—	—	3.450	—	
Average AUD/EUR exchange rate	1.499	—	—	1.499	1.545	
Average CZK/EUR exchange rate	—	—	25.407	25.677	—	
Average EUR/GBP exchange rate	—	1.162	—	—	—	
Average EUR/USD exchange rate	—	—	—	0.945	—	
Average HKD/EUR exchange rate	—	—	—	8.851	—	
Average JPY/EUR exchange rate	133.840	—	—	130.227	118.180	
Average NOK/EUR exchange rate	—	—	—	9.492	9.685	
Average RON/EUR exchange rate	—	4.746	—	4.842	4.927	
Average CHF/EUR exchange rate	—	—	1.092	1.105	—	
Average USD/CLP exchange rate	—	—	—	0.001	—	



31 December 2022

EUR million

	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Average NZD/EUR exchange rate	—	—	—	—	1.666	
Average USD/MXN exchange rate	—	—	0.051	—	—	
Credit risk						
<i>Credit risk instruments</i>						
Nominal	—	9	8	38	—	55
Cash flow hedges						
Interest rate and foreign exchange rate risk						
<i>Interest rate and foreign exchange rate instruments</i>						
Nominal	—	3	597	1,451	184	2,235
Average fixed interest rate (%) EUR/PEN	—	—	6.496	—	—	
Average fixed rate (%) USD/COP	—	—	15.398	—	—	
Average fixed interest rate (%) EUR/AUD	—	3.207	—	—	—	
Average fixed interest rate (%) AUD/EUR	—	—	—	0.305	—	
Average EUR/GBP exchange rate	—	—	1.084	1.173	—	
Average AUD/EUR exchange rate	—	—	—	1.604	1.562	
Average RON/EUR exchange rate	—	—	—	4.885	—	
Average JPY/EUR exchange rate	—	—	—	120.568	—	
Average CHF/EUR exchange rate	—	—	—	1.102	—	
Average NOK/EUR exchange rate	—	—	—	—	10.242	
Average CZK/EUR exchange rate	—	—	—	26.131	—	
Average EUR/PEN exchange rate	—	—	0.252	—	—	
Average EUR/AUD exchange rate	—	0.654	—	—	—	
Interest rate risk						
<i>Bond Forward instruments</i>						
Nominal	2,250	4,500	11,453	10,000	—	28,203
Average fixed interest rate (%) EUR	(0.431)	(0.404)	(0.348)	(0.010)	—	
Inflation risk						
<i>Bond Forward instruments</i>						
Nominal	—	—	700	—	—	700
Average fixed interest rate (%) EUR	—	—	0.322	—	—	
Exchange rate risk						
<i>Exchange instruments</i>						
Nominal	11	22	99	—	—	132
Average exchange rate GBP/EUR	1.156	1.153	1.142	—	—	
Hedges of net investments in foreign operations						
Exchange rate risk						
<i>Exchange and interest rate instruments</i>						
Nominal	2,020	4,711	13,839	—	—	20,570
Average BRL/EUR exchange rate	6.554	5.797	5.866	—	—	
Average CLP/EUR exchange rate	953.549	955.790	944.113	—	—	
Average COP/EUR exchange rate	—	4,935.121	—	—	—	
Average GBP/EUR exchange rate	0.869	0.873	0.876	—	—	
Average MXN/EUR exchange rate	25.130	23.968	22.156	—	—	
Average USD/EUR exchange rate	—	—	1.158	—	—	
Average PLN/EUR exchange rate	4.832	4.837	4.991	—	—	

31 December 2021

EUR million

	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Fair value hedges						
Interest rate risk						
Interest rate instruments						
Nominal	14	1,822	3,038	21,507	10,031	36,412
Average fixed interest rate (%) GBP	—	—	—	2.139	1.750	
Average fixed interest rate (%) EUR	3.859	0.989	(0.031)	1.212	1.532	
Average fixed interest rate (%) CHF	—	—	—	0.828	0.403	
Average fixed interest rate (%) JPY	—	—	—	0.465	—	
Average fixed interest rate (%) USD	4.746	1.449	3.459	2.737	3.374	
Average fixed interest rate (%) RON	—	—	—	4.211	3.200	
Foreign exchange risk						
Exchange and interest rate instruments						
Nominal	503	1,634	10,350	586	—	13,073
Average GBP/EUR exchange rate	—	0.882	0.865	0.876	—	
Average USD/EUR exchange rate	1.187	1.172	1.180	—	—	
Average CNY/EUR exchange rate	7.859	7.717	7.412	—	—	
Average PEN/USD exchange rate	—	4.003	—	—	—	
Average JPY/EUR exchange rate	132.688	130.741	—	—	—	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	116	1,109	53	3,255	1,279	5,812
Average fixed interest rate (%) AUD/EUR	—	—	—	4.000	4.661	
Average fixed interest rate (%) CZK/EUR	—	—	—	0.860	—	
Average fixed interest rate (%) RON/EUR	—	—	—	4.849	—	
Average fixed interest rate (%) HKD/EUR	—	—	—	2.580	—	
Average fixed interest rate (%) JPY/EUR	—	—	—	0.730	1.144	
Average fixed interest rate (%) NOK/EUR	—	—	—	—	3.605	
Average fixed interest rate (%) CHF/EUR	—	—	—	0.760	1.243	
Average fixed interest rate (%) USD/COP	—	5.140	9.470	6.789	7.153	
Average fixed interest rate (%) COP/USD	—	—	—	(0.140)	—	
Average fixed interest rate (%) USD/CLP	—	—	—	3.450	—	
Average AUD/EUR exchange rate	—	—	—	1.499	1.529	
Average COP/USD exchange rate	—	—	—	—	—	
Average CZK/EUR exchange rate	—	—	—	25.506	—	
Average EUR/GBP exchange rate	—	1.176	—	—	—	
Average EUR/COP exchange rate	—	—	—	—	—	
Average EUR/USD exchange rate	—	—	—	0.891	—	
Average HKD/EUR exchange rate	—	—	—	8.782	—	
Average JPY/EUR exchange rate	—	—	—	132.966	126.605	
Average MXN/EUR exchange rate	—	—	14.696	—	—	
Average NOK/EUR exchange rate	—	—	—	—	9.606	
Average RON/EUR exchange rate	—	—	—	4.815	4.927	
Average CHF/EUR exchange rate	—	—	—	1.092	1.105	
Average USD/COP exchange rate	—	—	—	—	—	
Average USD/CLP exchange rate	—	—	—	0.001	—	
Average NZD/EUR exchange rate	—	—	—	—	1.666	
Average USD/MXN exchange rate	—	—	—	0.050	—	
Credit risk						

31 December 2021						
EUR million						
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
Credit risk instruments						
Nominal	—	19	34	120	0	173
Cash flow hedges						
<i>Interest rate and foreign exchange rate risk</i>						
<i>Interest rate and foreign exchange rate instruments</i>						
Nominal	—	9	1,169	1,848	408	3,434
Average fixed interest rate (%) EUR/PEN	—	—	3.441	—	—	—
Average fixed interest rate (%) EUR/AUD	—	1.632	—	—	—	—
Average fixed interest rate (%) AUD/EUR	—	—	—	0.305	—	—
Average EUR/GBP exchange rate	—	—	1.102	1.113	—	—
Average EUR/USD exchange rate	—	—	—	0.882	—	—
Average AUD/EUR exchange rate	—	—	—	1.604	1.562	—
Average RON/EUR exchange rate	—	—	—	4.885	—	—
Average JPY/EUR exchange rate	—	—	—	120.568	—	—
Average CHF/EUR exchange rate	—	—	—	—	1.102	—
Average NOK/EUR exchange rate	—	—	—	—	10.242	—
Average CZK/EUR exchange rate	—	—	—	26.131	—	—
Average EUR/PEN exchange rate	—	—	0.208	—	—	—
Average EUR/AUD exchange rate	—	0.624	—	—	—	—
<i>Interest rate risk</i>						
<i>Bond Forward instruments</i>						
Nominal	4,279	—	5,191	38,314	—	47,784
Average fixed interest rate (%) EUR	—	—	(0.465)	(0.258)	—	—
Average fixed interest rate (%) USD	—	—	1.765	—	—	—
Average fixed interest rate (%) AUD	—	—	—	1.650	—	—
Hedges of net investments in foreign operations						
<i>Exchange rate risk</i>						
<i>Exchange and interest rate instruments</i>						
Nominal	3,778	4,848	11,815	2,916	—	23,357
Average BRL/EUR exchange rate	6.663	6.7576	6.8411	—	—	—
Average CLP/EUR exchange rate	943.354	929.690	949.615	—	—	—
Average COP/EUR exchange rate	—	—	4,538.997	—	—	—
Average GBP/EUR exchange rate	0.854	0.857	0.855	0.875	—	—
Average MXN/EUR exchange rate	25.541	25.335	25.192	—	—	—
Average PLN/EUR exchange rate	4.592	4.582	4.634	—	—	—
Average USD/EUR exchange rate	—	—	1.167	1.233	—	—

	31 December 2020					Total
	EUR million					
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges						
Interest rate risk						
Interest rate instruments						
Nominal	2,073	409	2,165	17,430	14,294	36,371
Average fixed interest rate (%) GBP	—	—	—	1.375	4.072	
Average fixed interest rate (%) EUR	0.647	0.551	0.388	0.820	1.927	
Average fixed interest rate (%) CHF	—	—	—	0.800	0.403	
Average fixed interest rate (%) JPY	—	—	—	0.465	—	
Average fixed interest rate (%) USD	0.698	0.570	2.031	3.004	3.562	
Average fixed interest rate (%) RON	—	—	—	3.610	—	
Foreign exchange risk						
Exchange and interest rate instruments						
Nominal	833	4,149	3,008	—	—	7,990
Average GBP/EUR exchange rate	—	0.901	0.916	—	—	
Average USD/EUR exchange rate	1.165	1.171	1.178	—	—	
Average COP/USD exchange rate	3,628.140	3,603.595	—	—	—	
Average CNY/EUR exchange rate	8.108	8.102	7.997	—	—	
Average SAR/EUR exchange rate	4.484	4.514	—	—	—	
Interest rate and foreign exchange rate risk						
Exchange and interest rate instruments						
Nominal	—	282	818	2,621	1,083	4,804
Average fixed interest rate (%) AUD/EUR	—	—	—	4.000	4.66	
Average fixed interest rate (%) CZK/EUR	—	—	—	0.860	—	
Average fixed interest rate (%) EUR/COP	—	—	4.380	—	—	
Average fixed interest rate (%) RON/EUR	—	—	—	4.849	—	
Average fixed interest rate (%) HKD/EUR	—	—	—	2.580	—	
Average fixed interest rate (%) JPY/EUR	—	—	2.195	0.568	1.281	
Average fixed interest rate (%) NOK/EUR	—	—	—	—	3.605	
Average fixed interest rate (%) CHF/EUR	—	—	—	—	1.243	
Average fixed interest rate (%) USD/COP	—	—	8.030	6.659	7.231	
Average fixed interest rate (%) COP/USD	—	—	6.000	—	—	
Average fixed interest rate (%) USD/CLP	—	—	0.930	—	—	
Average AUD/EUR exchange rate	—	—	—	1.499	1.508	
Average COP/USD exchange rate	—	—	3,437.200	—	—	
Average CZK/EUR exchange rate	—	—	—	25.539	—	
Average EUR/GBP exchange rate	—	1.113	—	—	—	
Average EUR/USD exchange rate	—	—	—	0.891	—	
Average HKD/EUR exchange rate	—	—	—	8.782	—	
Average JPY/EUR exchange rate	—	—	113.370	133.840	125.883	



31 December 2020

EUR million

	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	Total
<i>Average MXN/EUR exchange rate</i>	—	—	—	14.696	—	
<i>Average NOK/EUR exchange rate</i>	—	—	—	—	9.606	
<i>Average RON/EUR exchange rate</i>	—	—	—	4.727	—	
<i>Average CHF/EUR exchange rate</i>	—	—	—	1.092	1.105	
<i>Average USD/CLP exchange rate</i>	—	—	0.001	—	—	
<i>Average USD/MXN exchange rate</i>	—	—	0.050	—	—	
Credit risk						
<i>Credit risk instruments</i>						
Nominal	—	8	8	191	—	207
Cash flow hedges						
<i>Interest rate and foreign exchange rate risk</i>						
<i>Interest rate and foreign exchange rate instruments</i>						
Nominal	—	—	1,247	3,242	208	4,697
<i>Average EUR/GBP exchange rate</i>	—	—	1.080	1.102	—	
<i>Average EUR/USD exchange rate</i>	—	—	—	0.882	—	
<i>Average AUD/EUR exchange rate</i>	—	—	—	1.625	—	
<i>Average RON/EUR exchange rate</i>	—	—	—	4.810	—	
<i>Average JPY/EUR exchange rate</i>	—	—	—	120.568	—	
<i>Average CHF/EUR exchange rate</i>	—	—	—	—	1.102	
<i>Interest rate risk</i>						
<i>Bond Forward instruments</i>						
Nominal	3,164	5,000	23,000	4,279	—	35,443
<i>Average fixed interest rate (%) EUR</i>	—	(0.258)	(0.250)	(0.236)	—	
Hedges of net investments in foreign operations						
<i>Exchange rate risk</i>						
<i>Exchange and interest rate instruments</i>						
Nominal	2,229	4,554	11,570	1,858	—	20,211
<i>Average BRL/EUR exchange rate</i>	5.270	5.308	6.332	—	—	
<i>Average CLP/EUR exchange rate</i>	869.633	861.546	864.339	932.215	—	
<i>Average COP/EUR exchange rate</i>	—	—	4.471	—	—	
<i>Average GBP/EUR exchange rate</i>	0.909	0.916	0.907	—	—	
<i>Average MXN/EUR exchange rate</i>	23.121	25.456	26.788	—	—	
<i>Average PLN/EUR exchange rate</i>	4.427	4.420	4.516	—	—	



Other geographies

Consumer Group entities mainly have loans portfolios at fixed interest rates and are therefore, exposed to changes in fair value due to movements in market interest rates. The entities manage this risk by contracting interest rate swaps in which they pay a fixed rate and receive a variable rate. Interest rate risk is the only one hedged and, therefore, other risks, such as credit risk, are managed but not hedged by the entities. The interest rate risk component is determined as the change in fair value of fixed rate loans arising solely from changes in a reference rate. This strategy is designated as a fair value hedge and its effectiveness is assessed by comparing changes in the fair value of loans attributable to changes in reference interest rates with changes in the fair value of interest rate swaps.

In addition, in order to access international markets with the aim of obtaining sources of financing, some Consumer Group's entities issue fixed rate debt in their own currency and in other currencies that differ from their functional currency. Therefore, they are exposed to changes in both interest rates and exchange rates, which they mitigate with derivatives (Interest Rate Swaps, Fx Forward and Cross Currency Swaps) in which they receive a fixed interest rate and pay a variable interest rate, implemented with a fair value hedge.

The cash flow hedges of the Grupo Santander's entities hedge the foreign currency risk of loans and financing.

Finally, it has hedges of net investments abroad to hedge the foreign exchange risk of the shareholding in NOK and CNY currencies.

Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México has mainly long-term loan portfolios at fixed interest rates, portfolios of short-term deposits in local currency, portfolios of Mexican Government bonds and corporate bonds in currencies other than the local currency and are therefore exposed to changes in fair value due to movements in market interest rates, as well as these latter portfolios also to variations in exchange rates. The entity manages this risk by contracting derivatives (Interest Rate Swaps or Cross Currency Swaps) in which they pay a fixed rate and receive a variable rate. Only the interest rate and exchange rate risk is hedged, if applicable, and therefore other risks, such as credit risk, are managed but not hedged by the entity.

The interest rate risk component is determined as the change in the fair value of fixed rate loans arising solely from changes in a reference rate. This strategy is designated as a fair value hedge and its effectiveness is assessed by comparing changes in the fair value of loans attributable to changes in benchmark interest rates with changes in the fair value of interest rate swaps.

Regarding cash flow hedges, Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México has a portfolio of unsecured bonds issued at a variable rate in its local currency, which it manages with an Interest Rate Swap in which it receives a variable rate and pays a fixed rate. On the other hand, it also has different items in currencies other than the local currency: unsecured fixed rate bonds, commercial bank loans at variable rates, fixed rate issues, Mexican and Brazilian government bonds at fixed rates. In all these portfolios, the Bank is exposed to exchange rate variations, which it mitigates by contracting Cross Currency Swaps or Fx Forward.

Banco Santander (Brasil) S.A. has, on the one hand, fair value hedges to protect both assets and liabilities from fluctuations in market rates. The market risk coverage management methodology adopted by the Bank segregates transactions by risk factor (BRL/USD exchange rate risk, pre-set interest rate risk in BRL, USD interest rate risk, inflation....). The entity manages this risk by contracting derivatives (Interest Rate Swaps or Interest Rate Futures) to hedge assets or liabilities at a fixed rate.

Brasil has corporate loans in different currencies than the local one and is therefore exposed to changes in fair value due to exchange rates. This risk is mitigated by contracting Cross Currency Swaps or futures.

It also holds a portfolio of long-term corporate bonds with inflation-indexed rates, thus exposed to changes in market value due to changes in market inflation rates. In order to achieve its mitigation, they contract futures in which they pay the indexed inflation and receive variable interest rates.

In the hedge of cash flows, Banco Santander (Brasil) S.A. has portfolios of loans and government bonds in different currency than the entity's functional currency and, therefore, it is subject to the risk of changes in currency rates. This exposure will be mitigated by hiring Cross Currency Swaps and futures.

Finally, they have a portfolio of variable rate government bonds, so they are exposed to changes in the value due to changes in interest rates. In order to mitigate these changes, a future is hired in which a variable rate is paid and a fixed rate is received.

Additionally, Banco Santander Chile uses fair value hedges with cross currency swaps, interest rate swaps and call money swaps to hedge its exposure to changes in the fair value of the hedged item attributable to interest rates. The aforementioned hedging instruments modify the effective cost of long-term issues, from a fixed interest rate to a variable interest rate.

In addition, it also makes cash flow hedges in which it uses cross currency swaps to cover the risk of variability of flows attributable to changes in the interest rate of bonds and interbank loans issued at variable rates, as well as to cover the variation of foreign currency, mainly in United States dollars. To hedge the inflation risk present in certain items, it uses both forwards and cross currency swaps.

At Santander Bank National Association, Interest Rate Swaps are used to leave commercial loans at a fixed rate at a variable rate in USD indexed to 1-month Libor or SOFR, under cash flow hedges.



Regarding the hedged items, the products that are being hedged are mainly: borrowed deposits, financial deposits, loans, government bonds as assets and financial bonds as liabilities. The following table shows the detail of the type of hedging, the risk that is hedged and which products are being hedged at 31 December 2022, 2021 and 2020:

EUR million								
31 December 2022								
	Carrying amount of hedged items		Accumulated amount of fair value adjustments on the hedged item		Balance sheet line item	Change in fair value of hedged item for ineffectiveness assessment	Cash flow reserves or conversion reserves	
	Assets	Liabilities	Assets	Liabilities			Continuing hedges	Discontinued hedges
					Loans and advances / Deposits and Debt securities / Debt securities issued			
Fair value hedges	126,665	59,837	(5,487)	(3,581)		(3,232)	—	—
Interest rate risk	121,605	53,239	(5,069)	(3,428)		(2,397)	—	—
Exchange rate risk	2,792	1,040	(284)	—		(7)	—	—
Interest and Exchange rate risk	2,126	5,558	(134)	(153)		(826)	—	—
Inflation risk	—	—	—	—		—	—	—
Credit risk	142	—	—	—		(2)	—	—
Cash flow hedges						475	(3,353)	(225)
Interest rate risk						2,458	(2,973)	(75)
Exchange rate risk						(1,764)	(88)	(2)
Interest and Exchange rate risk						39	(309)	1
Inflation risk						(258)	14	(149)
Equity risk						—	3	—
Net foreign investments hedges	22,614	—				2,467	(6,750)	—
Exchange rate risk	22,614	—				2,467	(6,750)	—
	149,279	59,837	(5,487)	(3,581)		(290)	(10,103)	(225)

EUR million								
31 December 2021								
	Carrying amount of hedged items		Accumulated amount of fair value adjustments on the hedged item		Balance sheet line item	Change in fair value of hedged item for ineffectiveness assessment	Cash flow reserves or conversion reserves	
	Assets	Liabilities	Assets	Liabilities			Continuing hedges	Discontinued hedges
					Loans and advances / Deposits and Debt securities / Debt securities issued			
Fair value hedges	193,949	51,395	462	453		(1,061)	—	—
Interest rate risk	125,479	47,347	727	366		(543)	—	—
Exchange rate risk	64,531	—	(282)	—		(343)	—	—
Interest and Exchange rate risk	3,714	4,048	15	87		(173)	—	—
Inflation risk	46	—	—	—		—	—	—
Credit risk	179	—	2	—		(2)	—	—
Cash flow hedges						1,639	(414)	(148)
Interest rate risk						494	(540)	(52)
Exchange rate risk						115	81	8
Interest and Exchange rate risk						778	330	—
Inflation risk						249	(289)	(104)
Equity risk						3	4	—
Net foreign investments hedges	25,594	—				1,159	(4,283)	—
Exchange rate risk	25,594	—				1,159	(4,283)	—
	219,543	51,395	462	453		1,737	(4,697)	(148)



EUR million

31 December 2020

	Carrying amount of hedged items		Accumulated amount of fair value adjustments on the hedged item		Balance sheet line item	Change in fair value of hedged item for ineffectiveness assessment	Cash flow reserves or conversion reserves	
	Assets	Liabilities	Assets	Liabilities			Continuing hedges	Discontinued hedges
					Loans and advances / Deposits and Debt securities / Debt securities issued			
Fair value hedges	141,608	52,055	3,369	2,914		553	—	—
Interest rate risk	128,279	48,137	3,183	2,727		469	—	—
Exchange rate risk	8,718	—	40	—		(13)	—	—
Interest and Exchange rate risk	4,391	3,918	143	187		100	—	—
Inflation risk	—	—	—	—		(4)	—	—
Credit risk	220	—	3	—		(3)	—	—
Cash flow hedges						(286)	409	(33)
Interest rate risk						(69)	(98)	(1)
Exchange rate risk						412	(68)	—
Interest and Exchange rate risk						(741)	680	—
Inflation risk						121	(111)	(32)
Equity risk						(9)	6	—
Net foreign investments hedges	22,210	—				(2,340)	(3,124)	—
Exchange rate risk	22,210	—				(2,340)	(3,124)	—
	163,818	52,055	3,369	2,914		(2,073)	(2,715)	(33)



The cumulative amount of adjustments of the fair value hedging instruments that remain in the balance for hedges items that are no longer adjusted by profit and loss of coverage as at 31 December 2022 is EUR 756 million losses (EUR 460 million and EUR 729 million profit in 2021 and 2020, respectively).

The net impact of the hedges are shown in the following table:

EUR million					
31 December 2022					
	Earnings/ (losses) recognised in another cumulative overall result	Ineffective recognised in the income statement	Line of the income statement that includes the ineffectiveness of cash flows	Reclassified amount of reserves to the income statement due to:	
			Gains or losses financial assets/liabilities	Cover transaction affecting the income statement	Line of the income statement that includes reclassified items
Fair value hedges		119			
Interest rate risk		155			
Exchange rate risk		(16)			
Interest rate and exchange rate risk		(20)			
			Gains or losses financial assets/liabilities	1,254	Interest margin/Gains or losses financial assets/liabilities
Cash flow hedges	(3,016)	(45)			
Interest rate risk	(2,458)	1		(370)	
Exchange rate risk	(178)	(10)		2,130	
Interest rate and exchange rate risk	(638)	(39)		587	
Inflation risk	258	3		(1,093)	
Equity risk	—	—		—	
Net foreign investments hedges	(2,467)	—		—	
Exchange rate risk	(2,467)	—		—	
	(5,483)	74		1,254	

EUR million					
31 December 2021					
	Earnings/ (losses) recognised in another cumulative overall result	Ineffective coverage recognised in the income statement	Line of the income statement that includes the ineffectiveness of cash flows	Reclassified amount of reserves to the income statement due to:	
			Gains or losses financial assets/liabilities	Cover transaction affecting the income statement	Line of the income statement that includes reclassified items
Fair value hedges		18			
Interest rate risk		46			
Exchange rate risk		(55)			
Interest rate and exchange rate risk		27			
			Gains or losses financial assets/liabilities	(801)	Interest margin/Gains or losses financial assets/liabilities
Cash flow hedges	(938)	(64)			
Interest rate risk	(491)	(34)		269	
Exchange rate risk	155	2		(262)	
Interest rate and exchange rate risk	(350)	(35)		(350)	
Inflation risk	(249)	3		(458)	
Equity risk	(3)	—		—	
Net foreign investments hedges hedges	(1,159)	—		—	
Exchange rate risk	(1,159)	—		—	
	(2,097)	(46)		(801)	



EUR million

31 December 2020

	Earnings/ (losses) recognised in another cumulative overall result	Ineffective coverage recognised in the income statement	Line of the income statement that includes the ineffectiveness of cash flows	Reclassified amount of reserves to the income statement due to:	
			Gains or losses financial assets/liabilities	Cover transaction affecting the income statement	Line of the income statement that includes reclassified items
Fair value hedges		104			
Interest rate risk		9			
Risk of Exchange rate		1			
Risk of interest rate and exchange rate		92			
Credit risk		2			
Cash flow hedges	(53)	(53)	Gains or losses financial assets/liabilities	852	Interest margin/Gains or losses financial assets/liabilities
Interest rate risk	69	7		118	
Exchange rate risk	(180)	9		(131)	
Interest rate and exchange rate risk	170	(62)		844	
Inflation risk	(121)	(7)		21	
Equity risk	9	—		—	
Net foreign investments hedges	2,340	—	Gains or losses financial assets/liabilities	—	
Exchange rate risk	2,340	—		—	
	2,287	51		852	

The following table shows the movement in the impact of equity for the year:

EUR million	2022	2021	2020
Balance at beginning of year	(4,559)	(2,829)	(5,164)
Cash flow hedges			
Interest rate risk	(2,458)	(491)	69
<i>Amounts transferred to income statements</i>	370	(269)	(118)
<i>Gain or loss in value CFE - recognized in equity</i>	(2,828)	(222)	187
Exchange rate risk	(178)	155	(180)
<i>Amounts transferred to income statements</i>	(2,130)	262	131
<i>Gain or loss in value CFE - recognized in equity</i>	1,952	(107)	(311)
Interest rate and exchange rate risk	(638)	(350)	170
<i>Amounts transferred to income statements</i>	(587)	350	(844)
<i>Gain or loss in value CFE - recognized in equity</i>	(51)	(700)	1,014
Inflation risk	258	(249)	(121)
<i>Amounts transferred to income statements</i>	1,093	458	(21)
<i>Gain or loss in value CFE - recognized in equity</i>	(835)	(707)	(100)
Equity risk	0	(3)	9
<i>Amounts transferred to income statements</i>	—	—	—
<i>Gain or loss in value CFE - recognized in equity</i>	—	(3)	9
Net foreign investments hedges			
Exchange rate risk	(2,467)	(1,159)	2,340
<i>Amounts transferred to income statements</i>	—	—	—
<i>Gain or loss in value CFE - recognized in equity</i>	(2,467)	(1,159)	2,340
Minorities	(57)	89	43
Taxes	912	278	5
Balance at end of year	(9,187)	(4,559)	(2,829)

37. Discontinued operations

No operations were discontinued in 2022, 2021 or 2020.

38. Interest income

Interest and similar income in the consolidated income statement comprises the interest accruing in the year on all financial assets with an implicit or explicit return, calculated by applying the effective interest method, irrespective of measurement at fair value; and the rectifications of income as a result of hedge accounting. Interest is recognised gross, without deducting any tax withheld at source.

The detail of the main interest and similar income items earned in 2022, 2021 and 2020 is as follows:

EUR million	2022	2021	2020
Loans and advances, central banks	1,606	476	431
Loans and advances, credit institutions	2,186	916	894
Debt instruments	10,416	5,724	5,022
Loans and advances, customers	54,110	38,649	38,788
Other interest	3,112	698	606
	71,430	46,463	45,741

Most of the interest and similar income was generated by the Group's financial assets that are measured either at amortised cost or at fair value through Other comprehensive income.

39. Interest expense

Interest expense and similar charges in the consolidated income statement includes the interest accruing in the year on all financial liabilities with an implicit or explicit return, including remuneration in kind, calculated by applying the effective interest method, irrespective of measurement at fair value; the rectifications of cost as a result of hedge accounting; and the interest cost attributable to provisions recorded for pensions.

The detail of the main items of interest expense and similar charges accrued in 2022, 2021 and 2020 is as follows:

EUR million	2022	2021	2020
Central banks deposits	706	338	366
Credit institution deposits	2,784	1,140	1,652
Customer deposits	16,994	5,452	5,599
Debt securities issued and subordinated liabilities	8,464	4,838	5,119
<i>Marketable debt securities</i>	7,472	4,190	4,548
<i>Subordinated liabilities (note 23)</i>	992	648	571
Provisions for pensions (note 25)	100	91	95
Lease Liabilities	116	125	186
Other interest expense	3,647	1,109	730
	32,811	13,093	13,747

Most of the interest expense and similar charges was generated by the Group's financial liabilities that are measured at amortised cost.

40. Dividend income

Dividend income includes the dividends and payments on equity instruments out of profits generated by investees after the acquisition of the equity interest.

The detail of Income from dividends as follows:

EUR million	2022	2021	2020
Dividend income classified as:			
Financial assets held for trading	366	369	272
Non-trading financial assets mandatorily at fair value through profit or loss	35	32	31
Financial assets at fair value through other comprehensive income	87	112	88
	488	513	391

41. Commission income

Commission income comprises the amount of all fees and commissions accruing in favour of the Group in the year, except those that form an integral part of the effective interest rate on financial instruments.

The detail of fee and commission income is as follows:

EUR million	2022	2021	2020
Coming from collection and payment services			
Bills	245	214	265
Demand accounts	1,526	1,408	1,284
Cards	4,012	3,138	2,986
Orders	625	503	484
Cheques and other	172	139	110
	6,580	5,402	5,129
Coming from non-banking financial products			
Investment funds	1,017	992	888
Pension funds	167	161	170
Insurance	2,743	2,467	2,289
	3,927	3,620	3,347
Coming from Securities services			
Securities underwriting and placement	438	431	394
Securities trading	339	319	316
Administration and custody	321	402	336
Asset management	446	369	316
	1,544	1,521	1,362
Other			
Foreign exchange	822	522	500
Financial guarantees	433	415	409
Commitment fees	506	442	366
Other fees and commissions	2,055	1,890	1,911
	3,816	3,269	3,186
	15,867	13,812	13,024

42. Commission expense

Commission expense shows the amount of all fees and commissions paid or payable by the Group in the year, except those that form an integral part of the effective interest rate on financial instruments.

The detail of commission expense is as follows:

EUR million	2022	2021	2020
Commissions assigned to third parties	2,554	1,993	1,856
Cards	1,872	1,355	1,249
By collection and return of effects	18	16	12
Other fees assigned	664	622	595
Other commissions paid	1,523	1,317	1,153
Brokerage fees on lending and deposit transactions	77	60	26
Sales of insurance and pension funds	340	341	248
Other fees and commissions	1,106	916	879
	4,077	3,310	3,009

43. Gains or losses on financial assets and liabilities

The following information is presented below regarding the gains or losses recorded for financial assets or liabilities:

a) Breakdown

The detail, by origin, of Gains/losses on financial assets and liabilities:

EUR million	2022	2021	2020
Gains or losses on financial assets and liabilities not measured at fair value through profit or loss, net	149	628	1,107
Financial assets at amortized cost	34	89	(31)
Other financial assets and liabilities	115	539	1,138
<i>Of which debt instruments</i>	122	567	1,179
Gains or losses on financial assets and liabilities held for trading, net ^A	842	1,141	3,211
Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss	162	132	82
Gains or losses on financial assets and liabilities measured at fair value through profit or loss, net ^A	968	270	(171)
Gains or losses from hedge accounting, net	74	(46)	51
	2,195	2,125	4,280

A. Includes the net result obtained by transactions with debt securities, equity instruments, derivatives and short positions included in this portfolio when the Group jointly manages its risk in these instruments.



As explained in note 44, the above breakdown should be analysed in conjunction with the 'Exchange differences, net':

EUR million			
	2022	2021	2020
Exchange differences, net	(542)	(562)	(2,093)

b) Financial assets and liabilities at fair value through profit or loss

The detail of the amount of the asset balances is as follows:

EUR million			
	2022	2021	2020
Loans and receivables:	44,962	34,812	46,589
Central banks	11,595	3,608	9,481
Credit institutions	17,175	13,549	12,139
Customers	16,192	17,655	24,969
Debt instruments	45,079	30,223	41,573
Equity instruments	13,777	19,119	12,849
Derivatives	67,002	54,292	67,137
	170,820	138,446	168,148

Grupo Santander mitigates and reduces this exposure as follows:

- With respect to derivatives, the Group has entered into framework agreements with a large number of credit institutions and customers for the netting-off of asset positions and the provision of collateral for non-payment.

At 31 December 2022 the exposure to credit risk of the derivatives presented in the balance sheet is not significant because they are subject to netting and collateral agreements (see note 2.f).

- Loans and advances to credit institutions and Loans and advances includes reverse repos amounting to EUR 38,236 million at 31 December 2022.

Also, mortgage-backed assets totalled EUR 920 million.

- Debt instruments include EUR 35,118 million of Spanish and foreign government securities.

At 31 December 2022 the amount of the change in the year in the fair value of financial assets at fair value through profit or loss attributable to variations in their credit risk (spread) was not material.

The detail of the amount of the liability balances is as follows:

EUR million			
	2022	2021	2020
Deposits	78,299	40,946	43,598
Central banks	7,497	1,645	2,490
Credit institutions	11,754	7,552	6,765
Customer	59,048	31,749	34,343
Marketable debt securities	5,427	5,454	4,440
Short positions	22,515	12,236	16,698
Derivatives	64,891	53,566	64,469
Other financial liabilities	—	—	—
	171,132	112,202	129,205

At 31 December 2022, the amount of the change in the fair value of financial liabilities at fair value through profit or loss attributable to changes in their credit risk during the year is not material.

In relation to liabilities designated at fair value through profit or loss where it has been determined at initial recognition that the credit risk is recorded in accumulated 'Other comprehensive income' (see 'Statement of recognised income and expense') the amount that the Group would be contractually obliged to pay on maturity of these liabilities at 31 December 2022 is EUR 1,044 million higher than their carrying amount (EUR 81 million lower at 31 December 2021 and EUR 119 million lower at 31 December 2020).

Within Deposits, there are repurchase agreements amounting to EUR 27,780 million at 31 December 2022.

44. Exchange differences, net

Exchange differences shows basically the gains or losses on currency dealings, the differences that arise on translations of monetary items in foreign currencies to the functional currency.

Grupo Santander manages the currencies to which it is exposed together with the arrangement of derivative instruments and, accordingly, the changes in this line item should be analysed together with those recognised under 'Gains/losses on financial assets and liabilities' (see note 43).



45. Other operating income and expenses

Other operating income and Other operating expenses in the consolidated income statements include:

EUR million	2022	2021	2020
Insurance activity	158	211	210
Income from insurance and reinsurance contracts issued	2,698	1,516	1,452
Of which:			
Insurance and reinsurance premium income	2,543	1,381	1,349
Reinsurance income (note 15)	155	135	103
Expenses of insurance and reinsurance contracts	(2,540)	(1,305)	(1,242)
Of which:			
Claims paid, other insurance-related expenses and net provisions for insurance contract liabilities	(2,309)	(1,097)	(1,063)
Reinsurance premiums paid	(231)	(208)	(179)
Other operating income	1,510	2,255	1,920
Non-financial services	770	291	362
Other operating income	740	1,964	1,558
Other operating expense	(2,803)	(2,442)	(2,342)
Non-financial services	(661)	(283)	(350)
Other operating expense:	(2,142)	(2,159)	(1,992)
Of which, credit institutions deposit guarantee fund and single resolution fund	(1,258)	(1,016)	(1,005)
	(1,135)	24	(212)

Most of Banco Santander's insurance activity is carried on in life insurance.

The amount of the Group recognises in relation to income from sub-leases of rights of use is not material.

46. Staff costs

a) Breakdown

The detail of Staff costs is as follows:

EUR million	2022	2021	2020
Wages and salaries	9,563	8,466	8,070
Social Security costs	1,441	1,323	1,277
Additions to provisions for defined benefit pension plans (note 25)	65	73	76
Contributions to defined contribution pension funds	296	286	283
Other Staff costs	1,182	1,068	1,077
	12,547	11,216	10,783

b) Headcount

The average number of employees of Grupo Santander, as well as the average number and distribution by professional category of Banco Santander, S.A., was as follows:

Average number of employees	2022	2021	2020
Banco Santander, S.A.	23,410	24,512	27,503
Executive directors and Senior management	17	19	21
Other line personnel	21,872	23,343	26,527
Branches abroad	1,521	1,150	955
Total Group	201,516	194,589	196,090

A. Does not include staff affected by discontinued operations.

The number of employees, at the end of 2022, 2021 and 2020, was 206,462, 199,177 and 193,226, respectively.



The functional breakdown (final employment), by gender, at 31 December 2022 is as follows:

Functional breakdown by gender

	Senior managers		Other managers		Other personnel	
	Men	Women	Men	Women	Men	Women
Europe	1,093	478	6,779	3,893	33,041	40,919
North America	221	66	1,334	621	18,300	23,055
South America	320	134	3,147	2,096	31,108	39,857
	1,634	678	11,260	6,610	82,449	103,831

The same information, expressed in percentage terms at 31 December 2022 is as follows:

Functional breakdown by gender

	Senior managers		Other managers		Other personnel	
	Men	Women	Men	Women	Men	Women
Europe	70%	30%	64%	36%	45%	55%
North America	77%	23%	68%	32%	44%	56%
South America	70%	30%	60%	40%	44%	56%
	71%	29%	63%	37%	44%	56%

The labour relations between employees and the various Group companies are governed by the related collective agreements or similar regulations.

The number of employees in the Group with disabilities, distributed by professional categories, at 31 December 2022, is as follows:

Number of employees^A

	2022
Senior managers	13
Management	136
Collaborators	3,965
	4,114

A. An employee with disabilities is considered to be a person who is recognised by the State or the company in each jurisdiction where the Group operates and that entitles them to receive direct monetary assistance, or other types of aid such as, for example, reduction of their taxes. In the case of Spain, employees with disabilities have been considered to be those with a degree of disabilities greater than or equal to 33%.

The number of Group employees with disabilities at 2021 and 2020, was 3,703 and 3,577, respectively.

Likewise, the average number of employees of Banco Santander, S.A. with disabilities, equal to or greater than 33%, during 2022 was 331 (288 and 319 employees during 2021 and 2020). At the end of fiscal year 2022, there were 444 employees (307 and 317 employees at 31 December, 2021 and 2020, respectively).

c) Share-based payments

The main share-based payments granted by the Group in force at 31 December, 2022, 2021 and 2020 are described below.

i. Bank

The variable remuneration policy for the Bank's executive directors and certain executive personnel of the Bank and of other Group companies includes Bank share-based payments, the implementation of which requires, in conformity with the law and the Bank's Bylaws, specific resolutions to be adopted by the general meeting.

Were it necessary or advisable for legal, regulatory or other similar reasons, the delivery mechanisms described below may be adapted in specific cases without altering the maximum number of shares linked to the plan or the essential conditions to which the delivery thereof is subject.

These adaptations may involve replacing the delivery of shares with the delivery of cash amounts of an equal value.

The plans that include share-based payments are as follows:

- (i) Deferred and Conditional Variable Remuneration Plan;
- (ii) Deferred Multiyear Objectives Variable Remuneration Plan;
- (iii) Digital Transformation Award and (iv) Digital Transformation Award 2022. The characteristics of the plans are set forth below:

**Deferred variable remuneration systems**

	Description and plan beneficiaries	Conditions	Calculation Base
(j) Deferred and conditional variable remuneration plan (2015, 2016, 2017, 2018, 2019, 2020, 2021 and 2022)	<p>The purpose of these cycles is to defer a portion of the variable remuneration of the beneficiaries over a period of three years for the sixth cycles, over three or five years for the fifth, seventh, eighth, ninth, tenth and eleventh cycles, and over four or five years for the twelfth cycle, for it to be paid, where appropriate, in cash and in Santander shares. The other portion of the variable remuneration is also to be paid in cash and Santander shares, upon commencement of the cycles, in accordance with the rules set forth below.</p> <p>Beneficiaries:</p> <ul style="list-style-type: none"> Executive directors and certain executives (including senior management) and employees who assume risk, who perform control functions or receive an overall remuneration which puts them on the same remuneration level as senior executives and employees who assume risks (fifth cycle) In the case of the sixth, seventh, eighth, ninth, tenth, eleventh and twelfth cycle, the beneficiaries are Material Risk Takers (Identified staff) that are not beneficiaries of the Deferred Multiyear Objectives Variable Remuneration Plan. 	<p>For the fifth and sixth cycles (2015 to 2016), the accrual of the deferred compensation is conditioned, in addition to the requirement that the beneficiary remains in the Group's employ, with the exceptions included in the plan regulations on none of the following circumstances existing during the period prior to each delivery, pursuant to the provisions set forth in each case in the plan regulations:</p> <ol style="list-style-type: none"> Poor financial performance of the Group. breach by the beneficiary of internal regulations, including, in particular, those relating to risks. material restatement of the Group's consolidated financial statements, except when it is required pursuant to a change in accounting standards. Significant changes in the Group's economic capital or risk profile <p>In the case of the seventh, eighth, ninth, tenth, eleventh and twelfth cycles (2017 to 2021), the accrual of deferred compensation is conditioned, in addition to the permanence of the beneficiary in the Group, with the exceptions contained in the plan's regulations, to non-occurrence of a poor performance of the entity as a whole or of a specific division or area of the entity or of the exposures generated by the personnel:</p> <ol style="list-style-type: none"> significant failures in risk management by the entity, or by a business unit or risk control unit. the increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures. Regulatory sanctions or judicial sentences for events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity. Irregular behaviours, whether individual or collective, considering in particular the negative effects derived from the marketing of inappropriate products and the responsibilities of the persons or bodies that made those decisions. 	<p>Fifth cycle (2015):</p> <ul style="list-style-type: none"> Executive directors and members of the Identified Staff with total variable remuneration higher than 2.6 million euros: 40% paid immediately and 60% deferred over 5 years deferral period. Division managers, country heads (of countries which represent at least 1% of Group's economic capital), other executives of the Group with a similar profile and members of the Identified Staff with total variable remuneration between 1.7 million euros (1.8 million in fourth cycle) and 2.6 million euros: 50% paid immediately and 50% deferred over 5 years (fifth cycle) Other beneficiaries: 60% paid immediately and 40% deferred over 3 years. <p>Sixth cycle (2016):</p> <ul style="list-style-type: none"> 60% of bonus will be paid immediately and 40% deferred over a three years period. <p>Seventh, eighth, ninth, tenth and eleventh cycle (2017, 2018, 2019, 2020 and 2021):</p> <ul style="list-style-type: none"> Beneficiaries of these plans with target total variable remuneration higher or equal to 2.7 million euros: 40% paid immediately and 60% deferred over 5 years Beneficiaries of these plans with target total variable remuneration between 1.7 million euros and 2.7 million euros: 50% paid immediately and 50% paid over 5 years Other beneficiaries of these plans: 60% paid immediately and 40% deferred over 3 years. <p>Twelfth cycle (2022):</p> <ul style="list-style-type: none"> Beneficiaries of these plans with target total variable remuneration higher or equal to 2.7 million euros: 40% paid immediately and 60% deferred over 5 years Beneficiaries of these plans with target total variable remuneration between 1.7 million euros and 2.7 million euros: 50% paid immediately and 50% paid over 5 years Other beneficiaries of these plans: 60% paid immediately and 40% deferred over 4 years .

**Deferred variable remuneration systems**

	Description and plan beneficiaries	Conditions	Calculation Base
(ii) Deferred Multiyear Objectives Variable Remuneration Plan (2016, 2017, 2018, 2019, 2020, 2021 and 2022)	<p>The aim is simplifying the remuneration structure, improving the ex ante risk adjustment and increasing the impact of the long-term objectives on the Group's most relevant roles. The purpose of these cycles is to defer a portion of the variable remuneration of the beneficiaries over a period of three or five years (four or five years for the seventh cycle) for it to be paid, where appropriate, in cash and in Santander shares; the other portion of the variable remuneration is also to be paid in cash and Santander shares (regarding the instruments part, executive directors in the seventh cycle have the opportunity to choose all in share options or half in share options and half in shares), upon commencement of the cycles, in accordance with the rules set forth below. The accrual of the last third of the deferral (in the case of 3 years deferral), the last 2 fourths (in the case of 4 years deferral) and the last three fifths (in the case of 5 years deferral) is also subject to long-term objectives.</p> <p>Beneficiaries Executive directors, senior managers and certain executives of the Group's first lines of responsibility.</p>	<p>In 2016 the accrual is conditioned, in addition to the permanence of the beneficiary in the Group, with the exceptions contained in the plan's regulations, to non-occurrence of the following circumstances during the period prior to each of the deliveries in the terms set forth in each case in the plan's regulations:</p> <ol style="list-style-type: none"> Poor performance of the Group. breach by the beneficiary of the internal regulations, including in particular that relating to risks. material restatement of the Group's consolidated financial statements, except when appropriate under a change in accounting regulations. Significant changes in the Group's economic capital or risk profile. <p>In 2017, 2018, 2019, 2020 and 2021 the accrual is conditioned, in addition to the beneficiary' permanence in the Group, with the exceptions contained in the plan's regulations, to the non-occurrence of poor financial performance from the entity as a whole or of a specific division or area thereof or of the exposures generated by the personnel, taking into account the following factors:</p> <ol style="list-style-type: none"> Significant failures in risk management committed by the entity, or by a business unit or risk control unit. the increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures. Regulatory sanctions or court rulings for events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity. Irregular behaviours, whether individual or collective, considering in particular negative effects derived from the marketing of inappropriate products and responsibilities of persons or bodies that made those decisions. 	<p>First cycle (2016):</p> <ul style="list-style-type: none"> Executive directors and members of the Identified Staff with total variable remuneration higher than or equal to 2.7 million euros: 40% paid immediately and 60% deferred over a 5 years period. Senior managers, country heads of countries representing at least 1% of the Group's capital and other members of the identified staff whose total variable remuneration is between 1.7 million and 2.7 million euros: 50% paid immediately and 50% deferred over a 5 years period. Other beneficiaries: 60% paid immediately and 40% deferred over a 3 years period.
			<p>The second, third, fourth, fifth and sixth cycles (2017, 2018, 2019, 2020 and 2021 respectively) are under the aforementioned deferral rules, except that the variable remuneration considered is the target for each executive and not the actual award.</p>
			<p>In 2016 the metrics for the deferred portion subject to long-term objectives (last third or last three fifths, respectively, for the cases of three years and five years deferrals) are:</p> <ul style="list-style-type: none"> Earnings per share (EPS) growth in 2018 over 2015. Relative Total Shareholder Return (TSR) in the 2016-2018 period measured against a group of credit institutions. Compliance with the fully-loaded common equity tier 1 ("CET1") ratio target for financial year 2018. Compliance with Grupo Santander's underlying return on risk-weighted assets ("RoRWA") growth target for financial year 2018 compared to financial year 2015.
			<p>In the second, third, fourth, fifth and sixth cycle (2017, 2018, 2019, 2020 and 2021) the metrics for the deferred portion subject to long-term objectives (last third or last three fifths, respectively, for the cases of three years and five years deferrals) are:</p> <ul style="list-style-type: none"> EPS growth in 2019, 2020, 2021, 2022 and 2023 (over 2016, 2017, 2018, 2019 and 2020, for each respective cycle) Relative Total Shareholder Return (TSR) measured against a group of 17 credit institutions (second and third cycles) in the periods 2017-2019 and 2018-2019, respectively, and against a group of 9 entities (fourth, fifth and sixth cycle) for the 2019-2021, 2020-2022 and 2010-2023 period. Compliance with the fully-loaded common equity tier 1 ("CET1") ratio target for financial years 2019, 2020, 2021, 2022 and 2023, respectively.
			<p>In the seventh cycle (2022), the metrics for the deferred portion subject to long-term objectives (two last fourths and last three fifths, for the cases of four years and five years deferrals) are:</p> <ul style="list-style-type: none"> Banco Santander's consolidated Return on tangible equity (RoTE) target in 2024. Relative Total Shareholder Return (TSR) measured against a group of 9 credit institutions for the period 2022-2024. Five ESG metrics linked to our public targets of our Responsible Banking agenda.
		<p>Paid half in cash and half in shares. In the seventh cycle, and only for executive directors: half in cash and 25% in share options and 25% in shares (unless the director chooses to receive options only).</p>	
		<p>The maximum number of shares to be delivered is calculated by taking into account the weighted average daily volume of weighted average prices for the fifteen trading sessions prior to the previous Friday (excluding) on the date on which the board decides the bonus for the Executive directors of the Bank.</p>	

Deferred variable remuneration systems

	Description and plan beneficiaries	Conditions	Calculation Base
(iii) Digital Transformation Award (2019, 2020 and 2021)	<p>The 2019, 2020 and 2021 Digital Transformation Incentive (the "Digital Incentive") is a variable remuneration system that includes the delivery of Santander shares and share options.</p> <p>The aim of the Digital Incentive is to attract and retain the critical skill sets to support and accelerate the digital transformation of the Group. By means of this program, the Group offers a remuneration element which is competitive with the remuneration systems offered by other market operators who also compete for digital talent.</p> <p>The number of beneficiaries is limited to a maximum of 250 employees and the total amount of the incentive is limited to 30 million euros.</p>	<p>The funding of this incentive is subject to meeting important milestones that are aligned with the Group's digital roadmap and have been approved by the board of directors, taking into account the digitalization strategy of the Group, with the aim of becoming the best open, responsible global financial services platform.</p> <p>Performance of 2019 incentive was measured based on achievement of the following milestones: (i) Launch of a Global Trade Services (GTS) platform; (ii) launch of a Global Merchant Services (GMS) platform; (iii) migration of our fully digital bank, OpenBank, to a "next generation" platform and launch in 3 markets; (iv) extension of SuperDigital in Brazil to at least one other country; (v) and launch of our international payments app based on blockchain Pago FX to non-Santander customers.</p> <p>The milestones for the 2020 Digital Transformation Award were: (i) rolling out the global merchant services (GMS) platform in 3 new geographies, enhancing the platform functionality and achieving volume targets for transactions and participating merchants; (ii) doing the commercial rollout of the global trade services (GTS) platform in 8 new geographies, enhancing platform functionality, and achieving volume targets for on-boarded clients and monthly active users; (iii) launching OpenBank in a new market and migrating the retail banking infrastructure to "new-mode" bank; (iv) launch the global platform SuperDigital in at least 4 countries, driving target active user growth; (v) deploying machine learning across pre-defined markets for 4 priority use cases, rolling out Conversion Rate Optimization (Digital marketing) for at least 40 sales programs, delivering profit targets, and driving reduction of agent handled calls in contact centers; (vi) successfully implementing initiatives related to on-board and identity services, common API (application programming interface) layer, payment hubs, mobile app for SMEs and virtual assistant services; and (vii) launching the PagoFX global platform in at least 4 countries.</p> <p>The milestones for 2021 were: (i) in relation to Pago Nxt Consumer payment platform: implementation of Superdigital platform in seven countries, acquisition of over 1.5 million active customer base and accelerating growth through B2B (business to business) and B2B2C (business to business to customer) partnerships, acquiring more than 50% of the new customers through these channels, which are more cost-effective; (ii) in relation to Digital Consumer Bank: launching online API for checkout lending in the European Union and completion of controllable items for Openbank launch in USA; (iii) in relation to One Santander strategy: implementation in Europe of One Common Mobile Experience and, specifically, implementation of Europe ONE app for individual customers in at least three of the four countries by December 2021; and be among the three-top rated entities in terms of Mobile NetPromoter Score (Mobile NPS) in at least two of the four countries by December 2021; (iv) In relation to cloud adoption: host 75% of migratable virtual machines on cloud technology (either public cloud or OHE) by December 2021. For these purposes, mainframes, physical servers and servers with non-x86 operating systems will be considered non-migratable.</p>	<p>The Digital Incentive is structured 50% in Santander shares and 50% in options over Santander shares, taking into account the fair value of the option at the moment in which they are granted. For Material Risk Takers subject to five years deferrals, the Digital Incentive (shares and options over shares) shall be delivered in thirds, on the third, fourth and fifth anniversary from their granting. For Material Risk Takers subject to three years deferrals and employees not subject to deferrals, delivery shall be done on the third anniversary from their granting.</p> <p>Any delivery of shares, either directly or via exercise of options over shares, will be subject generally to the Group's general <i>malus & clawback</i> provisions as described in the Group's remuneration policy and to the continuity of the beneficiary within the Grupo Santander. In this regard, the board may define specific rules for non-Identified Staff.</p> <p>Vested share options can be exercised until maturity, with all options lapsing after ten years (for granting the 2019 incentive) and eight years (for granting the 2020 and 2021 incentive).</p> <p>The total achievement for 2021 Digital Incentive was 77.5% (85% en 2020 and 83% en 2019).</p>

**Deferred variable remuneration systems**

Description and plan beneficiaries	Conditions	Calculation base
<p>(iv) Digital Transformation Award (2022)</p> <p>The board of directors approved the 2022 Digital Transformation Incentive. It is a variable remuneration scheme splits in two different blocks:</p> <ul style="list-style-type: none"> • The first one, with the same mechanism than previous years, that delivers Santander shares and share options if the group hits major milestones on its digital roadmap. This is aimed at a group of up to 250 (is limited to 30 million euros) employees whose functions are deemed essential to Santander's growth. • And the second one, which delivers PagoNxt, S.L. RSUs and premium prices options (PPOs), and is aimed at up to 50 employees (and limited to 15 million euros) whose roles are considered key to PagoNxt's success. <p>The aim of the Digital Incentive is to attract and retain the critical skill sets to support and accelerate the digital transformation of the Group. By means of this program, the Group offers a remuneration element which is competitive with the remuneration systems offered by other market operators who also compete for digital talent.</p>	<p>Performance of the first block of the incentive shall be measured based on achievement of the following milestones:</p> <ol style="list-style-type: none"> Edelweiss: Our Santander future retail architecture EDELWEISS will mean moving from our current Core centric banking architecture towards a Customer and Data-Centric Core supported by lean Record Processing engines. Simplification: Speed up the simplification of our technology platform and business model by Reducing the total number of applications in production and reducing number of products in the regions. Agile: Agile ways of working enable a better and faster reaction to customers' needs and is based on a value-driven delivery that increases efficiency by reducing time-to-market and development costs, and increasing quality. People working in Agile are more collaborative, engaged, empowered and creative. <p>iv. In Digital Consumer Bank:</p> <ol style="list-style-type: none"> To create the BNPL platform connected to at least one merchant in Netherlands and Germany, and to make sure the platform is ready to connect in Spain. To support the definition of Openbank US's IT digital strategy and achieve 2022 milestones in it. To have the new leasing platform connected to dealers in Italy. To expand the Wabi B2B online business to Germany. To execute the first B2B deal with an Original Equipment Manufacturer or mobility player in at least one country. To expand coches.com business and platform to Portugal. <p>And in regard to the second block of digital incentive: the consolidation of PagoNxt Core Perimeter.</p>	<p>The first block of the Digital Incentive is structured 50% in Santander shares and 50% in options over Santander shares, taking into account the fair value of the option at the moment in which they are granted. For Material Risk Takers subject to five years deferrals, the Digital Incentive (shares and options over shares) shall be delivered in thirds, on the third, fourth and fifth anniversary from their granting. For Material Risk Takers subject to three years deferrals and employees not subject to deferrals, delivery shall be done on the third anniversary from their granting.</p> <p>Any delivery of shares, either directly or via exercise of options over shares, will be subject generally to the Group's general <i>malus & clawback</i> provisions as described in the Group's remuneration policy and to the continuity of the beneficiary within the Grupo Santander. In this regard, the board may define specific rules for non-Identified Staff.</p> <p>Vested share options can be exercised until maturity, with all options lapsing after ten years.</p> <p>The total achievement for 2022 Digital Incentive was 96.5%.</p> <p>The second block of Digital Incentive is structured in restricted stock units (RSUs) and premium priced Options (PPOs) of PagoNxt S.L. in a percentage determined by the internal category of the beneficiary. The total achievement for 2022 was 100%.</p>

ii. Santander UK plc

The long-term incentive plans on shares of the Bank granted by management of Santander UK plc to its employees are as follows:

	Number of shares (in thousand)	Exercise price in pounds sterling ^A	Year granted	Employee group	Number of persons ^B	Date of commencement of exercise period	Date of expiry of exercise period
Plans outstanding at 01/01/2020	23,373						
Options granted (sharesave)	11,642	1.65	2020	Employees	5,012	01/11/20	01/11/23
						01/11/20	01/11/25
Options exercised	(860)	2.75					
Options cancelled (net) or not exercised	(12,993)	2.96					
Plans outstanding at 31/12/2020	21,162						
Options granted (sharesave)	9,414	2.43	2021	Employees	4,142	01/11/21	01/11/24
						01/11/21	01/11/26
Options exercised	(48)	1.86					
Options cancelled (net) or not exercised	(4,592)	2.95					
Plans outstanding at 31/12/2021	25,936						
Options granted (sharesave)	13,068	1.89	2022	Employees	4,362	11/01/22	11/01/25
						11/01/22	11/01/27
Options exercised	(242)	1.69					
Options cancelled (net) or not exercised	(8,774)	2.59					
Plans outstanding at 31/12/2022	29,988						

A. At 31 December, 2022, 2021 and 2020, the euro/pound sterling exchange rate was 1.1277, 1.1904 and 1.1168, respectively.

B. Number of accounts/contracts. A single employee may have more than one account/contract.



In 2008 the Group launched a voluntary savings scheme for Santander UK employees (Sharesave Scheme) whereby employees who join the scheme see deducted between GBP 5 and GBP 500 from their net monthly pay over a period of three or five years. At the end of the chosen period, the employee may choose between collecting the amount contributed, the interest accrued and a bonus (tax-exempt in the United Kingdom) or exercising options on shares of the Bank in an amount equal to the sum of such three amounts at a fixed price. The exercise price will be the result of reducing by up to 20% the average purchase and sale prices of the Bank shares in the three trading sessions prior to the approval of the scheme by the UK tax authorities (HMRC). This approval must be received within 21 to 41 days following the publication of the Group's results for the first half of the year. This scheme was approved by the Board of Directors, at the proposal of the appointments and remuneration committee, and, since it involved the delivery of Bank shares, its application was authorized by the Annual General Meeting held on June 21, 2008. Also, the scheme was authorized by the UK tax authorities (HMRC) and commenced in September 2008. In subsequent years, at the Annual General Meetings held on June 19, 2009, June 11, 2010, June 17, 2011, March 30, 2012, March 22, 2013, March 28, 2014, March 27, 2015, March 18, 2016, April 7, 2017, March 23, 2018, April 12, 2019, April 3, 2020 and March 26, 2021, respectively, the shareholders approved the application of schemes previously approved by the board and with similar features to the scheme approved in 2008.

iii. Fair value

The fair value of the performance share plans was calculated as follows:

a) Deferred variable compensation plan linked to multi-year objectives 2020, 2021 and 2022:

The Group calculates at the grant date the fair value of the plan based on the valuation report of an independent expert, Willis Towers Watson. According to the design of the plan for 2020, 2021 and 2022 and the levels of achievement of similar plans in comparable entities, it has been considered that the fair value is 70%.

b) Santander UK sharesave plans:

The fair value of each option at the date of grant is estimated using an analytical model that also reflects the correlation between EUR and GBP. This model uses assumptions on the share price, the EUR/GBP FX rate, the EUR/GBP risk-free interest rate, dividend yields, the expected volatilities of both the underlying shares and EUR/GBP for the expected lives of options granted. The weighted average grant-date fair value of options granted during the year was GBP 0.23 (GBP 0.20 and GBP 0.21 reported in 2021 and 2020, respectively).

47. Other general administrative expenses

a) Breakdown

The detail of Other general administrative expenses is as follows:

EUR million	2022	2021	2020
Technology and systems	2,473	2,182	2,119
Property, fixtures and supplies (note 2.k)	804	789	827
Technical reports	785	689	672
Taxes other than income tax	559	558	537
Advertising	559	510	523
Communications	410	401	473
Surveillance and cash courier services	336	306	325
Per diems and travel expenses	163	69	73
Insurance premiums	108	109	88
Other administrative expenses	2,174	1,830	1,900
	8,371	7,443	7,537

The payments associated with short-term leases (leases less than or equal to 12 months) and leases of low-value assets, that the Group recognises as an expense in the income statement is not material.

b) Technical reports and other

Technical reports includes the fees paid by the various Group companies (detailed in the accompanying appendices) for the services provided by their respective auditors, the detail being as follows:

EUR million	2022	2021	2020
Audit	113.4	104.6	99.4
Audit-related services	6.4	6.0	6.0
Tax services	0.5	0.7	0.8
All other	4.8	2.4	1.2
Total	125.1	113.7	107.4

The 'Audit' heading mainly includes audit fees for the individual and consolidated financial statements of Banco Santander and its subsidiaries of which PwC is the statutory auditor; for interim consolidated financial statements of Banco Santander; for integrated audits prepared in order to file Form 20-F for the annual report with the SEC in the US regarding required entities; the internal control audit (SOx) for required Group's entities; the limited review of the financial statements; and the regulatory auditor's reports on Grupo Santander's geographies.

The main fees under 'Audit-related services' include, comfort letters, verifying financial and non-financial information (as required by regulators), and other reviews of documents that, due to their nature, the external auditor provides to be submitted to domestic or foreign authorities.

The fees included under the heading 'Tax services' mainly related to tax compliance and advisory services provided to Group companies outside Spain, which are permitted in accordance with independence regulations; none were for tax planning advice.



The 'Audit' heading includes the fees for the year's audit, regardless of the date the audit was completed. Any subsequent adjustments, which are not significant, and for purposes of comparison, are shown in this note for each year. The fees corresponding to the rest of the services are shown by when the audit committee approved them.

The services commissioned from the Group's auditors meet the independence requirements under applicable European and Spanish law, the SEC rules and the Public Company Accounting Oversight Board (PCAOB), applicable to the Group, and they did not involve in any case the performance of any work that is incompatible with the auditor's role.

Lastly, the Group commissioned services from audit firms other than PwC amounting to EUR 185.5 million in 2022 (EUR 263.8 million and EUR 172.4 million in 2021 and 2020, respectively).

c) Number of branches

The number of offices at 31 December 2022, 2021 and 2020 is as follows:

	Number of branches		
	Group		
	2022	2021	2020
Spain	1,966	1,998	2,989
Group	7,053	7,231	7,597
	9,019	9,229	10,586

48. Gains or losses on non financial assets, net

The detail of Gains/ (losses) on disposal of assets not classified as non-current assets held for sale is as follows:

EUR million			
	2022	2021	2020
Gains			
Tangible and intangible assets	56	87	89
Investments	5	2	60
	61	89	149
Losses			
Tangible and intangible assets	(49)	(36)	(34)
Investments	—	—	(1)
	(49)	(36)	(35)
	12	53	114

49. Gains or losses on non-current assets held for sale not classified as discontinued operations

The detail of Gains/(losses) on non-current assets held for sale not classified as discontinued operations is as follows:

EUR million			
Net balance	2022	2021	2020
Tangible assets	7	(52)	(171)
Impairment (note 12)	(94)	(141)	(215)
Gain (loss) on sale (note 12)	101	89	44
Other gains and other losses	—	9	—
	7	(43)	(171)



50. Other disclosures

a) Residual maturity periods

The detail, by maturity, of the balances of certain items in the consolidated balance sheet at 31 December 2022, 2021 and 2020 is presented below:

	31 December 2022						Total
	EUR million						
	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	
Assets							
Cash, cash balances at Central Banks and other deposits on demand	223,073	—	—	—	—	—	223,073
Financial assets at fair value through other comprehensive income	—	19,215	5,425	15,377	17,693	25,588	83,298
Debt securities	—	19,011	4,528	13,884	16,631	21,029	75,083
Loans and advances	—	204	897	1,493	1,062	4,559	8,215
Customers	—	204	897	1,493	1,062	4,559	8,215
Financial assets at amortized cost	45,322	194,757	137,632	196,939	135,156	437,238	1,147,044
Debt securities	—	7,956	7,417	21,459	6,715	30,007	73,554
Loans and advances	45,322	186,801	130,215	175,480	128,441	407,231	1,073,490
Central banks	—	14,139	—	—	—	1,236	15,375
Credits institutions	7,565	22,578	2,756	3,580	139	9,900	46,518
Customers	37,757	150,084	127,459	171,900	128,302	396,095	1,011,597
	268,395	213,972	143,057	212,316	152,849	462,826	1,453,415
Liabilities							
Financial liabilities at amortized cost	731,837	236,565	144,666	168,984	81,808	59,998	1,423,858
Deposits	718,366	193,092	96,667	82,663	19,343	1,756	1,111,887
Central banks	117	6,991	18,311	47,018	4,506	9	76,952
Credit institutions	7,172	30,557	15,901	9,670	3,925	1,357	68,582
Customer deposits	711,077	155,544	62,455	25,975	10,912	390	966,353
Marketable debt securities ^A	—	34,408	46,480	81,051	55,359	57,614	274,912
Other financial liabilities	13,471	9,065	1,519	5,270	7,106	628	37,059
	731,837	236,565	144,666	168,984	81,808	59,998	1,423,858
Difference (assets less liabilities)	(463,442)	(22,593)	(1,609)	43,332	71,041	402,828	29,557

A. Includes promissory notes, certificates of deposit and other short-term debt issues.

See breakdown by type of debt (subordinated debt, senior unsecured debt, senior secured debt, notes and other securities) (see note 22).

Grupo Santander has accounted as "On demand", those financial liabilities assumed, in which the counterparty may require the payments.

In addition, when Grupo Santander is committed to have amounts available in different maturity periods, these amounts have been accounted for in the first year, in which they may be required.

Additionally, for issued financial guarantee contracts, the Group has recorded the maximum amount of the financial guarantee issued, in the first year in which the guarantee could be executed.



31 December 2021

EUR million

	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Assets							
Cash, cash balances at Central Banks and other deposits on demand	210,689	—	—	—	—	—	210,689
Financial assets at fair value through other comprehensive income	—	19,885	10,447	20,001	17,745	37,507	105,585
Debt securities	—	19,598	9,609	19,133	16,494	33,088	97,922
Loans and advances	—	287	838	868	1,251	4,419	7,663
Customers	—	287	838	868	1,251	4,419	7,663
Financial assets at amortized cost	35,520	161,837	121,272	154,345	130,456	434,468	1,037,898
Debt securities	—	4,212	4,171	2,205	15,388	9,732	35,708
Loans and advances	35,520	157,625	117,101	152,140	115,068	424,736	1,002,190
Central banks	—	14,544	—	—	—	1,113	15,657
Credits institutions	11,849	20,802	4,542	93	150	1,733	39,169
Customers	23,671	122,279	112,559	152,047	114,918	421,890	947,364
	246,209	181,722	131,719	174,346	148,201	471,975	1,354,172
Liabilities							
Financial liabilities at amortized cost	718,435	169,013	99,223	194,879	98,210	69,409	1,349,169
Deposits	711,377	126,956	64,096	117,585	52,658	5,915	1,078,587
Central banks	92	5,861	2,130	91,651	40,013	10	139,757
Credit institutions	12,854	16,208	12,507	4,712	1,981	3,973	52,235
Customer deposits	698,431	104,887	49,459	21,222	10,664	1,932	886,595
Marketable debt securities ^A	—	31,550	29,798	71,333	45,198	62,830	240,709
Other financial liabilities	7,058	10,507	5,329	5,961	354	664	29,873
	718,435	169,013	99,223	194,879	98,210	69,409	1,349,169
Difference (assets less liabilities)	(472,226)	12,709	32,496	(20,533)	49,991	402,566	5,003

A. Includes promissory notes, certificates of deposit and other short-term debt issues.



31 December 2020							
EUR million							
	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Assets							
Cash, cash balances at Central Banks and other deposits on demand	153,839	—	—	—	—	—	153,839
Financial assets at fair value through other comprehensive income	—	11,084	7,738	19,923	21,302	58,123	118,170
Debt securities	—	10,908	7,019	18,365	19,969	52,642	108,903
Loans and advances	—	176	719	1,558	1,333	5,481	9,267
Customers	—	176	719	1,558	1,333	5,481	9,267
Financial assets at amortized cost	51,513	117,335	109,561	150,399	120,376	409,194	958,378
Debt securities	—	4,184	5,760	3,059	5,257	7,818	26,078
Loans and advances	51,513	113,151	103,801	147,340	115,119	401,376	932,300
Central banks	—	10,762	—	673	—	1,064	12,499
Credit institutions	21,337	8,950	3,910	3,207	34	400	37,838
Customers	30,176	93,439	99,891	143,460	115,085	399,912	881,963
	205,352	128,419	117,299	170,322	141,678	467,317	1,230,387
Liabilities							
Financial liabilities at amortized cost	640,613	175,269	93,296	175,238	80,041	83,731	1,248,188
Deposits	632,305	132,337	61,142	109,856	32,464	22,287	990,391
Central banks	150	10,499	3,216	83,112	15,827	—	112,804
Credit institutions	14,370	22,385	9,940	5,618	5,934	4,373	62,620
Customer deposits	617,785	99,453	47,986	21,126	10,703	17,914	814,967
Marketable debt securities ^A	—	33,257	30,994	59,526	47,143	59,909	230,829
Other financial liabilities	8,308	9,675	1,160	5,856	434	1,535	26,968
	640,613	175,269	93,296	175,238	80,041	83,731	1,248,188
Difference (assets less liabilities)	(435,261)	(46,850)	24,003	(4,916)	61,637	383,586	(17,801)

A. Includes promissory notes, certificates of deposit and other short-term debt issues.



The detail of the undiscounted contractual maturities of the existing financial liabilities at amortised cost at 31 December 2022, 2021 and 2020 is as follows:

31 December 2022							
EUR million							
	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Financial liabilities at amortized cost							
Deposits	718,366	192,609	96,482	82,618	19,354	1,595	1,111,024
Central banks	117	7,003	18,210	46,933	4,506	9	76,778
Credit institutions	7,172	30,548	15,808	9,722	3,924	1,190	68,364
Customer	711,077	155,058	62,464	25,963	10,924	396	965,882
Marketable debt securities	—	34,312	46,396	81,059	55,357	57,576	274,700
Other financial liabilities	13,471	9,065	1,519	5,270	7,106	626	37,057
	731,837	235,986	144,397	168,947	81,817	59,797	1,422,781

31 December 2021							
EUR million							
	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Financial liabilities at amortized cost							
Deposits	705,129	120,654	62,896	116,343	52,031	5,884	1,062,937
Central banks	83	5,862	2,131	91,327	39,579	10	138,992
Credit institutions	12,683	16,184	11,867	4,504	1,945	3,950	51,133
Customer	692,363	98,608	48,898	20,512	10,507	1,924	872,812
Marketable debt securities	—	32,575	30,618	73,131	46,367	64,318	247,009
Other financial liabilities	7,059	10,507	5,329	5,961	354	663	29,873
	712,188	163,736	98,843	195,435	98,752	70,865	1,339,819

31 December 2020							
EUR million							
	On demand	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Financial liabilities at amortized cost							
Deposits	629,043	130,439	60,465	108,326	32,260	22,228	982,761
Central banks	150	10,497	3,217	82,803	15,827	—	112,494
Credit institutions	14,334	22,367	9,606	5,031	5,903	4,333	61,574
Customer	614,559	97,575	47,642	20,492	10,530	17,895	808,693
Marketable debt securities	—	34,307	31,103	58,645	46,118	56,730	226,903
Other financial liabilities	8,308	9,675	1,160	5,856	434	1,535	26,968
	637,351	174,421	92,728	172,827	78,812	80,493	1,236,632



Below is a breakdown of contractual maturities for the rest of financial assets and liabilities as of 31 December 2022, 2021 and 2020 :

	31 December 2022					Total
	EUR million					
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	
FINANCIAL ASSETS						
Financial assets held for trading	44,770	27,562	29,753	20,177	33,856	156,118
Derivatives	7,631	9,983	23,156	15,533	10,699	67,002
Equity instruments					10,066	10,066
Debt securities	5,160	13,357	5,667	4,193	13,026	41,403
Loans and advances	31,979	4,222	930	451	65	37,647
Central banks	11,595	—	—	—	—	11,595
Credits institutions	13,650	2,852	—	—	—	16,502
Customers	6,734	1,370	930	451	65	9,550
Financial assets designated at fair value through profit or loss	236	756	2,732	1,691	3,574	8,989
Debt securities	68	77	1,026	599	772	2,542
Loans and advances	168	679	1,706	1,092	2,802	6,447
Credit institutions	6	181	23	4	459	673
Customers	162	498	1,683	1,088	2,343	5,774
Non-trading financial assets mandatorily at fair value through profit or loss	164	214	265	70	5,000	5,713
Equity instruments	—	—	—	—	3,711	3,711
Debt securities	6	52	52	—	1,024	1,134
Loans and advances	158	162	213	70	265	868
Customers	158	162	213	70	265	868
Financial assets at fair value through other comprehensive income	—	—	—	—	1,941	1,941
Equity instruments	—	—	—	—	1,941	1,941
Hedging derivatives	2,200	1,076	1,356	1,451	1,986	8,069
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	(734)	(498)	(1,178)	(1,036)	(303)	(3,749)
TOTAL FINANCIAL ASSETS	46,636	29,110	32,928	22,353	46,054	177,081



31 December 2022						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
FINANCIAL LIABILITIES						
Financial liabilities held for trading	51,621	12,012	23,669	18,273	9,610	115,185
Derivatives	7,749	9,671	22,479	16,955	8,037	64,891
Shorts positions	17,952	888	1,031	1,071	1,573	22,515
Deposits	25,920	1,453	159	247	—	27,779
Central banks	5,757	—	—	—	—	5,757
Credits institutions	7,963	1,435	151	247	—	9,796
Customers	12,200	18	8	—	—	12,226
Financial liabilities designated at fair value through profit or loss	27,071	4,359	6,180	1,915	16,422	55,947
Deposits	26,908	3,558	5,069	818	14,167	50,520
Central banks	1,702	38	—	—	—	1,740
Credits institutions	1,284	129	54	87	404	1,958
Customers	23,922	3,391	5,015	731	13,763	46,822
Marketable debt securities ^A	163	801	1,111	1,097	2,255	5,427
Hedging derivatives	947	1,469	3,650	1,159	2,003	9,228
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	11	(52)	(140)	20	44	(117)
TOTAL FINANCIAL LIABILITIES	79,650	17,788	33,359	21,367	28,079	180,243

A. Includes promissory notes, certificates of deposit and other short-term debt issues (see note 22).

31 December 2022						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Memorandum items						
Loans commitment granted	120,962	32,538	50,875	54,033	15,667	274,075
Financial guarantees granted	7,023	3,586	1,427	441	379	12,856
Other commitments granted	66,716	16,152	7,119	1,517	1,168	92,672
MEMORANDUM ITEMS	194,701	52,276	59,421	55,991	17,214	379,603

In the Group's experience, no outflows of cash or other financial assets take place prior to the contractual maturity date that might affect the information broken down above.



31 December 2021

EUR million

	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
FINANCIAL ASSETS						
Financial assets held for trading	21,887	20,627	20,047	15,105	39,287	116,953
Derivatives	4,943	7,426	12,285	11,980	17,658	54,292
Equity instruments	—	—	—	—	15,077	15,077
Debt securities	2,978	8,585	5,766	2,869	6,552	26,750
Loans and advances	13,966	4,616	1,996	256	—	20,834
Central banks	3,608	—	—	—	—	3,608
Credits institutions	5,607	3,982	808	—	—	10,397
Customers	4,751	634	1,188	256	—	6,829
Financial assets designated at fair value through profit or loss	2,451	2,928	3,686	2,334	4,558	15,957
Debt securities	64	142	699	700	911	2,516
Loans and advances	2,387	2,786	2,987	1,634	3,647	13,441
Central banks	—	—	—	—	—	—
Credit institutions	1,138	1,476	205	10	323	3,152
Customers	1,249	1,310	2,782	1,624	3,324	10,289
Non-trading financial assets mandatorily at fair value through profit or loss	116	49	127	67	5,177	5,536
Equity instruments	—	—	—	—	4,042	4,042
Debt instruments	4	40	4	6	903	957
Loans and advances	112	9	123	61	232	537
Central banks	—	—	—	—	—	—
Credits institutions	—	—	—	—	—	—
Customers	112	9	123	61	232	537
Financial assets at fair value through other comprehensive income	—	—	—	—	2,453	2,453
Equity instruments	—	—	—	—	2,453	2,453
Hedging derivatives	368	857	748	1,270	1,518	4,761
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	429	(11)	(304)	19	277	410
TOTAL FINANCIAL ASSETS	25,251	24,450	24,304	18,795	53,270	146,070

31 December 2021						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
FINANCIAL LIABILITIES						
Financial liabilities held for trading	26,142	9,234	15,709	12,750	15,634	79,469
Derivatives	4,485	7,583	14,868	11,912	14,718	53,566
Shorts positions	8,559	1,290	728	743	916	12,236
Deposits	13,098	361	113	95	—	13,667
Central banks	1,038	—	—	—	—	1,038
Credits institutions	5,919	361	113	95	—	6,488
Customers	6,141	—	—	—	—	6,141
Marketable debt securities	—	—	—	—	—	—
Other financial liabilities	—	—	—	—	—	—
Financial liabilities designated at fair value through profit or loss	7,000	1,685	4,669	1,225	18,154	32,733
Deposits	6,874	1,246	2,801	764	15,594	27,279
Central banks	569	38	—	—	—	607
Credits institutions	237	487	30	178	132	1,064
Customers	6,068	721	2,771	586	15,462	25,608
Marketable debt securities ^A	126	439	1,868	461	2,560	5,454
Hedging derivatives	613	930	1,667	824	1,429	5,463
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	45	16	58	49	80	248
TOTAL FINANCIAL LIABILITIES	33,800	11,865	22,103	14,848	35,297	117,913

A. Includes promissory notes, certificates of deposit and other short-term debt issues (see note 22).

31 December 2021						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Memorandum items						
Loans commitment granted	123,529	27,587	51,999	49,781	9,841	262,737
Financial guarantees granted	3,617	4,251	1,749	687	454	10,758
Other commitments granted	52,359	12,008	7,297	1,539	2,530	75,733
MEMORANDUM ITEMS	179,505	43,846	61,045	52,007	12,825	349,228



31 December 2020

EUR million

	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
FINANCIAL ASSETS						
Financial assets held for trading	12,494	27,753	22,473	18,014	34,211	114,945
Derivatives	9,556	10,044	15,526	13,681	18,330	67,137
Equity instruments	—	—	—	—	9,615	9,615
Debt securities	2,938	17,709	6,947	4,310	5,990	37,894
Loans and advances	—	—	—	23	276	299
Credits institutions	—	—	—	3	—	3
Customers	—	—	—	20	276	296
Financial assets designated at fair value through profit or loss	27,334	7,205	3,680	3,933	6,565	48,717
Debt securities	259	162	407	719	1,432	2,979
Loans and advances	27,075	7,043	3,273	3,214	5,133	45,738
Central banks	9,481	—	—	—	—	9,481
Credit institutions	8,449	2,728	590	12	357	12,136
Customers	9,145	4,315	2,683	3,202	4,776	24,121
Non-trading financial assets mandatorily at fair value through profit or loss	275	—	—	69	4,142	4,486
Equity instruments	—	—	—	—	3,234	3,234
Debt instruments	85	—	—	—	615	700
Loans and advances	190	—	—	69	293	552
Central banks	—	—	—	—	—	—
Credits institutions	—	—	—	—	—	—
Customers	190	—	—	69	293	552
Financial assets at fair value through other comprehensive income	—	—	—	—	2,783	2,783
Equity instruments	—	—	—	—	2,783	2,783
Hedging derivatives	2,003	1,293	1,107	1,083	2,839	8,325
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	181	132	205	381	1,081	1,980
TOTAL FINANCIAL ASSETS	42,287	36,383	27,465	23,480	51,621	181,236



31 December 2020						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
FINANCIAL LIABILITIES						
Financial liabilities held for trading	20,481	6,286	17,635	16,036	20,729	81,167
Derivatives	4,338	5,800	17,566	16,036	20,729	64,469
Shorts positions	16,143	486	69	—	—	16,698
Deposits	—	—	—	—	—	—
Central banks	—	—	—	—	—	—
Credits institutions	—	—	—	—	—	—
Customers	—	—	—	—	—	—
Marketable debt securities	—	—	—	—	—	—
Other financial liabilities	—	—	—	—	—	—
Financial liabilities designated at fair value through profit or loss	15,200	2,228	2,893	1,121	26,596	48,038
Deposits	15,168	1,954	2,497	518	23,461	43,598
Central banks	1,707	783	—	—	—	2,490
Credits institutions	3,785	935	1,493	171	381	6,765
Customers	9,676	236	1,004	347	23,080	34,343
Marketable debt securities	32	274	396	603	3,135	4,440
Other financial liabilities	—	—	—	—	—	—
Hedging derivatives	2,819	588	748	641	2,073	6,869
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	9	40	74	64	99	286
TOTAL FINANCIAL LIABILITIES	38,509	9,142	21,350	17,862	49,497	136,360

31 December 2020						
EUR million						
	Within 3 months	3 to 12 months	1 to 3 years	3 to 5 years	More than 5 years	Total
Memorandum items						
Loans commitment granted	114,221	28,207	47,876	40,458	10,468	241,230
Financial guarantees granted	2,661	3,732	4,134	1,169	681	12,377
Other commitments granted	43,734	10,497	5,101	3,207	1,999	64,538
MEMORANDUM ITEMS	160,616	42,436	57,111	44,834	13,148	318,145



b) Equivalent euro value of assets and liabilities

The detail of the main foreign currency balances in the consolidated balance sheet, based on the nature of the related items, is as follows:

Equivalent value in EUR million

	2022		2021		2020	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Cash, cash balances at central banks and other deposits on demand	122,391	—	105,457	—	76,882	—
Financial assets/liabilities held for trading	94,256	60,105	65,345	49,314	66,448	50,494
Non-trading financial assets mandatorily at fair value through profit or loss	3,210	—	2,460	—	2,248	—
Other financial assets/liabilities at fair value through profit or loss	1,085	20,274	1,230	9,103	24,015	18,347
Financial assets at fair value through other comprehensive income	62,046	—	78,086	—	79,688	—
Financial assets at amortized cost	747,138	—	680,774	—	610,152	—
Investments	1,296	—	1,666	—	1,671	—
Tangible assets	21,834	—	22,350	—	21,617	—
Intangible assets	11,881	—	10,066	—	9,609	—
Financial liabilities at amortized cost	—	893,531	—	796,395	—	726,516
Liabilities under insurance contracts	—	4	—	10	—	13
Other	23,886	24,372	22,631	20,420	26,433	22,801
	1,089,023	998,286	990,065	875,242	918,763	818,171

c) Fair value of financial assets and liabilities not measured at fair value

The financial assets owned by the Group are measured at fair value in the accompanying consolidated balance sheet, except for cash, cash balances at central banks and other deposits on demand, loans and advances at amortised cost.

Similarly, the Group's financial liabilities -except for financial liabilities held for trading, those measured at fair value and derivatives other than those having as their underlying equity instruments whose market value cannot be estimated reliably- are measured at amortised cost in the accompanying consolidated balance sheet.

Following is a comparison of the carrying amounts of the Group's financial instruments measured at other than fair value and their respective fair values at year-end:

i) Financial assets measured at other than fair value

EUR million

Assets	2022					2021					2020				
	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value	Level 1	Level 2	Level 3
Loans and advances	1,073,490	1,053,703	—	64,968	988,735	1,002,190	1,006,711	—	69,840	936,871	932,300	940,258	—	65,755	874,503
Debt securities	73,554	70,373	37,805	19,254	13,314	35,708	35,378	13,558	12,158	9,662	26,078	26,532	6,753	11,899	7,880
	1,147,044	1,124,076	37,805	84,222	1,002,049	1,037,898	1,042,089	13,558	81,998	946,533	958,378	966,790	6,753	77,654	882,383

**ii) Financial liabilities measured at other than fair value**

EUR million

Liabilities ^A	2022					2021					2020				
	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value	Level 1	Level 2	Level 3	Carrying amount	Fair value	Level 1	Level 2	Level 3
Deposits	1,111,887	1,108,918	—	258,701	850,217	1,078,587	1,076,876	—	286,613	790,263	990,391	990,807	—	263,517	727,290
Debt securities	274,912	263,191	106,169	124,939	32,083	240,709	246,697	109,346	115,034	22,317	230,829	241,174	91,771	125,031	24,372
	1,386,799	1,372,109	106,169	383,640	882,300	1,319,296	1,323,573	109,346	401,647	812,580	1,221,220	1,231,981	91,771	388,548	751,662

A. At 31 December 2022, Grupo Santander had other financial liabilities that amounted to EUR 37,059 million, EUR 29,873 million in 2021 and EUR 26,968 million in 2020.

The main valuation methods and inputs used in the estimates at 31 December 2022 of the fair values of the financial assets and liabilities in the foregoing table were as follows:

- Financial assets at amortised cost: the fair value was estimated using the present value method. The estimates were made considering factors such as the expected maturity of the portfolio, market interest rates, spreads on newly approved transactions or market spreads -when available-.
 - Financial liabilities at amortised cost:
- i) Deposits: the fair value of short term deposits was taken to be their carrying amount. Factors such as the expected maturity of the transactions and the Group's current cost of funding in similar transactions are considered for the estimation of long term deposits fair value. It had been used also current rates offered for deposits of similar remaining maturities.
- ii) Marketable debt securities and subordinated liabilities: the fair value was calculated based on market prices for these instruments -when available- or by the present value method using market interest rates and spreads, as well as using any significant input which is not observable with market data if applicable.
- iii) The fair value of cash, cash balances at central banks and other deposits on demand was taken to be their carrying amount since they are mainly short-term balances.

51. Primary and secondary segments reporting

Grupo Santander bases segment reporting on financial information presented to the chief operating decision maker, which excludes certain statutory results items that distort year-on-year comparisons and are not considered for management reporting. This financial information (underlying basis) is computed by adjusting reported results for the effects of certain gains and losses (e.g. capital gains, write-downs, impairment of goodwill, etc.). These gains and losses are items that management and investors ordinarily identify and consider separately to better understand the underlying trends in the business.

Grupo Santander has aligned the information in this note with the underlying information used internally for management reporting and with that presented in Grupo Santander's other public documents.

Grupo Santander executive committee has been determined to be its chief operating decision maker. Grupo Santander's operating segments reflect its organizational and managerial structures. Grupo Santander's executive committee reviews internal reporting based on these segments to assess performance and allocate resources.

The segments are split by geographic area in which profits are earned and type of business. Grupo Santander prepares the information by aggregating the figures for Grupo Santander's various geographic areas and business units, relating it to both the accounting data of the units integrated in each segment and that provided by management information systems. The same general principles as those used in Grupo Santander are applied.

Grupo Santander announced at 4 April 2022 changes in the reportable segments to reflect the new reporting structure effective from the first quarter financial information of 2022.

The main changes, which have been applied to management information for all periods included in the annual accounts, relate to the following:

1. Reallocation of certain financial costs of the Corporate Centre as follows:
 - a. Further clarity in the minimum requirement for own funds and eligible liabilities (MREL) and total loss absorbing capacity (TLAC) regulation makes it possible to allocate the cost of eligible debt issuances to the country units.
 - b. Other financial costs, primarily associated with the cost of funding the excess capital held by the units above the Group's CET1 ratio, have been reassigned accordingly.



2. Downsizing of 'Other Europe':

- a. The Corporate & Investment Banking branches of Banco Santander, S.A. in Europe and other business lines previously reported under 'Other Europe' have been now integrated into the Spain unit to reflect how the business will be managed and supervised, in line with other regions.

Grupo Santander recasted the corresponding information of earlier periods considering the changes included in this section to facilitate a homogeneous comparison.

In addition to these changes, we completed the usual annual adjustment of the perimeter of the Global Customer Relationship Model between Retail Banking and Santander Corporate & Investment Banking and between Retail Banking and Wealth Management & Insurance.

The above-mentioned changes have no impact on the Group's reported consolidated financial statements.

a) Primary segments

This primary level of segmentation, which is based on the Group's management structure, comprises five reportable segments: four operating areas plus the Corporate Centre. The operating areas are:

- Europe: which comprises all business activity carried out in the region, except that included in Digital Consumer Bank.
- North America: which comprises all the business activities carried out in Mexico and the US, which includes the holding company (SHUSA) and the businesses of Santander Bank, Santander Consumer USA, the specialized business unit Banco Santander International, Santander Investment Securities (SIS), Santander's New York branch and Amherst Pierpont Securities (APS).
- South America: includes all the financial activities carried out by Grupo Santander through its banks and subsidiary banks in the region.
- Digital Consumer Bank: includes Santander Consumer Finance, which incorporates the entire consumer finance business in Europe, Openbank and ODS.

In addition to these operating units, which report by geographic area and businesses, Grupo Santander continues to maintain the area of Corporate Centre, that includes the centralized activities relating to equity stakes in financial companies, financial management of the structural exchange rate position, assumed within the sphere of Grupo Santander's assets and liabilities committee, as well as management of liquidity and of shareholders' equity via issuances.

As Grupo Santander's holding entity, this area manages all capital and reserves and allocations of capital and liquidity with the rest of businesses. It also incorporates amortization of goodwill but not the costs related to the Grupo Santander's central services (charged to the areas), except for corporate and institutional expenses related to the Grupo Santander's functioning.

With regard to the balance sheet, due to the required segregation of the various business units (included in a single consolidated balance sheet), the amounts lent and borrowed between the units are shown as increases in the assets and liabilities of each business. These amounts relating to intra-Group liquidity are eliminated and are shown in the Intra-Group eliminations column in the table below in order to reconcile the amounts contributed by each business unit to the consolidated Grupo Santander's balance sheet.

There are no customers located in any of the areas that generate income exceeding 10% of Total income.



The condensed balance sheets and income statements of the various primary segments are as follows:

EUR million

Balance sheet (condensed)	2022						Total
	Europe	North America	South America	Digital Consumer Bank	Corporate Centre	Intra-Group eliminations	
Total assets	958,207	288,595	292,925	151,015	262,218	(218,301)	1,734,659
Loans and advances to customers	591,280	171,519	144,812	122,608	5,785	—	1,036,004
Cash, balances at central banks and credit institutions and other deposits on demand	216,308	35,607	52,358	12,311	123,230	(126,078)	313,736
Debt securities	76,318	44,060	57,106	7,644	8,588	—	193,716
Other financial assets ^A	47,737	14,668	19,854	190	271	—	82,720
Other asset accounts ^B	26,564	22,741	18,795	8,262	124,344	(92,223)	108,483
Total liabilities	915,167	262,931	268,417	137,986	178,651	(126,078)	1,637,074
Customer deposits	659,553	168,748	137,661	58,544	895	—	1,025,401
Central banks and credit institutions	112,254	25,294	42,921	39,169	71,225	(126,078)	164,785
Marketable debt securities	71,731	41,063	35,063	33,749	98,733	—	280,339
Other financial liabilities ^C	60,008	20,883	41,445	1,820	309	—	124,465
Other liabilities accounts ^D	11,621	6,943	11,327	4,704	7,489	—	42,084
Total equity	43,040	25,664	24,508	13,029	83,567	(92,223)	97,585
Other customer funds under management	100,178	15,571	65,251	880	—	—	181,880
Investment funds	70,084	13,949	58,156	—	—	—	142,189
Pension funds	13,940	81	—	—	—	—	14,021
Assets under management	16,154	1,541	7,095	880	—	—	25,670
Other non-managed marketed customer funds	23,305	20,908	1,077	3,089	—	—	48,379

A. Including Trading derivatives and Equity instruments.

B. Including Hedging derivatives, Changes in the fair value of hedged items in portfolio hedges of interest risk, Investments in joint ventures and associated entities, Assets under insurance or reinsurance contracts, tangible assets, intangible assets, tax assets, other assets and non-current assets held for sale.

C. Including Trading derivatives, Short positions and Other financial liabilities.

D. Including Hedging derivatives, Changes in the fair value of hedged items in portfolio hedges of interest risk, Liabilities under insurance or reinsurance contracts, provisions, tax liabilities, other liabilities and liabilities associated with non-current assets held for sale.

EUR million

Balance sheet (condensed)	2021						Total
	Europe	North America	South America	Digital Consumer Bank	Corporate Centre	Intra-Group eliminations	
Total assets	943,875	244,734	257,805	148,005	215,467	(214,051)	1,595,835
Loans and advances to customers	590,610	137,428	123,920	113,937	6,787	—	972,682
Cash, balances at central banks and credit institutions and other deposits on demand	219,154	34,857	43,134	21,804	88,918	(125,195)	282,672
Debt securities	67,068	38,500	51,451	5,280	1,554	—	163,853
Other financial assets ^A	37,250	12,555	23,809	47	2,203	—	75,864
Other asset accounts ^B	29,793	21,394	15,491	6,937	116,005	(88,856)	100,764
Total liabilities	899,007	216,048	237,375	135,599	135,950	(125,197)	1,498,782
Customer deposits	619,486	121,989	120,500	55,327	1,042	—	918,344
Central banks and credit institutions	156,257	35,152	44,314	37,600	53,063	(125,197)	201,189
Marketable debt securities	73,629	38,061	23,461	36,710	74,302	—	246,163
Other financial liabilities ^C	38,706	14,652	40,490	1,397	430	—	95,675
Other liabilities accounts ^D	10,929	6,194	8,610	4,565	7,113	—	37,411
Total equity	44,868	28,686	20,430	12,406	79,517	(88,854)	97,053
Other customer funds under management	114,698	13,949	57,428	852	—	—	186,927
Investment funds	82,641	12,112	51,234	—	—	—	145,987
Pension funds	15,994	84	—	—	—	—	16,078
Assets under management	16,063	1,753	6,194	852	—	—	24,862
Other non-managed marketed customer funds	25,572	20,213	103	2,497	—	—	48,385

A. Including Trading derivatives and Equity instruments.

B. Including Hedging derivatives, Changes in the fair value of hedged items in portfolio hedges of interest risk, Investments in joint ventures and associated entities, Assets under insurance or reinsurance contracts, tangible assets, intangible assets, tax assets, other assets and non-current assets held for sale.

C. Including Trading derivatives, Short positions and Other financial liabilities.

D. Including ' Hedging derivatives', Changes in the fair value of hedged items in portfolio hedges of interest risk, Liabilities under insurance or reinsurance contracts, provisions, tax liabilities, other liabilities and liabilities associated with non-current assets held for sale.



EUR million

Balance sheet (condensed)	2020						Total
	Europe	North America	South America	Digital Consumer Bank	Corporate Centre	Intra-Group eliminations	
Total assets	909,304	223,797	238,746	137,155	182,587	(183,339)	1,508,250
Loans and advances to customers	563,581	120,571	113,745	113,258	5,044	—	916,199
Cash, balances at central banks and credit institutions and other deposits on demand	180,245	28,666	43,154	12,058	61,174	(99,501)	225,796
Debt securities	81,271	38,403	49,304	5,659	1,917	—	176,554
Other financial assets ^A	48,313	15,439	17,342	30	1,645	—	82,769
Other asset accounts ^B	35,894	20,718	15,201	6,150	112,807	(83,838)	106,932
Total liabilities	866,949	199,789	218,927	124,720	106,044	(99,501)	1,416,928
Customer deposits	582,353	102,924	111,808	51,399	826	—	849,310
Central banks and credit institutions	133,973	38,071	42,049	32,046	38,041	(99,501)	184,679
Marketable debt securities	84,201	36,583	21,280	35,965	57,240	—	235,269
Other financial liabilities ^C	54,634	16,182	35,456	1,370	493	—	108,135
Other liabilities accounts ^D	11,788	6,029	8,334	3,940	9,444	—	39,535
Total equity	42,355	24,008	19,819	12,435	76,543	(83,838)	91,322
Other customer funds under management	99,301	12,501	55,965	475	12	—	168,254
Investment funds	71,239	10,864	49,850	—	12	—	131,965
Pension funds	15,487	90	—	—	—	—	15,577
Assets under management	12,575	1,547	6,115	475	—	—	20,712
Other non-managed marketed customer funds	21,913	15,920	72	658	—	—	38,563

A. Including 'Trading derivatives' and 'Equity instruments'.

B. Including 'Hedging derivatives', 'Changes in the fair value of hedged items in portfolio hedges of interest risk', 'Investments in joint ventures and associated entities', 'Assets under insurance or reinsurance contracts', 'Tangible assets', 'Intangible assets', 'Tax assets', other assets and non-current assets held for sale.

C. Including Trading derivatives, Short positions and Other financial liabilities.

D. Including Hedging derivatives, Changes in the fair value of hedged items in portfolio hedges of interest risk, Liabilities under insurance or reinsurance contracts, provisions, tax liabilities, other liabilities and liabilities associated with non-current assets held for sale.



The condensed income statements for the primary segments are as follows:

EUR million

Underlying income statement (condensed)	2022					Total
	Europe	North America	South America	Digital Consumer Bank	Corporate centre	
Net interest income	12,565	9,705	12,979	4,022	(652)	38,619
Net fee income	4,493	1,958	4,515	843	(19)	11,790
Gains (losses) on financial transactions ^A	821	204	1,291	60	(723)	1,653
Other operating income ^B	151	449	(761)	344	(91)	92
Total income	18,030	12,316	18,024	5,269	(1,485)	52,154
Administrative expenses, depreciation and amortisation	(8,523)	(5,871)	(6,675)	(2,462)	(372)	(23,903)
Net operating income^C	9,507	6,445	11,349	2,807	(1,857)	28,251
Net loan-loss provisions ^D	(2,396)	(2,538)	(5,041)	(544)	10	(10,509)
Other gains (losses) and provisions ^E	(1,629)	(118)	(544)	(27)	(174)	(2,492)
Operating profit/(loss) before tax	5,482	3,789	5,764	2,236	(2,021)	15,250
Tax on profit	(1,492)	(869)	(1,549)	(549)	(27)	(4,486)
Profit from continuing operations	3,990	2,920	4,215	1,687	(2,048)	10,764
Net profit from discontinued operations	—	—	—	—	—	—
Consolidated profit	3,990	2,920	4,215	1,687	(2,048)	10,764
Non-controlling interests	179	43	557	379	1	1,159
Attributable profit to the parent	3,811	2,877	3,658	1,308	(2,049)	9,605

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. 'Net Operating Income' is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. 'Net loan-loss provisions' refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes a release of EUR 27 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except a release EUR 27 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognised in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.



EUR million

Underlying income statement (condensed)	2021					
	Europe	North America	South America	Digital Consumer Bank	Corporate Centre	Total
Net interest income	10,574	8,072	11,307	4,041	(624)	33,370
Net fee income	4,344	1,644	3,721	821	(28)	10,502
Gains (losses) on financial transactions ^A	756	224	716	8	(141)	1,563
Other operating income ^B	260	914	(407)	229	(27)	969
Total income	15,934	10,854	15,337	5,099	(820)	46,404
Administrative expenses, depreciation and amortisation	(8,318)	(4,967)	(5,379)	(2,405)	(346)	(21,415)
Net operating income^C	7,616	5,887	9,958	2,694	(1,166)	24,989
Net loan-loss provisions ^D	(2,293)	(1,210)	(3,251)	(527)	(155)	(7,436)
Other gains (losses) and provisions ^E	(1,290)	(145)	(474)	(194)	(190)	(2,293)
Operating profit/(loss) before tax	4,033	4,532	6,233	1,973	(1,511)	15,260
Tax on profit	(1,212)	(1,016)	(2,360)	(464)	(24)	(5,076)
Profit from continuing operations	2,821	3,516	3,873	1,509	(1,535)	10,184
Net profit from discontinued operations	—	—	—	—	—	—
Consolidated profit	2,821	3,516	3,873	1,509	(1,535)	10,184
Non-controlling interests	71	556	556	345	2	1,530
Attributable profit to the parent	2,750	2,960	3,317	1,164	(1,537)	8,654

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net, Gain or losses on financial assets and liabilities held for trading, net, Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net, Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net, Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. 'Net Operating Income' is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. 'Loan loss provisions' refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes an addition of EUR 29 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except an addition of EUR 29 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognised in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.



EUR million

Underlying income statement (condensed)	2020					Total
	Europe	North America	South America	Digital Consumer Bank	Corporate Centre	
Net interest income	9,518	8,394	10,710	4,014	(642)	31,994
Net fee income	4,000	1,684	3,589	771	(29)	10,015
Gains (losses) on financial transactions ^A	868	251	765	16	287	2,187
Other operating income ^B	(106)	628	(209)	116	(25)	404
Total income	14,280	10,957	14,855	4,917	(409)	44,600
Administrative expenses, depreciation and amortisation	(8,275)	(4,677)	(5,357)	(2,329)	(329)	(20,967)
Net operating income^C	6,005	6,280	9,498	2,588	(738)	23,633
Net loan-loss provisions ^D	(3,345)	(3,917)	(3,924)	(957)	(31)	(12,174)
Other gains (losses) and provisions ^E	(970)	(132)	(320)	49	(412)	(1,785)
Operating profit/(loss) before tax	1,690	2,231	5,254	1,680	(1,181)	9,674
Tax on profit	(476)	(550)	(1,918)	(421)	(151)	(3,516)
Profit from continuing operations	1,214	1,681	3,336	1,259	(1,332)	6,158
Net profit from discontinued operations	—	—	—	—	—	—
Consolidated profit	1,214	1,681	3,336	1,259	(1,332)	6,158
Non-controlling interests	78	261	437	301	—	1,077
Attributable profit to the parent	1,136	1,420	2,899	958	(1,332)	5,081

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method; Other operating income; Other operating expenses; Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. 'Net Operating Income' is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. 'Net loan-loss provisions' refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes an addition of EUR 50 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except an addition of EUR 50 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognised in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.



b) Secondary segments

At this secondary level, Grupo Santander is structured into Retail Banking, Santander Corporate & Investment Banking (SCIB), Wealth Management & Insurance (WM&I) and PagoNxt.

- **Retail Banking:** this covers all customer banking businesses, including consumer finance, except those of corporate banking which are managed through Santander Corporate & Investment Banking, asset management, private banking and insurance, which are managed by WM&I. The results of the hedging positions in each country are also included, conducted within the sphere of their respective assets and liabilities committees.
- **Santander Corporate & Investment Banking (SCIB):** this business reflects revenue from global corporate banking, investment banking and markets worldwide including treasuries managed globally (always after the appropriate distribution with Retail Banking customers), as well as equity business.
- **Wealth Management & Insurance:** includes the asset management business (Santander Asset Management), the corporate unit of Private Banking and International Private Banking in Miami and Switzerland (Santander Private Banking) and the insurance business (Santander Insurance).
- **PagoNxt:** this includes digital payment solutions, providing global technology solutions for Grupo Santander's banks and new customers in the open market. It is structured in four businesses: Merchant, International Trade, Payments and Consumer.

Although WM&I and PagoNxt do not meet the quantitative thresholds defined in IFRS 8, these segments are considered reportable by Grupo Santander and are disclosed separately because Grupo Santander's management believes that information about these segments are useful to users of the financial statements.

There are no customers located in a place different from the location of the Group's assets that generate revenues in excess of 10% of ordinary revenues.



The condensed income statements are as follows:

EUR million

Underlying income statement (condensed)	2022					Total
	Retail Banking	Santander Corporate & Investment Banking	Wealth Management & Insurance	PagoNxt	Corporate centre	
Net interest income	34,880	3,544	825	22	(652)	38,619
Net fee income	7,650	1,988	1,291	881	(19)	11,790
Gains (losses) on financial transactions ^A	435	1,833	123	(14)	(723)	1,653
Other operating income ^B	(280)	31	369	64	(91)	92
Total income	42,685	7,396	2,608	953	(1,485)	52,154
Administrative expenses, depreciation and amortisation	(18,568)	(2,898)	(1,041)	(1,024)	(372)	(23,903)
Net operating income^C	24,117	4,498	1,567	(71)	(1,857)	28,251
Net loan-loss provisions ^D	(10,210)	(251)	(14)	(44)	10	(10,509)
Other gains (losses) and provisions ^E	(2,135)	(131)	(26)	(26)	(174)	(2,492)
Operating profit/(loss) before tax	11,772	4,116	1,527	(141)	(2,021)	15,250
Tax on profit	(2,931)	(1,119)	(347)	(63)	(27)	(4,486)
Profit/(loss) from continuing operations	8,841	2,997	1,180	(204)	(2,048)	10,764
Net profit/(loss) from discontinued operations	—	—	—	—	—	—
Consolidated profit/(loss)	8,841	2,997	1,180	(204)	(2,048)	10,764
Non-controlling interests	895	192	60	12	1	1,159
Attributable profit/(loss) to the parent	7,946	2,805	1,120	(216)	(2,049)	9,605

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method; Other operating income; Other operating expenses; Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes an addition of EUR 27 million mainly corresponding to the results by commitments and contingent risks included in the line provisions or reversal of provisions, net of the statutory income statement.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except an addition of EUR 27 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.



EUR million

Underlying income statement (condensed)	2021					Total
	Retail Banking	Santander Corporate & Investment Banking (SCIB)	Wealth Management & Insurance	PagoNxt	Corporate Centre	
Net interest income	30,595	2,921	477	1	(624)	33,370
Net fee income	7,045	1,744	1,248	493	(28)	10,502
Gains (losses) on financial transactions ^A	839	766	100	(1)	(141)	1,563
Other operating income ^B	390	188	416	2	(27)	969
Total income	38,869	5,619	2,241	495	(820)	46,404
Administrative expenses, depreciation and amortisation	(17,102)	(2,380)	(914)	(673)	(346)	(21,415)
Net operating income^C	21,767	3,239	1,327	(178)	(1,166)	24,989
Net loan-loss provisions ^D	(7,082)	(151)	(38)	(10)	(155)	(7,436)
Other gains (losses) and provisions ^E	(2,053)	(17)	6	(39)	(190)	(2,293)
Operating profit/(loss) before tax	12,632	3,071	1,295	(227)	(1,511)	15,260
Tax on profit	(3,898)	(821)	(309)	(24)	(24)	(5,076)
Profit/(loss) from continuing operations	8,734	2,250	986	(251)	(1,535)	10,184
Net profit/(loss) from discontinued operations	—	—	—	—	—	—
Consolidated profit/(loss)	8,734	2,250	986	(251)	(1,535)	10,184
Non-controlling interests	1,345	137	44	2	2	1,530
Attributable profit/(loss) to the parent	7,389	2,113	942	(253)	(1,537)	8,654

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes a release of EUR 29 million mainly corresponding to the results by commitments and contingent risks included in the line provisions or reversal of provisions, net of the statutory income statement.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except a release of EUR 29 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.

EUR million

Underlying income statement (condensed)	2020					Total
	Retail Banking	Santander Corporate & Investment Banking (SCIB)	Wealth Management & Insurance	PagoNxt	Corporate Centre	
Net interest income	29,401	2,842	394	(1)	(642)	31,994
Net fee income	6,986	1,542	1,154	362	(29)	10,015
Gains (losses) on financial transactions ^A	1,132	670	99	(1)	287	2,187
Other operating income ^B	(153)	202	383	(3)	(25)	404
Total income	37,366	5,256	2,030	357	(409)	44,600
Administrative expenses, depreciation and amortisation	(17,285)	(2,038)	(872)	(443)	(329)	(20,967)
Net operating income^C	20,081	3,218	1,158	(86)	(738)	23,633
Net loan-loss provisions ^D	(11,633)	(470)	(28)	(12)	(31)	(12,174)
Other gains (losses) and provisions ^E	(1,238)	(134)	1	(2)	(412)	(1,785)
Operating profit/(loss) before tax	7,210	2,614	1,131	(100)	(1,181)	9,674
Tax on profit	(2,328)	(750)	(272)	(15)	(151)	(3,516)
Profit/(loss) from continuing operations	4,882	1,864	859	(115)	(1,332)	6,158
Net profit/(loss) from discontinued operations	—	—	—	—	—	—
Consolidated profit/(loss)	4,882	1,864	859	(115)	(1,332)	6,158
Non-controlling interests	921	118	37	1	—	1,077
Attributable profit/(loss) to the parent	3,961	1,746	822	(116)	(1,332)	5,081

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method; Other operating income; Other operating expenses; Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes a release of EUR 50 million mainly corresponding to the results by commitments and contingent risks included in the line provisions or reversal of provisions, net of the statutory income statement.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except a release of EUR 50 million mainly corresponding to the results by commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.



c) Reconciliations of reportable segment results

The tables below reconcile the underlying basis results to the statutory results for each of the periods presented as required by IFRS 8. For the purposes of these reconciliations, all material reconciling items are separately identified and described.

Grupo Santander assets and liabilities for management reporting purposes do not differ from the statutory reported figures and therefore are not reconciled.

EUR million

2022			
Reconciliation of underlying results to statutory results	Underlying results	Adjustments	Statutory results
Net interest income	38,619	—	38,619
Net fee income	11,790	—	11,790
Gains (losses) on financial transactions ^A	1,653	—	1,653
Other operating income ^B	92	(37)	55
Total income	52,154	(37)	52,117
Administrative expenses, depreciation and amortisation	(23,903)	—	(23,903)
Net operating income^C	28,251	(37)	28,214
Net loan-loss provisions ^D	(10,509)	(327)	(10,836)
Other gains (losses) and provisions ^E	(2,492)	364	(2,128)
Operating profit/(loss) before tax	15,250	—	15,250
Tax on profit	(4,486)	—	(4,486)
Adjusted profit for the year from continuing operations	10,764	—	10,764
Profit from discontinued operations (net)	—	—	—
Consolidated profit/(loss)	10,764	—	10,764
Non-controlling interests	(1,159)	—	(1,159)
Attributable profit/(loss) to the parent	9,605	—	9,605

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net, Gain or losses on financial assets and liabilities held for trading, net, Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net, Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net, Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes a release of EUR 27 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except for a release of EUR 27 million mainly corresponding to results from commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.

Explanation of adjustments:

- Mainly, payment holidays in Poland.



EUR million

	2021		
	Underlying results	Adjustments	Statutory results
Reconciliation of underlying results to statutory results			
Net interest income	33,370	—	33,370
Net fee income	10,502	—	10,502
Gains (losses) on financial transactions ^A	1,563	—	1,563
Other operating income ^B	969	—	969
Total income	46,404	—	46,404
Administrative expenses, depreciation and amortisation	(21,415)	—	(21,415)
Net operating income^C	24,989	—	24,989
Net loan-loss provisions ^D	(7,436)	—	(7,436)
Other gains (losses) and provisions ^E	(2,293)	(713)	(3,006)
Operating profit/(loss) before tax	15,260	(713)	14,547
Tax on profit	(5,076)	182	(4,894)
Adjusted profit for the year from continuing operations	10,184	(531)	9,653
Profit from discontinued operations (net)	—	—	—
Consolidated profit/(loss)	10,184	(531)	9,653
Non-controlling interests	(1,530)	1	(1,529)
Attributable profit/(loss) to the parent	8,654	(530)	8,124

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net, Gain or losses on financial assets and liabilities held for trading, net, Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net, Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net, Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes an addition of EUR 29 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except for an addition of EUR 29 million mainly corresponding to results from commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations

Explanation of adjustments:

- Restructuring costs for net impact of EUR -530 million, mainly in the United Kingdom and Portugal.



EUR million

	2020		
	Underlying results	Adjustments	Statutory results
Reconciliation of underlying results to statutory results			
Net interest income	31,994	—	31,994
Net fee income	10,015	—	10,015
Gains (losses) on financial transactions ^A	2,187	—	2,187
Other operating income ^B	404	(321)	83
Total income	44,600	(321)	44,279
Administrative expenses, depreciation and amortisation	(20,967)	(163)	(21,130)
Net operating income^C	23,633	(484)	23,149
Net loan-loss provisions ^D	(12,174)	(258)	(12,432)
Other gains (losses) and provisions ^E	(1,785)	(11,008)	(12,793)
Operating profit/(loss) before tax	9,674	(11,750)	(2,076)
Tax on profit	(3,516)	(2,116)	(5,632)
Adjusted profit for the year from continuing operations	6,158	(13,866)	(7,708)
Profit from discontinued operations (net)	—	—	—
Consolidated profit/(loss)	6,158	(13,866)	(7,708)
Non-controlling interests	1,077	(14)	1,063
Attributable profit/(loss) to the parent	5,081	(13,852)	(8,771)

- A. Gains (losses) on financial transactions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net; Gain or losses on financial assets and liabilities held for trading, net; Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net; Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net; Gain or losses from hedge accounting, net and Exchange differences, net.
- B. Other operating income includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Dividend income; Income from companies accounted for using the equity method, Other operating income, Other operating expenses, Income from assets under insurance or reinsurance contracts and Expenses from liabilities under insurance or reinsurance contracts.
- C. Net Operating Income is used for the Group's internal reporting and management reporting purposes but is not a line item in the statutory consolidated income statement.
- D. Net loan-loss provisions refers to Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes line item in the statutory income statement. Additionally, includes an addition of EUR 50 million mainly corresponding to the results by commitments and contingent risks includes in the line of the statutory income statement of provisions or reversal of provisions.
- E. Other gains (losses) and provisions includes the following line items in the statutory income statement, which are presented net for internal reporting and management reporting purposes: Provisions or reversal of provisions except an addition of EUR 50 million mainly corresponding to results from commitments and contingent risks; Impairment of investments in joint ventures and associates, net; Impairment on non-financial assets, net; Gains or losses on non-financial assets, net; Negative goodwill recognized in results and Gains or losses on non-current assets held for sale not classified as discontinued operations.

Explanation of adjustments:

- Adjustment to the valuation of goodwill arising from the Group's acquisitions in the amount of EUR -10,100 million, which is included in the line 'Other gains (losses) and provisions'.
- Adjustment to the valuation of the deferred tax assets of the consolidated tax group in Spain in the amount of EUR -2,500 million, which is included in the 'Tax on profit' line.
- Restructuring costs with a net impact of EUR -1,114 million, which are included for their gross amount mainly in the line 'Other gains (losses) and provisions'.
- Other charges of EUR -138 million (related to sales of non-performing loans in Spain, cancellation of pension commitment costs and other expenses), which are recorded gross in 'Other gains (losses) and provisions', 'Net loan-loss provision' and 'Administrative expenses and depreciation and amortization'.



52. Related parties

The parties related to the Group are deemed to include, in addition to its subsidiaries, associates and joint ventures, the Bank's key management personnel (the members of its board of directors and the executive vice presidents, together with their close family members) and the entities over which the key management personnel may exercise significant influence or control.

Following below is the balance sheet balances and amounts of the Group's income statement corresponding to operations with the parties related to it, distinguishing between associates and joint ventures, members of the Bank's board of directors, the Bank's executive vice presidents, and other related parties. Related-party transactions were made on terms equivalent to those that prevail in arm's-length transactions or, when this was not the case, the related compensation in kind was recognized.

EUR million

	2022			
	Associates and joint ventures	Members of the board of directors	Executive vicepresident	Other related parties
Assets	10,257	—	13	455
Cash, cash balances at central banks and other deposits on demand	227	—	—	—
Loans and advances: credit institutions	489	—	—	—
Loans and advances: customers	8,822	—	13	455
Debt securities	463	—	—	—
Others	256	—	—	—
Liabilities	3,611	11	11	109
Financial liabilities: credit institutions	938	—	—	—
Financial liabilities: customers	2,301	11	11	109
Marketable debt securities	—	—	—	—
Others	372	—	—	—
Income statement	1,357	—	—	2
Interest income	189	—	—	1
Interest expense	(60)	—	—	—
Gains/losses on financial assets and liabilities and others	(225)	—	—	—
Commission income	1,541	—	—	1
Commission expense	(88)	—	—	—
Other	3,535	2	2	79
Financial guarantees granted and Others	11	1	1	23
Loan commitments and Other commitments granted	201	1	1	13
Derivative financial instruments	3,323	—	—	43



EUR million

	2021			
	Associates and joint ventures	Members of the board of directors	Executive vicepresident	Other related parties
Assets	9,386	—	14	384
Cash, cash balances at central banks and other deposits on demand	131	—	—	—
Loans and advances: credit institutions	437	—	—	—
Loans and advances: customers	8,148	—	14	384
Debt securities	496	—	—	—
Others	174	—	—	—
Liabilities	3,405	8	11	197
Financial liabilities: credit institutions	867	—	—	—
Financial liabilities: customers	2,464	8	11	197
Marketable debt securities	—	—	—	—
Others	74	—	—	—
Income statement	1,265	—	—	1
Interest income	90	—	—	1
Interest expense	(13)	—	—	—
Gains/losses on financial assets and liabilities and others	(32)	—	—	—
Commission income	1,268	—	—	—
Commission expense	(48)	—	—	—
Other	3,965	2	2	76
Financial guarantees granted and Others	11	1	1	17
Loan commitments and Other commitments granted	314	1	1	13
Derivative financial instruments	3,640	—	—	46



EUR million

	2020			
	Associates and joint ventures	Members of the board of directors	Executive vicepresident	Other related parties
Assets	8,473	—	24	95
Cash, cash balances at central banks and other deposits on demand	151	—	—	—
Loans and advances: credit institutions	562	—	—	—
Loans and advances: customers	6,934	—	24	95
Debt securities	423	—	—	—
Others	403	—	—	—
Liabilities	3,593	4	16	159
Financial liabilities: credit institutions	944	—	—	—
Financial liabilities: customers	2,557	4	16	159
Marketable debt securities	12	—	—	—
Others	80	—	—	—
Income statement	1,269	—	—	3
Interest income	106	—	—	2
Interest expense	(8)	—	—	—
Gains/losses on financial assets and liabilities and others	49	—	—	—
Commission income	1,154	—	—	1
Commission expense	(32)	—	—	—
Other	4,097	1	1	52
Financial guarantees granted and Others	14	—	—	3
Loan commitments and Other commitments granted	253	1	1	13
Derivative financial instruments	3,830	—	—	36

The remaining required information is detailed in notes 5 and 46.c.



53. Risk management

a) Risk principles and culture

The principles on which Grupo Santander's risk management and control are based are detailed below. They take into account regulatory requirements, best market practices and are mandatory:

1. **All employees are risk managers** who must understand the risks associated with their functions and not assume risks that will exceed the Group's risk appetite or have an unknown impact.
2. **Senior managers** must make sure Grupo Santander keeps its risk profile within risk appetite, with consistent risk conduct, action, communications, and oversight of our risk culture.
3. **Independent risk management and control functions**, according to the three lines of defence model of Grupo Santander.
4. **Grupo Santander takes a forward-looking, comprehensive approach** towards all businesses and risk types.
5. **Santander keeps thorough and timely reporting** to properly pinpoint, assess, manage and disclose risks.

1. Key risk types

Grupo Santander's risks categorization ensures effective risk management, control and reporting. The risk framework distinguishes these risk types:

- **Credit risk** relates to financial loss arising from the default or credit quality deterioration of a customer or counterparty, to which Santander has directly provided credit or assumed a contractual obligation.
- **Market risk** results from changes in interest rates, exchange rates, equities, commodities and other market factors, and from their effect on profit or capital. It includes the structural risk relates to market movements or balance sheets behaviour will change the value or profit generation of assets or liabilities in the banking book.
- **Liquidity risk** occurs if liquid financial resources are insufficient or too costly to obtain in order to meet liabilities when they fall due.
- **Capital risk** is the risk that arises from the possibility of having an inadequate quantity or quality of capital to meet internal business objectives, regulatory requirements or market expectations in the area of structural risk.

Grupo Santander also takes into account, on an ongoing basis in its management of the risk function, operational (includes fraud, technological, cyber, legal and conduct risks), financial crime (includes, among others, money laundering, terrorism financing, violation of international sanctions, corruption, bribery and tax evasion), model, structural (includes risks associated with insurance and pensions), reputational and strategic risks.

Besides, environmental and climate-related risk drivers are considered as factors that could impact the existing risks in the medium-to-long-term. These elements include, on the one hand, those derived from the physical effects of climate change, generated by one-off events as well as by chronic changes in the environment and, on the other hand, those derived from the process of transition to a development model with lower emissions, including legislative, technological or behaviour of economic agents changes.

Climate change and environmental risk could affect other risks in different time horizons on account of physical damage, as well as factors relating to the transition to a more sustainable economy, such as legislative reform, technology and economic agents. Given the nature of its operations, the Group has no environment-related liabilities, expenses, assets or contingencies of a material relevance to its consolidated equity, financial situation and results.

Most exposures in sectors potentially affected by climate change risk are with wholesale clients, whose preliminary reviews, credit approval and credit ratings take such risk into account. Customers' ratings determine the parameters for calculating loan loss (typically in terms of probability of default or "PD"). Thus, when climate factors are relevant, in conjunction with other elements of analysis, they have an impact on the loan loss calculations which support capital and provisions.

The Group also passed the recent regulatory climate stress tests, which had been classified as learning exercises for the industry. Results showed that the Group's coverage for potential losses would be sufficient in view of portfolio maturity over time.

Therefore, based on the best information available at the time these consolidated annual financial statements were prepared, the Group sees no additional environmental or climate change risk having a substantial impact on its equity, financial situation and results in 2022.

Still, this matter is constantly changing, and, like other banks, the Group is working on developing more methodologies to better measure potential loan loss in line with new management needs, best practice, and regulators' and supervisors' requirements.

2. Risk and compliance governance

Grupo Santander robust risk and compliance governance structure allows us to conduct effective oversight in line with our risk appetite. It stands on three lines of defence, a structure of committees and strong Group-subsidiary relations, guided by our risk culture, Risk Pro.

2.1 Lines of defence

Grupo Santander model of three lines of defence effectively manages and controls risks:

- **First line:** formed by business and support areas, which are primarily accountable for managing the risk exposure they originate, recognizes, measures, monitors and reports on risks according to risk management policies, models and procedures. Risk origination must be consistent with the approved risk appetite and related limits.



- **Second line:** formed by risk and compliance & conduct functions, independently oversees and challenges risk management at the first line of defence to make sure Grupo Santander keeps risks within risk appetite approved by senior management and promote Risk Pro in the Group.
- **Third line:** Internal audit function, is fully independent to give the board and senior managers assurance of high-quality and efficient risk governance and management to preserve our value, solvency and reputation.

Risk, compliance & conduct, and internal audit are sufficiently separate and autonomous functions, with direct access to the board and its committees.

2.2 Risk committee structure

The **board of directors** has final oversight of risk management and compliance promoting a sound risk culture and reviewing and approving risk appetite and frameworks, with support from its risk, regulation and compliance committee and its executive committee. The Group's risk governance keeps risk control and risk-taking areas separate.

The **Group chief risk officer (Group CRO)**, who leads the application and execution of risk strategy and promotes proper risk culture, is in charge of overseeing all risks and challenging and advising business lines on risk management.

The **Group chief compliance officer (Group CCO)**, who handles compliance risk and leads the application and execution of the compliance and conduct risk strategy and provides the Group CRO with a complete overview on the situation of risks being monitored.

The Group CRO and the Group CCO report directly to both the risk supervision, regulation and compliance committee and the board of directors.

The executive risk, risk control and compliance and conduct committees are executive committees with powers delegated from the board.

Furthermore, risk functions have forums and regular meetings to manage and control the risks within their purview. Executive committees also delegate some duties to subordinate forums.

Their responsibilities include:

- Inform the Group CRO, the Group CCO, the risk control committee and the compliance and conduct committee if risks are being managed within risk appetite;
- Regularly monitor each key risk type; and
- Overseeing measures to meet supervisors and auditors' expectations.

Besides, Grupo Santander, in order to establish an adequate control environment for the management of each risk types, the Risk and Compliance and Conduct functions have effective internal regulation to create the right environment to manage and control all risks.

Grupo Santander can also implement extra governance measures for special situations, as it did with Brexit and the covid-19 crisis. Since the beginning of the war in Ukraine, Santander has strengthened the monitoring of all risks, with special attention to the situation in Poland, monitoring of macroeconomic performance, vulnerable sectors/customers, cybersecurity, among other. In addition, the compliance team have continuously reviewed the application of the sanctions. Santander has no presence in, or hardly any direct exposure to, Russia and Ukraine. Our special situations governance enabled the Group to remain resilient against the consequences of the war in Ukraine.

2.3 The Group's relationship with subsidiaries

Grupo Santander subsidiaries have a model for managing risk, compliance and conduct that is consistent with the frameworks approved by the group's board of directors, which they adhere to through their own boards and can only adapt to higher standards according to local law and regulation.

Furthermore, the Group's aggregate oversight area advises and validates subsidiaries on internal regulation and operations. This reinforces a common risk management model across Santander.

In 2022, Grupo Santander continued to build on our Group-subsiidiaries' model through a regional approach, benefiting from the Group's global scale to find synergy for standard operations and platforms; to streamline processes; and tighten control mechanisms to grow our business.

The Group CRO, the Group CCO and regional heads of risk are involved in appointing, setting objectives for, reviewing and compensating their country-unit counterparts to promote proper risk management. Each subsidiary CRO/CCO interacts regularly with the regional head of risk, the Group CRO and the Group CCO in regional or country control meetings.

Local and global risk and compliance areas also meet to address special matters. Country and regional units work closely to effectively strengthen group-subsiidiary relations through these common initiatives:

- restructuring based on subsidiary benchmarks, strategic vision, and advanced risk management infrastructures and practices.
- exchange of best practices that will strengthen processes, drive innovation and result in a quantitative impact.
- search for talent in risk and compliance teams with internal mobility through the global risk talent programme and strong succession plans.

3. Management processes and tools

Grupo Santander has these effective risk management processes and tools:

3.1 Risk appetite and structure of limits

Risk appetite is the aggregate level and types of risk that Grupo Santander deems prudent for our business strategy, even in unforeseen circumstances. In Grupo Santander, these principles influence risk appetite:



- Risk appetite is part of the board's duties. It prepares the risk appetite statement (RAS) for the whole Group every year. In a cascading down process, each subsidiary's board also sets its own risk appetite.
- Comprehensiveness and forward-looking approach. Our appetite includes of all material risks that Santander are exposed to and defines our target risk profile for the current and medium term with a forward-looking view considering stress scenarios.
- Common standards and embedding in the day-to-day risk management. Common standards and embedding in the day-to-day risk management. The Group shares the same risk appetite model, which sets common requirements for processes, metrics, governance bodies, controls and standards.. It also ensures an effective and traceable embedding of our appetite into more granular management policies and limits across our subsidiaries.
- Continuous adaptation to market best practices, regulatory requirements and supervisors' expectations.
- Aligning with business plans and strategy. The risk appetite is a key point of reference for strategic and business planning. Grupo Santander verifies that the three-year strategic plans, the annual budget and capital and liquidity planning are within the limits set in the RAS before Santander approves them.

Grupo Santander's risk appetite and business model rest on the following elements:

- A medium-low, predictable target risk profile, centred on retail and commercial banking, internationally diversified operations and a strong market share;
- Stable, recurrent earnings and shareholder remuneration, sustained by a sound base of capital, liquidity and sources of funding;
- Autonomous subsidiaries that are self-sufficient in terms of capital and liquidity to ensure their risk profiles won't compromise the Group's solvency;
- An independent Risk function and a senior management actively engaged in supporting a robust control environment and risk culture; and
- A conduct model that protects our customers and our Simple, Personal and Fair culture.

The risk appetite is expressed through qualitative statements and limits on metrics representative of the bank's risk profile at present and under stress. Those metrics cover all risk types according to our corporate risk framework. Grupo Santander articulates them in five axes that provide the Bank with a holistic view of all risks it incurs in the development of its business model. These five axes are applicable to all Santander's key risk types, and comprise:

- P&L volatility: Control of P&L volatility of business plan under baseline and stressed conditions (aligned with ICAAP stress test)
- Solvency: Control of capital ratios under baseline and stressed scenarios (aligned with ICAAP)

- Liquidity: Control of liquidity ratios under base and stress scenarios (aligned with ILAAP)
- Concentration: Control of credit concentration on top clients, portfolios and industries
- Non financial: Control on non financial risks aimed to minimize events which could lead to financial loss, operative, technological, legal and regulatory breaches, conduct issues or reputational damage.

b) Credit risk

1. Introduction to the credit risk treatment

Credit risk is the risk of financial loss due to the failure to pay or impaired credit of a customer or counterparty Grupo Santander has financed or maintains a contractual obligation with. It includes counterparty risk, country risk and sovereign risk. It is our most significant risk in terms of exposure and capital consumption.

Credit risk management

Grupo Santander takes a holistic view of the credit risk cycle, including the transaction, the customer and the portfolio, in order to identify, analyse, control and decide on credit risk.

Credit risk identification facilitates active and effective portfolio management and control. Grupo Santander classify external and internal risk in each business to adopt any corrective or mitigating measures through:

1.1. Planning

Grupo Santander's planning helps to set business targets and draw up action plans within our risk appetite statement.

Strategic commercial plans (SCP) are a management and control tool the business and risk areas prepare for Grupo Santander's credit portfolios. They determine commercial strategies, risk policies, resources and infrastructure, ensuring a holistic view of the portfolios.

They provide managers with an updated view of portfolio credit quality to measure credit risk, run internal controls to regularly monitor credit strategy detect significant risk deviation and potential impacts, and take corrective action.

They are suited to the Grupo Santander's risk appetite and subsidiaries' capital targets, having been reviewed and pre-approved by senior managers before Group management revises and validates them.

1.2. Risk assessment and credit rating

Risk approval generally depends on the applicant's ability to repay the debt, regardless of any collateral or personal guarantees the Bank requires. Grupo Santander reviews their regular sources of income, including funds and net cash flows from any businesses.

Grupo Santander monitors credit rating drivers to calibrate the decisions and ratings that Group credit quality assessment models determine. Risk management uses these ratings for many things like applying approval limits, pre-approvals, monitoring risk, and policies on pricing credit.



Grupo Santander then uses rating models to measure ability to pay. Depending on each segment, credit rating drivers can be:

- **Rating:** from mathematical algorithms that have a quantitative model based on balance sheet ratios or macroeconomic variables, and a qualitative module supplemented by the credit analyst's expert judgement. It is used for SCIB, corporate, institutional and SME segments (with individualised treatment).
- **Scoring:** system of automatic evaluation of loan applications. It automatically assigns customers an individual score retail on which the subsequent decision is based. It is used for SME segments without an assigned analyst.

Grupo Santander's parameter estimation models, based on econometric models of past defaults and losses, calculate economic and regulatory capital as well as IFRS 9 provisions for each customer portfolio.

Grupo Santander regularly monitors and evaluates models' suitability, predictive capacity, performance, granularity, and compliance with policy, among other factors. Grupo Santander reviews ratings with the latest financial and other relevant information to assess credit risk due to depreciation caused by customers' lower creditworthiness and manage credit portfolios according to the risk appetite and profile target set out in SCPs, with exposure limits adjusted to an acceptable level for each portfolio and counterparty and for new loan originations.

Grupo Santander uses SCPs to manage credit portfolios, defining limits for each of them and for new originations, in line with the Group's credit risk appetite and its target risk profile. Transposing the risk appetite to portfolio management strengthens controls over our credit portfolios.

Grupo Santander's limits, pre-classifications and pre-approvals processes, which are highly automated and digitalized, determine the risk Grupo Santander can assume with each customer. Limits are approved by the executive risk committee (or delegated committees) and should reflect a transaction's expected risk-return. Santander also uses risk-based pricing tools to make sure portfolio growth is sustainable.

Grupo Santander applies various limits models to each segment:

- Large corporate groups are subject to a pre-classification model based on a system for measuring and monitoring economic capital. Pre-classification models express the level of risk Grupo Santander is willing to assume in transactions with customers/groups.
- Corporates and institutions that meet certain requirements (strong relationships, rating, etc.) are subject to a simpler pre-classification model that sets a recommended risk level for each customer. Transactions above certain limits or with special characteristics could require approval from a senior credit analyst or a committee.

Transactions with large corporates, corporates and institutions above certain limits or with special characteristics could require approval from a senior credit analyst or a committee.

- For individual customers and SMEs with low turnover, Grupo Santander manages large volumes of credit transactions with automatic decision models to classify customers and transactions.

1.3. Scenario analysis

Grupo Santander's scenario analyses determine the potential risks in its credit portfolios and provide a better understanding of our portfolios' performance under various macroeconomic conditions.

They allow us to anticipate management strategies that will avoid future deviations from defined plans and targets. They simulate the impact of alternative scenarios in portfolios' credit parameters (PD, LGD) and expected credit losses. Grupo Santander compares findings with portfolios' credit profile indicators to find the right measures for managers to take. Credit risk management of portfolios and SCPs incorporate scenario analyses.

1.4. Monitoring

Regularly monitoring business performance and comparing it to pre-defined plans is key to our management of risk. Grupo Santander's holistic monitoring of customers helps detect impacts on risk performance and credit quality early.

The monitoring process considers projections on the performance of the operations and their characteristics, in addition to any variation in their classification. Anticipation and preventive monitoring uses transactional data sources and advanced analytics (early warning engine) which determines specific actions at the client level, based on the assigned monitoring classification.

Monitoring is performed by local and global risk teams and is based on customer segmentation:

- For SCIB, monitoring is initially a function of business managers and risk analysts which provide an up-to-date view of customers' credit quality to predict a potential customer's deterioration.
- For commercial banking, institutions and SMEs assigned a credit analyst, Grupo Santander tracks customers requiring closer monitoring and review their ratings based on relevant indicators.
- Monitoring of individual customers, businesses and smaller SMEs follows a system of automatic alerts to detect shifts in portfolios' performance.

Monitoring uses the Santander Customer Assessment Note (SCAN) tool. Grupo Santander fully rolled it out in our subsidiaries in 2019. It helps set individual monitoring levels and frequencies, policies, and actions for customers based on credit quality and particular circumstances.

In addition to monitoring customer credit quality, Grupo Santander defines control procedures to analyse portfolios and performance, as well as any deviations from planning or approved alert levels.



1.5. Credit risk mitigation techniques

Grupo Santander generally approves risk according to a borrower's ability to make due payment, regardless of any additional collateral or personal guarantees Santander may require to modulate exposure.

To determine ability to pay, the Group analyse funds or cash flows from businesses or other regular income, not including guarantors or loan collateral which are always considered as a secondary means of recourse.

In general, guarantees are to reinforce a credit transaction and mitigate a loss if the borrower defaults. Our techniques to mitigate credit risk cover various types of customer and product. Some are for specific transactions (e.g. property) or a series of transactions (e.g. derivatives netting and collateral). Santander groups them by personal guarantees (with a solvent guarantor), collateral (mainly in primary residence mortgages) and hedges with credit derivatives.

The correct acceptance of these mitigation techniques is established by ensuring their legal enforceability in all jurisdictions. The entire process is subject to internal control and effective monitoring of the valuation of the guarantees, especially mortgages.

1.6. Collections & recoveries management

Collections & recoveries, an important area in risk management, develops a global management strategy based on local economic conditions, business models and other recovery-related particulars, with a full approach and general action lines for our subsidiaries. Recovery management follows regulatory requirements set out in the EBA Guidelines on the management of non-performing and forborne exposures.

For effective and efficient recoveries management, the area segments customers based on certain aspects, using new digital channels that help create value in Collections & Recoveries. It follows hi-tech, digital procedures to handle large groups of similar customer profiles and products; but it also adapts management for customers who need an assigned manager and tailored approach.

Collections & Recoveries splits recoveries into four phases: arrears/early delinquency, default, write-offs and foreclosed assets. To recover debt, the Group always seeks alternatives to court action, like forbearance and other arrears management techniques.

Grupo Santander also reviews debt instruments individually and treat them as write-offs (even when they're not past due) if the Group sees signs of irreversible impairment that suggest recovery to be remote. Though this may lead us to cancel all or part of the gross carrying amount, the Group never interrupt negotiations and legal proceedings to recover debt.

In markets where the real estate risk exposure is high, Grupo Santander can take action to quickly dispose of assets, like selling off portfolios or foreclosed assets with efficient sales instruments to recover as many on-balance-sheet assets as possible.



2. Main aggregates and variations

Following are the main aggregates relating to credit risk from our activities with customers:

Main credit risk performance metrics from activity with customers^A

December data

	Credit risk with customers (EUR million)			Credit impaired loans (EUR million)			NPL ratio (%)		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Europe	639,996	636,123	606,997	15,186	19,822	20,272	2.37	3.12	3.34
Spain	293,197	283,953	272,154	9,598	13,403	14,053	3.27	4.72	5.16
UK	253,455	262,869	252,255	3,059	3,766	3,138	1.21	1.43	1.24
Portugal	41,755	41,941	40,693	1,247	1,442	1,584	2.99	3.44	3.89
Poland	33,350	33,497	31,578	1,268	1,210	1,496	3.80	3.61	4.74
North America	185,614	149,792	131,626	5,629	3,632	2,938	3.03	2.42	2.23
US	140,452	112,808	99,135	4,571	2,624	2,025	3.25	2.33	2.04
Mexico	45,107	36,984	32,476	1,047	1,009	913	2.32	2.73	2.81
South America	167,348	141,874	129,590	10,381	6,387	5,688	6.20	4.50	4.39
Brazil	101,801	85,702	74,712	7,705	4,182	3,429	7.57	4.88	4.59
Chile	47,811	41,479	42,826	2,384	1,838	2,051	4.99	4.43	4.79
Argentina	5,844	5,481	4,418	122	198	93	2.08	3.61	2.11
Digital Consumer Bank	125,339	116,989	116,381	2,583	2,490	2,525	2.06	2.13	2.17
Corporate Centre	5,824	6,337	4,862	894	903	344	15.35	14.38	7.08
Total Group	1,124,121	1,051,115	989,456	34,673	33,234	31,767	3.08	3.16	3.21

A. Management perimeter according to the reported segments

B. Includes gross lending to customers, guarantees and documentary credits.

Key figures by geographic region are described below at 31 December 2022:

- **Europe:** The NPL ratio fell 75 bps to 2.37% from 2021 because impaired loans decreased significantly in the UK, and in Spain and Portugal due to the NPL portfolio sales.
- **North America:** The NPL ratio increased 61 bps to 3.03% from 2021, mainly due to increases at SC USA motivated by the new definition of default.
- **South America:** The NPL ratio rose 170 bp from 2021 to 6.20%, due to increases in Brazil (mainly due to the retail unsecured portfolio performance and a single name in SCIB) and Chile, offset by the decrease in Argentina.
- **Digital Consumer Bank:** The NPL ratio decreased 7 bps to 2.06%, despite the decrease in automobile financing.

All support measures (moratoria) that the Group took in response to the covid-19 pandemic have expired, with positive behaviour thanks to economic recovery in 2021, and improved sanitary-health environment in our main geographies.

Government liquidity programmes also remained in force in 2022, of which 77% of total credit granted was in Spain (77% was secured by the Instituto de Crédito Oficial - ICO), and 12% of total credit was in the UK, with 98% government-secured.

In the case of delinquent operations with ICO guarantee, the transfer of the overdue guaranteed amounts will take place as the guarantee is executed, regardless of whether the guarantor is subrogated to the right to receive said amounts, according to the regulation of these guarantees. The derecognition of the transferred guaranteed amounts will entail the recognition, at its fair value, of a collection right against the guarantor.

In addition, the Group is following the measures launched by the governments of Spain, Portugal and Poland (for more information please see note 10 c.), aimed at relieving the mortgage payment burden for vulnerable customers after the increase in interest rates.

Information on the estimation of impairment losses

The calculation of credit risk provisions is performed at financial asset level, estimating potential credit losses through the difference between the expected cash flows and the contractual cash flows, ensuring that the results are adequate considering the status of the transaction, economic conditions and available forward-looking information.

The IFRS 9 impairment model applies to financial assets valued at amortized cost; debt instruments valued at fair value with changes in other comprehensive income; leasing receivables; and commitments and guarantees not valued at fair value.

The portfolio of financial instruments subject to IFRS 9 has three credit risk categories (or stages) according to the status of each instrument in relation to its level of credit risk:

- Stage 1: financial instruments with no significant increase in risk since initial recognition – the impairment provision reflects expected credit losses from defaults over the twelve months from the reporting date.
- Stage 2: financial instruments with a significant credit risk increase since initial recognition but no materialized impairment event – the impairment provision reflects expected losses from defaults over the financial instrument's residual life.



- Stage 3: financial instruments with true signs of impairment as a result of one or more events resulting in a loss – the impairment provision reflects expected losses for credit risk over the instrument's expected residual life.

The classification of financial instrument in the IFRS 9 stages is carried out in accordance with the guidelines through the risk management policies of the subsidiaries, which are consistent with the Group's policies.

Estimation of expected loss

Grupo Santander calculates impairment losses using parameters (mainly EAD, PD, LGD and discount rate) based on internal models, the stage in which each financial asset is classified, and regulatory and management expertise. Far from being a simple adaptation, Santander defined and validated them according to specific requirements of IFRS 9 and other guidelines by regulators, supervisors and other international organizations (EBA, NCAs, BIS, GPPC, etc.), such as forward-looking information, point-in-time (PiT) vision, multiple scenarios, calculation of losses for the entire life of the transaction through lifetime PD, etc.

Determination of significant increase in credit risk

In order to determine the classification in stage 2, the Group assesses whether there has been a significant increase in credit risk (SICR) since the initial recognition of the transactions, considering a series of common principles throughout the Group that guarantee that all financial instruments are subject to this assessment, which considers the particularities of each portfolio and type of product on the basis of various quantitative and qualitative indicators. Furthermore, transactions are subject to the expert judgement of the analysts, who set the thresholds under an effective integration in management and implemented according to the approved governance.

The criteria thresholds used by the Group are based on a series of principles, and develop a set of techniques. The principles are as follows:

- **Universality:** all financial instruments subject to a credit rating must be assessed for their possible SICR.
- **Proportionality:** the definition of the SICR must take into account the particularities of each portfolio.
- **Materiality:** its implementation must be also consistent with the relevance of each portfolio so as not to incur in unnecessary costs or efforts.
- **Holistic vision:** the approach selected must be a combination of the most relevant credit risk aspects (e.g. quantitative and qualitative).
- **Application of IFRS 9:** the approach must take into consideration IFRS 9 characteristics, focusing on a comparison with credit risk at initial recognition, as well as considering forward-looking information.
- **Risk management integration:** the criteria must be consistent with those metrics considered in the day-to-day risk management.
- **Documentation:** Appropriate documentation must be prepared.

The techniques are summarised below:

- **Stability of stage 2:** in the absence of significant changes in the portfolios credit quality, the volume of assets in stage 2 should maintain a certain stability as a whole.
- **Economic reasonableness:** at transaction level, stage 2 is expected to be a transitional rating for exposures that could eventually move to a deteriorating credit status at some point or stage 3, as well as for exposures that have suffered credit deterioration and whose credit quality is improving and returns to stage 1.
- **Predictive power:** it is expected that the SICR definition avoids, as far as possible, direct migrations from stage 1 to stage 3 without having been previously classified in stage 2.
- **Time in stage 2:** it is expected that the exposures do not remain categorized as stage 2 for an excessive time.

The application of the aforementioned techniques, conclude in the setting of one or several thresholds for each portfolio in each geography. Likewise, these thresholds are subject to a regular review by means of calibration tests, which may entail updating the thresholds types or their values.

Identifying a significant increase in credit risk: when classifying financial instruments under stage 2, Santander considers:

- **Quantitative criteria:** Grupo Santander reviews and quantifies changes in the risk of default during their expected life based on their credit risk level on initial recognition.

To recognize significant changes so instruments can be classified in stage 2, each subsidiary set quantitative thresholds for its portfolios based on Santander's guidelines for consistent interpretation across all our footprint.

Of those quantitative thresholds, Grupo Santander considers two: the relative threshold, which shows the difference in credit quality since the transaction was approved as a percentage of change; and the absolute threshold, which calculates the total difference in credit quality. All subsidiaries apply them (with different values) in the same manner. The use of one or both depends on portfolio type and other aspects, such as the starting point for average credit quality.

- **Qualitative criteria:** Several indicators aligned with ordinary credit risk management indicators (e.g. past due for over 30 days, forbearance, etc.). Each subsidiary defined these criteria for its portfolios. Santander supplements these qualitative criteria with expert opinions.

When the presumption of a significant deterioration of credit risk is removed, due to a sufficient improvement of the credit quality, the obligor can be re-classified to Stage 1, without any probationary period in Stage 2.

- **Definition of default:** Santander incorporated the new definition to provisions calculation according to the EBA's guidelines; the Group is also considering applying it to prudential framework. In addition, the default definition and stage 3 have been aligned.



This definition considers the following criteria to classify exposures as stage 3: financial instruments with one or more payments more than 90 consecutive days past due, representing at least 1% of the client's total exposure or the identification of other criteria demonstrating, even in the absence of defaults, that it is unlikely that the counterparty is unlikely to meet all of its financial obligations.

The Group applies the default criteria to all exposures of the impaired client. Where an obligor belongs to a group, the default criteria may also be applied to all exposures of the group.

The default classification is maintained during the 3-month test period following the disappearance of all default indicators described above, and this period is extended to one year for forbearances that have been classified as default.

- Expected life of financial instruments: Santander estimates the expected life of financial instruments according to their contractual terms (e.g. prepayments, duration, purchase options, etc.).

The contractual period (including extension options) is the maximum time frame for measuring the expected credit loss. If financial instruments have an undefined maturity period and available balance (e.g. credit cards), Santander estimates its expected life based on the total exposure period and effective management practices to mitigate exposure.

The context and monitoring of the expected credit loss was analysed and reviewed during the health crisis by covid-19, and was reinforced with collective analysis, monitoring of government measures, monitoring of the evolution of the Group's customers, as well as remedial management actions if necessary. In terms of classification, Grupo Santander has maintained the criteria and thresholds for classification applied prior to the start of the pandemic, eliminating regulatory criteria of the effect of moratorium classification as they have expired, as well as the collective analyses associated with these groups of loans.

Regarding moratorium measures, a rigorous identification and periodic monitoring of the credit quality of the clients and their payment behaviour have been carried out and, through a specific individual or collective evaluation, the timely detection of the significant increase in credit risk.

At the end of December 2022 the credit risk provisions not included any special measures or adjustments in relation to health crisis by covid-19.

1. Forward-looking vision

To estimate expected losses, Grupo Santander requires a great deal of expert analysis as well as past, present and future data. Santander quantifies expected losses from credit events using an unbiased, weighted consideration of up to five future scenarios that could affect our ability to collect contractual cash flows. These scenarios take into account the time value of money, the relevant information available about past events and current conditions, and projections of macroeconomic factors that are considered important to estimate this amount (e.g. GDP, house prices, rate of unemployment, among others).

Santander uses forward-looking information in internal management and regulatory processes under several scenarios. The Group's guidelines and governance ensure synergy and consistency between these different processes.

2. Additional elements

Additional elements will be required when necessary because they have not been captured under the two previous elements. This has included, among others, the analysis of sectors most affected if their impacts are not sufficiently captured by the macroeconomic scenarios. Also collective analysis techniques, when the potential impairment in a group of clients cannot be identified individually.

With the elements indicated above, Grupo Santander has evaluated in each of the geographical areas the evolution of the credit quality of its customers, for the purposes of their classification in Grupo Santander financial statements.

Management overlays

During the 2022, the Group has used, through its process of updating forward looking information and recalibration of parameters, the overlay related to government support measures in various countries that the Group had established as of December 31, 2021 for an amount of 1,232 millions of euros. At the end of 2022, Grupo Santander has EUR 1,471 million as management overlays that include, among others, those destined to cover the uncertainties resulting from the war in Ukraine and the current macroeconomic context.

Exposure and impaired losses

Then, considering the most relevant units of the Group (United Kingdom, Spain, United States, Brazil, also Chile, Mexico, Portugal, Poland, Argentina and Santander Consumer Finance), which represent approximately 96% of the total Group's provisions. The table below shows the impairment losses associated with each stage as of 31 December 2022, 2021 and 2020. In addition, depending on the transactions credit quality, the exposure is divided into four categories according to Standard & Poor's rating scale:

Exposure and impairment losses by stage

Credit quality ^A	2022			Total
	Stage 1	Stage 2	Stage 3	
From AAA to AA-	172,440	1,506	—	173,946
From A+ to BB	394,084	10,601	—	404,685
From BB- to B-	272,456	32,653	—	305,109
CCC and below	11,799	21,436	32,608	65,843
Total exposure^B	850,779	66,196	32,608	949,583
Impairment losses	3,807	5,195	13,852	22,854



Exposure and impairment losses by stage

EUR million

Credit quality ^A	2021			
	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	188,434	1,844	—	190,278
From A+ to BB	377,008	11,954	—	388,962
From BB- to B-	233,779	44,292	—	278,071
CCC and below	3,746	11,878	30,711	46,335
Total exposure^B	802,967	69,968	30,711	903,646
Impairment losses^C	4,149	5,103	12,873	22,125

Exposure and impairment losses by stage

EUR million

Credit quality ^A	2020			
	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	110,536	1,512	—	112,048
From A+ to BB	378,982	7,612	—	386,594
From BB- to B-	273,443	42,313	—	315,756
CCC and below	3,073	13,525	30,436	47,034
Total exposure^B	766,034	64,962	30,436	861,432
Impairment losses^C	4,458	5,461	13,503	23,422

A. Detail of credit quality ratings calculated for Group management purposes.

B. Total exposure includes loan balances (drawn amounts) and off balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.

C. Includes provisions for undrawn authorized lines (loan commitments).

The remaining units that form the totality of the Group exposure, contributed EUR 123,796 million in stage 1; EUR 2,902 million in stage 2, and EUR 2,064 million in stage 3 (in 2021 EUR 102,631 million in stage 1; EUR 1,870 million in stage 2, and EUR 2,522 million in stage 3. In 2020, EUR 98,121 million in stage 1; EUR 3,613 million in stage 2, and EUR 1,322 million in stage 3), and impairment losses of EUR 147 million in stage 1; EUR 123 million for stage 2, and EUR 294 million in stage 3 (in 2021, EUR 408 million, EUR 322 million and EUR 841 million and in 2020, EUR 180 million, EUR 393 million and EUR 277 million in stage 1, stage 2 and stage 3, respectively).

The remaining exposure, including all financial instruments not included before, amounts to EUR 538,364 million (EUR 349,228 million in 2021 and EUR 478,093 million in 2020), and it includes all undrawn authorized lines (loan commitments).

As of 31 December 2022, the Group had EUR 322 million net of provisions (EUR 420 million and EUR 497 million at 31 December 2021 and 2020, respectively) of purchased credit-impaired assets, which relate mainly to the business combinations carried out by the Group.

Regarding the evolution of credit risk provisions, the Group, in collaboration with the main geographical areas, monitors them by carrying out sensitivity analyses considering changes in macroeconomic scenarios and main variables that have an impact on the financial assets distribution in the different stages and calculating credit risk provisions.

Additionally, based on consistent macroeconomic scenarios, the Group also performs stress tests and sensitivity analysis in a regular basis, such as ICAAP, strategic plans, budgets and recovery and resolution plans. In this sense, a prospective view of the sensitivity of each of the Group's loan portfolio is created in relation to the possible deviation from the base scenario, considering both the macroeconomic developments in different scenarios and the three year evolution of the business. These tests include potentially adverse and favourable scenarios.

3.Detail of the main geographical areas

Following is the risk information related to the most relevant geographies in exposure and credit risk allowances.

This information includes sensitivity analysis, consisting on simulations of +/-100 bp in the main macroeconomic variables. A set of specific and complete scenarios is used in each geography, where different shocks that affect both the reference variable as well as the rest of the parameters is simulated. These shocks collect mainly the most relevant risks and may be originated by productivity, tax, wages or exchange and interest rates factors.

Sensitivity is measured as the average variation on expected loss corresponding to the aforementioned movement of +/-100 bp. Following a conservative approach, the negative movements take into account one additional standard deviation in order to reflect the potential higher variability of losses.

3.1. United Kingdom

Credit risk with customers in the UK (excluding Santander Consumer UK and Santander London Branch) declined year-on-year by 3.6% (+1.8% in local currency) to EUR 253,455 million. 22.5% of Santander's loan portfolio is in the UK.

At 1.21%, the NPL ratio fell 22 bps from December 2021, due to a significant drop in the corporates segment following covid relief measures and the positive performance of the real estate market. The profile of the different segments remains stable.

Mortgage portfolio

Because of its size, Grupo Santander closely monitor Santander UK's mortgage portfolio for the entity itself and the Group.

As of 31 December 2022, the mortgage portfolio of Santander UK grew by 5.5% in local currency to EUR 209,872 million. It comprises residential mortgages granted to new and existing customers which are first lien mortgages. There are no second or more liens on mortgaged properties.

The high loan origination rate observed since 2021 carried on into 2022, with very low credit risk. The economy slowdown and the interest rate hikes have moderated the increasing pace of house price increases from the second half of the year.

Information on the estimation of impairment losses

The detail of Santander's UK exposure and impairment losses associated with each of the stages at 31 December, 2022, 2021 and 2020, is shown below.



In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses by stage

EUR million

2022				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	85,930	827	—	86,757
From A+ to BB	118,585	7,547	—	126,132
From BB- to B-	16,831	11,093	—	27,924
CCC and below	220	978	3,059	4,257
Total exposure^B	221,566	20,445	3,059	245,070
Impairment losses^C	166	529	337	1,032

Exposure and impairment losses by stage

EUR million

2021				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	97,388	1,015	—	98,403
From A+ to BB	113,030	8,074	—	121,104
From BB- to B-	13,063	10,657	—	23,720
CCC and below	—	943	3,508	4,451
Total exposure^B	223,481	20,689	3,508	247,678
Impairment losses^C	135	372	460	967

Exposure and impairment losses by stage

EUR million

2020				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	41,757	111	—	41,868
From A+ to BB	142,308	2,116	—	144,424
From BB- to B-	34,965	16,814	—	51,779
CCC and below	—	—	3,229	3,229
Total exposure^B	219,030	19,041	3,229	241,300
Impairment losses^C	223	557	668	1,448

- A. Detail of credit quality ratings calculated for Group management purposes.
 B. Total exposure includes loan balances (drawn amounts) and off balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.
 C. Includes provisions for undrawn authorized lines (loan commitments).



For the estimation of expected losses, prospective information is taken into account. Specifically, Santander UK considers five macroeconomic scenarios, which are updated periodically. The evolution forecasted in 2022 for the next five years of the main macroeconomic indicators used by Santander UK to estimate expected losses is presented below:

Variables	2023 - 2027				
	Pessimistic scenario 3	Pessimistic scenario 2	Pessimistic scenario 1	Base scenario	Optimistic scenario 1
Interest rate	4.3%	3.0%	2.7%	3.1%	2.8%
Unemployment rate	6.0%	7.3%	5.5%	4.6%	4.4%
Housing price change	-4.4%	-4.6%	-3.5%	-0.4%	-0.7%
GDP growth	-0.4	-0.5%	-0.2%	0.7%	1.2%

Each of the macroeconomic scenarios is associated with a given weight. In terms of allocation, Santander UK associates the highest weighting to the base scenario, while it associates the lowest weightings to the most extreme or severe scenarios. In addition, at 31 December 2022, the weights used by Santander UK reflect the future prospects of the British economy in relation to its current political and economic position so that higher weights are assigned for negative scenarios:

	2022	2021	2020
Pessimistic scenario 3	20%	5%	10 %
Pessimistic scenario 2	10%	20%	25 %
Pessimistic scenario 1	15%	25%	15 %
Base scenario	50%	45%	45 %
Optimistic scenario 1	5%	5%	5 %

The sensitivity analysis of the main portfolios expected loss to variations of +/-100 bp for the macroeconomic variables used in the construction of the scenarios, as of December 2022, is as follows:

	Change in Provision	
	Mortgages	Corporates
GDP Growth		
-100 bp	18.9%	7.1%
100 bp	-8.1%	-4.0%
Housing price change		
-100 bp	10.1%	10.2%
100 bp	-6.0%	-12.0%
Unemployment rate		
-100 bp	-10.8%	-5.4%
100 bp	27.2%	10.5%

In relation to the previously mentioned management overlays, UK has constituted EUR 328 million.

With regards to the determination of classification in stage 2, the quantitative criteria applied by Santander UK are based on identifying whether any increase in PD for the expected life of the transaction is greater than both an absolute and a relative threshold (the PD used in that assessment are adjusted to the transaction's remaining term and also annualised in order to facilitate that the thresholds defined cover the whole range of the transactions maturity dates). The relative threshold established is common to all portfolios and a transaction is considered to exceed this threshold when the PD for the entire life of the transaction increases by 100% with respect to the PD at the time of initial recognition. The absolute threshold, on the other hand, is different for each portfolio depending on the characteristics of the transactions, ranging between 360 bps and 30 bps.

In addition, for each portfolio, a series of specific qualitative criteria is defined to indicate that the exposure has experienced a significant increase in credit risk, regardless of the evolution of its PD since the time of initial recognition. Santander UK, among other criteria, considers that an operation presents a significant increase in credit risk when it presents irregular positions for more than 30 days. These criteria depend on the risk management practices of each portfolio.

3.2. Spain

Portfolio overview

Santander España's credit risk totalled EUR 293,197 million (26% of Grupo Santander's total). It is appropriately diversified among products and customer segments.

The macroeconomic outlook is marked by an environment of high uncertainty, where there are also factors that have an opposite influence. Positive factors, such as the reactivation of tourism after the end of the pandemic was declared together with a better than expected macro economic performance, and negative factors such as high inflation and the rise in interest rates that will affect the purchasing power of families.

In this context, the activity had a different behaviour between segments, since it grew significantly in consumer credit and large corporates, but it remained stable in mortgages and decreased significantly in SMEs, as customer positions were maintained in the support and liquidity programs (financing lines of the Official Credit Institute - ICO) without having to require new financing.



Total credit risk increased 3.3% from December 2021. The ICO loans that were granted as a result of the pandemic (EUR 25,428 million) maintain a high weight in this segment.

The credit portfolio's NPL ratio was 3.27%, 145 lower than in December 2021. This better overall portfolio performance was driven by customer support programmes, the regularization of several restructured positions and portfolio sales.

The NPL coverage ratio remained at 51%. The cost of credit was reduced to 0.61% (-31 bps vs. December 2021).

Information on the estimation of impairment losses

The detail of Santander Spain exposure and impairment losses associated with each of the stages at 31 December, 2022, 2021 and 2020, is shown below. In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses by stage

EUR million

	2022			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	37,133	447	—	37,580
From A+ to BB	107,667	282	—	107,949
From BB- to B-	46,296	6,388	—	52,684
CCC and below	253	5,234	8,893	14,380
Total exposure^B	191,349	12,351	8,893	212,593
Impairment losses^C	507	666	3,472	4,645

Exposure and impairment losses by stage

EUR million

	2021			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	43,978	352	—	44,330
From A+ to BB	109,142	555	—	109,697
From BB- to B-	33,104	11,716	—	44,820
CCC and below	129	3,024	12,761	15,914
Total exposure^B	186,353	15,647	12,761	214,761
Impairment losses^C	422	580	5,005	6,007

Exposure and impairment losses by stage

EUR million

	2020			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	38,656	1,199	—	39,855
From A+ to BB	108,336	318	—	108,654
From BB- to B-	40,294	6,533	—	46,827
CCC and below	336	5,008	13,762	19,106
Total exposure^B	187,622	13,058	13,762	214,442
Impairment losses^C	479	732	5,277	6,488

- A. Detail of credit quality ratings calculated for Group management purposes. Excluding the SCIB branches business
 B. Total exposure includes loan balances (drawn amounts) and off balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.
 C. Includes provisions for undrawn authorized lines (loan commitments).

For the estimation of the expected losses, the prospective information is taken into account. Specifically, Santander Spain considers three macroeconomic scenarios, which are updated periodically. The projected evolution for a period of five years of the main macroeconomic indicators used by Santander Spain for estimating expected losses as of 2022, is presented below:

	2023-2027		
Variables	Pessimistic scenario	Base scenario	Optimistic scenario
Interest rate	2.6%	2.3%	2.0%
Unemployment rate	16.6%	12.2%	10.7%
Housing price change	2.3%	3.3%	3.8%
GDP growth	0.5%	2.0%	3.3%

Each macroeconomic scenarios is associated with a given weight. As for its allocation, Santander Spain associates the Base scenario with the highest weight, while associating the lower weights to the most extreme scenarios:

	2022	2021	2020
Pessimistic scenario	30%	30%	30%
Base scenario	40%	40%	40%
Optimistic scenario 1	30%	30%	30%

The sensitivity analysis of the main portfolios expected loss to variations of +/- 100 bp for the macroeconomic variables used in the construction of the scenarios is as follows:

	Change in Provision		
	Mortgages	Corporates	Others
GDP Growth			
-100 bp	10.9%	4.7%	3.9%
100 bp	-5.4%	-2.9%	-2.7%
Housing price change			
-100 bp	4.4%	2.6%	3.4%
100 bp	-3.6%	-2.0%	-2.3%

In relation to the previously mentioned management overlays, Spain has constituted EUR 274 million.



With regards to the stage 2 classification determination, the quantitative criteria applied in Santander Spain are based on identifying whether an increase in the PD for the expected lifetime of the transaction when compared to the one at its origination is greater than an absolute threshold. The threshold established is different for each portfolio based on the transactions characteristics, considering that a transaction is above this threshold when the PD for the life of the transaction increases by a certain quantity over the initial recognized PD. The values of these thresholds depend on their calibration, carried out periodically as indicated in the preceding paragraphs, which currently ranges from 25% to 1%, depending on the type of product and estimated sensitivity. Regarding the relative threshold, all operations that exceed 200% belonging to customers with good credit quality (internal rating greater than 4) will be classified in stage 2 if they also exceed the absolute threshold. On the other hand, those customer contracts with a worse credit quality will be classified in stage 2 if it exceeds the relative threshold or the absolute threshold.

In the case of non-retail portfolios, Santander Spain uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting absolute thresholds for the different rating bands that depend on each portfolio characteristics. A SICR implies changes in the rating value between 0.1 and 4, depending on the portfolio and the estimated sensitivity (from lower to higher credit quality, the rating range goes from 1 to 9.3).

In addition, for each portfolio, a series of specific qualitative criteria are defined indicating that the exposure experienced a significant increase in credit risk, regardless of the evolution of its PD since the time of initial recognition. Santander Spain, among other criteria, considers that an operation presents a significant increase in credit risk when positions have been past due for more than 30 days. These criteria depend on the risk management practices of each portfolio.

Residential mortgage portfolio

Residential mortgages in Spain, including Santander Consumer Finance business, amounted to EUR 63,688 million in 2022 (EUR 62,324 million and EUR 59,605 million in 2021 and 2020, respectively), 99.55% of which have a mortgage guarantee (99.33% and 99.35% in 2021 and 2020, respectively).

2022		
EUR Million	Gross amount	Of which: impaired
Home purchase loans to families	63,688	1,088
Without mortgage guarantee	288	24
With mortgage guarantee	63,400	1,064
2021		
EUR Million	Gross amount	Of which: impaired
Home purchase loans to families	62,324	1,860
Without mortgage guarantee	419	115
With mortgage guarantee	61,905	1,745
2020		
EUR Million	Gross amount	Of which: impaired
Home purchase loans to families	59,605	1,850
Without mortgage guarantee	387	75
With mortgage guarantee	59,218	1,775

The mortgage portfolio for the acquisition of homes in Spain is characterised by its medium-low risk profile, which limits expectations of any potential additional impairment:

- Principal is repaid on all mortgages from the start.
- Early repayment is common so the average life of the transaction is well below that of the contract.
- High quality of collateral, concentrated almost exclusively in financing for first homes.
- The average affordability rate stood at 26% (27% in 2021 and 2020).
- The 93% of the portfolio has a LTV below 80% calculated as total risk/latest available house appraisal.



Breakdown of the credit with mortgage guarantee to households for house acquisition, according to the percentage that the total risk represents on the amount of the latest available valuation (loan to value):

EUR Million	2022					Total
	Loan to value ratio					
	Less than or equal to 40%	More than 40% and less than 60%	More than 60% and less than 80%	More than 80% and less than or equal to 100%	More than 100%	
Gross amount	17,877	20,617	20,225	3,294	1,387	63,400
Of which impaired	132	192	220	181	339	1,064

In November 2022, Royal Decree-Law 19/2022 was published, which establishes a Code of Good Practices in response to the rise in interest rates on mortgage loans for primary residences and Royal Decree-Law 6/2012 of protection measures for mortgage debtors without resources. The entity is analysing the plausible impact based on different adherence hypotheses. The code of good practices is focused on extending the term of the operations (aids ranging between 2 and 7 years of extension).

Corporate & SME financing

Credit risk with SME and corporates in commercial banking amounted to EUR 112,255 million, 2.3% lower than in December 2021, mainly due to the fall in the portfolio of SMEs of 4.3%. This is Santander Spain's main lending segment, accounting for 39% of the total, at the level of CIB portfolio, which in 2022 has come to include branches in Europe.

Most of the portfolio corresponds to clients who have been assigned a credit analyst, who performs continuous management of said clients during all phases of the risk cycle.

The portfolio is broadly diversified and not concentrated by sector of activity. 2021 was a year of stability in the portfolio figures after the significant growth in 2020 due to the liquidity support programmes (ICO), which after the initial grace period have begun to be amortised.

The portfolio's NPL ratio stood at 5.79% in December 2022. The NPL ratio decreased by 171 bps compared to December 2021, due to a reduction in the delinquency stock in SMEs, due to the proactive management of delinquent positions with the support of portfolio sales.

Real estate activity

Santander has specialized teams that are in charge of managing real estate business production and risk areas that cover the entire life cycle of these operations.

The changes in gross property development loans to customers were as follows:

EUR million	2022	2021	2020
Balance at beginning of year	2,625	2,871	2,939
Foreclosed assets	—	(1)	(6)
Reductions	(295)	(230)	(24)
Written-off assets	(3)	(15)	(38)
Balance at end of year	2,327	2,625	2,871

The NPL ratio of this portfolio ended the year at 4.04% (compared with 5.07% and 6.13% at December 2021 and 2020, respectively) due to the decrease of non-performing assets in the troubled loan portfolio and, in particular, to the sharp reduction in lending in this segment. The table below shows the distribution of the portfolio. The coverage ratio of the real estate doubtful exposure in Spain stands at 35.11% (30.08% and 32.95% in 2021 and 2020, respectively).

EUR Million	2022		
	Gross amount	Excess of gross exposure over maximum recoverable amount of effective collateral	Specific allowance
Financing for construction and property development (including land) (business in Spain)	2,327	211	44
Of which impaired	94	21	33
Memorandum items written-off assets	487	—	—

Memorandum items: Data from the public consolidated balance sheet

EUR Million	2022
	Carrying amount
Total loans and advances to customers excluding the Public sector (business in Spain) (Book value)	250,702
Total consolidated assets (Total business) (Book value)	1,734,659
Impairment losses and credit risk allowances. Coverage for unimpaired assets (business in Spain)	1,311



At year-end, the distribution of this portfolio was as follows:

	2022
EUR Million	Loans: gross amount
1. Without mortgage guarantee	43
2. With mortgage guarantee	2,285
2.1 Completed buildings	1,138
2.1.1 Residential	674
2.1.2 Other	464
2.2 Buildings and other constructions under construction	1,110
2.2.1 Residential	1,103
2.2.2 Other	7
2.3 Land	37
2.3.1 Developed consolidated land	25
2.3.2 Other land	12
Total	2,328

Policies and strategies in place for the management of these risks

The policies in force for the management of this portfolio are periodically reviewed and approved on a regular basis by Santander's senior management.

As has already been disclosed in this section, the Group's anticipatory management of these risks enabled it to significantly reduce its exposure, and it has a granular, geographically diversified portfolio in which the financing of second residences accounts for a very small proportion of the total.

Mortgage lending on non-urban land represents a low percentage of mortgage exposure to land, while the remainder relates to land already classified as urban or approved for development.

The significant reduction of exposure in the case of residential financing projects in which the construction work has already been completed was based on various actions. As well as the specialised marketing channels already in existence, campaigns were carried out with the support of specific teams of managers for this function who, in the case of the Santander network, were directly supervised by the recoveries business area. These campaigns, which involved the direct management of the projects with property developers and purchasers, reducing sale prices and adapting the lending conditions to the buyers' needs, enabled loans already in force to be subrogated. These subrogations enable to diversify its risk in a business segment that displays a clearly lower non-performing loans ratio.

In the case of construction-phase projects that are experiencing difficulties of any kind, the policy adopted is to ensure completion of the construction work so as to obtain completed buildings that can be sold in the market. To achieve this aim, the projects are analysed on a case-by-case basis in order to adopt the most effective series of measures for each case (structured payments to suppliers to ensure completion of the work, specific schedules for drawing down amounts, etc.).

For the real estate business production, the admission processes are managed by specialized teams that work in direct coordination with the commercial teams, with clearly defined policies and criteria:

- Property developers with a robust solvency profile and a proven track record in the market.
- Medium-high level projects, conducting to contracted demand and significant cities.
- Strict criteria regarding the specific parameters of the transactions: exclusive financing for the construction cost, high percentages of accredited sales, principal residence financing, etc.
- Support of financing of government-subsidised housing, with accredited sales percentages.
- Restricted financing of land purchases dealt with exceptional nature.

In addition to the permanent control performed by its risk monitoring teams, the Group has a specialist technical unit that monitors and controls this portfolio with regard to the stage of completion of construction work, planning compliance and sales control, and validates and controls progress billing payments. The Group has created a set of specific tools for this function. All mortgage distributions, amounts drawn down of any kind, changes made to the grace periods, etc. are authorised on a centralised basis.

Foreclosed properties

At 31 December 2022, the net balance of these assets amounted to EUR 2,971 million (gross amount of EUR 6,422 million; recognised allowance of EUR 3,451 million, of which EUR 2,526 million related to impairment after the foreclosure date).

At 31 December 2021, the net balance of these assets amounted to EUR 3,591 million (gross amount: EUR 7,364 million; recognised allowance: EUR 3,773 million, of which EUR 2,729 million related to impairment after the foreclosure date). At 31 December, 2020, the net balance of these assets amounted to EUR 3,962 million (gross amount of EUR 7,937 million; recognised allowance of EUR 3,975 million, of which EUR 2,834 million related to impairment after the foreclosure date).

The following table shows the detail of the assets foreclosed by the businesses in Spain at the end of 2022:

EUR Million	2022			Net Carrying amount
	Gross carrying amount	Valuation adjustments	Of which impairment losses on assets since time of foreclosure	
Property assets arising from financing provided to construction and property development companies	5,587	3,097	2,275	2,490
<i>Of which:</i>				
<i>Completed buildings</i>	1,456	713	583	743
<i>Residential</i>	341	157	127	184
<i>Other</i>	1,115	556	456	559
<i>Buildings under construction</i>	92	44	32	48
<i>Residential</i>	25	7	4	18
<i>Other</i>	67	37	28	30
<i>Land</i>	4,039	2,340	1,660	1,699
<i>Developed land</i>	1,286	689	415	597
<i>Other land</i>	2,753	1,651	1,245	1,102
Property assets from home purchase mortgage loans to households	659	274	190	385
Other foreclosed property assets	176	80	61	96
Total property assets	6,422	3,451	2,526	2,971

In addition, the Group has shareholdings in entities holding foreclosed assets amounting to EUR 439 million (mainly Project Quasar Investment 2017, S.L. with EUR 405 million), and equity instruments foreclosed or received in payment of debts amounting to EUR 15 million.

In recent years, the Group has considered foreclosure to be a more efficient method for resolving cases of default than legal proceedings. The Group initially recognises foreclosed assets at the lower of the carrying amount of the debt (net of provisions) and the fair value of the foreclosed asset (less estimated costs to sell). Subsequent to initial recognition, the assets are measured at the lower of fair value (less costs to sell) and the amount initially recognised.

The fair value of this type of assets is determined by the Group's directors based on evidence obtained from qualified valuers or evidence of recent transactions.

The management of real estate assets on the balance sheet is carried out through companies specializing in the sale of real estate that is complemented by the structure of the commercial network. The sale is realised with at prices in accordance with the market situation and the offer of wholesale buyers.

The gross movement in foreclosed properties were as follows (EUR billion):

	EUR Billion		
	2022	2021	2020
Gross additions	0.2	0.4	0.5
Disposals	(1.3)	(1.1)	(0.9)
Difference	(1.1)	(0.7)	(0.4)



3.3. United States

Santander US's credit risk increased to EUR 140,452 million at the end of December 2022. It makes up 12.5% of Grupo Santander's total credit risk.

Leases carried out exclusively under the Stellantis Group agreement (primarily with highly creditworthy customers) dropped 1.8% to EUR 13,400 million, providing stable and recurring earnings. Risk management and residual value mitigation measures remain a priority.

Santander US includes the following business units:

Santander Bank, National Association (SBNA)

Its activity is focused on commercial banking with 54% of the portfolio distributed in individuals, and approximately 46% in corporates. The bank's core strategic objectives include continuing to improve customer experience, growing its customer and deposit base with digital initiatives to transform business and branches, and using its deposit base to build up its Commercial Real Estate business. To maximize returns and growth, retail and commercial banking mainly consists of consumer credit, auto-lending and auto-leasing, but not mortgages or any kind of loans or lines of credit secured by collateral. In 2022 lending increased 12.8% across all segments, helped by a stronger US dollar. Excluding the FX effect, the increase was lower, standing at 6.3%.

The NPL ratio increased to 1.8% (+23 bp in the year) as of December 2022 the cost of credit increased to 0.36% once the provisions were normalized after the extraordinary releases of 2021 that were favoured by the fiscal support and stimulus programs still in force at that time.

Information on the estimation of impairment losses

The detail of Santander Bank, National Association exposure and impairment losses associated with each of the stages at 31 December, 2022, 2021 and 2020, is shown below. In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses by stage

EUR million

	2022			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	6,884	145	—	7,029
From A+ to BB	20,768	366	—	21,134
From BB- to B-	30,359	2,225	—	32,584
CCC and below	308	558	459	1,325
Total exposure^B	58,319	3,294	459	62,072
Impairment losses^C	392	241	74	707

Exposure and impairment losses by stage

EUR million

	2021			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	8,811	124	—	8,935
From A+ to BB	29,379	1,033	—	30,412
From BB- to B-	12,193	2,756	—	14,949
CCC and below	19	361	477	857
Total exposure^B	50,402	4,274	477	55,153
Impairment losses^C	263	314	45	622

Exposure and impairment losses by stage

EUR million

	2020			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	3,284	48	—	3,332
From A+ to BB	14,821	1,730	—	16,551
From BB- to B-	24,350	2,459	—	26,809
CCC and below	30	518	403	951
Total exposure^B	42,485	4,755	403	47,643
Impairment losses^C	344	316	42	702

A. Detail of credit quality ratings calculated for Group management purposes.

B. Total exposure includes loan balances (drawn amounts) and off-balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.

C. Includes provisions for undrawn authorized lines (loan commitments).



For the estimation of expected losses, prospective information is taken into account. Specifically, Santander Bank, National Association considers four macroeconomic scenarios, which are updated periodically. The evolution projected in 2022 for a period of five years of the main macroeconomic indicators used Santander Bank, National Association to estimate expected losses is presented below:

Variables	2023 - 2027			
	Pessimistic scenario 2	Pessimistic scenario 1	Base scenario	Optimistic scenario
Interest rate (annual averaged)	2.5%	2.9%	3.4%	3.2%
Unemployment rate	6.0%	4.6%	4.1%	3.4%
House price change	-1.5%	-0.9%	0.1%	1.7%
GDP growth	1.8%	2.1%	1.6%	2.8%

Each of the macroeconomic scenarios is associated with a given weight. As for its allocation, Santander Bank, National Association associates the highest weighting to the Base scenario, while associates the lowest weightings to the most extreme scenarios:

	2022	2021	2020
Pessimistic scenario 2	18%	18%	18%
Pessimistic scenario 1	20%	20%	20%
Base scenario	33%	33%	33%
Optimistic scenario	30%	30%	30%

The sensitivity analysis of the main portfolios expected loss to variations of +/-100 bp for the macroeconomic variables used in the construction of the scenarios as of 2022 is as follows:

	Change in Provision	
	Mortgages	Corporates
GDP Growth		
-100 bp	7.7%	18.1%
100 bp	-5.5%	-8.2%
Housing price change		
-100 bp	12.8%	20.3%
100 bp	-6.1%	-9.5%
Unemployment rate		
-100 bp	-22.8%	-33.6%
100 bp	29.0%	48.0%

In relation to the previously mentioned management overlays, SBNA has constituted EUR 215 million.

In relation to the Stage 2 classification determination, the quantitative criteria applied at SBNA for retail portfolios uses the FICO (Fair Isaac Corporation) score at the time of origination and its current value, establishing different absolute threshold for each portfolio according to their characteristics. A SICR implies changes in that score ranging from 120 bp to 20 bp.

In the case of wholesale portfolios, SBNA uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting absolute thresholds for the different rating bands that depend on each portfolio characteristics. A SICR implies changes in the rating value between 2 and 0.1, depending on the portfolio and the estimated sensitivity (from lower to higher credit quality, the rating range goes from 1 to 9.3).

Additionally, for each portfolio, a series of specific qualitative criteria are defined, which indicate that the exposure has experienced a significant increase in credit risk, regardless of the evolution of its PD since the initial recognition. Santander Bank, National Association, among other criteria, considers that a transaction presents a significant increase in credit risk when it has arrears positions for more than 30 days. These criteria depend on the risk management practices of each portfolio.

Santander Consumer USA Inc.

Santander Consumer USA Inc. (SC USA) presents higher risk indicators than other Santander US units due to the nature of its business, which focuses on auto finance via loans and leasing.

The focus continues to be on managing the relationship between profitability and risk, via management of prices adjusted to the credit quality of the customer/transaction, while improving the dealers' experience. Originations in the auto portfolio did not grow compared to the previous year, as a reflection of the restriction in the supply of new vehicles and the revaluation of used vehicles compared to the levels of previous years.

As of 31 December 2022, risk indicators stabilized with the end of covid relief programmes for customers and government stimulus and with the new definition of default: NPLs increased to 12.1% (+584 bp in the year); and the cost of credit stood at 4.68% (+314 bp YoY). Non-performing coverage ratio fell to 87% (-89 pp in the year).



Information on the estimation of impairment losses

The detail of Santander Consumer USA Holding Inc. exposure and impairment losses associated with each of the stages at 31 December 2022, 2021 and 2020, is shown below. In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses by stage

EUR million

Credit quality ^A	2022			
	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	—	—	—	—
From A+ to BB	171	—	—	171
From BB- to B-	14,564	512	—	15,076
CCC and below	7,735	5,108	3,870	16,713
Total exposure^B	22,470	5,620	3,870	31,960
Impairment losses^C	672	1,232	1,452	3,356

Exposure and impairment losses by stage

EUR million

Credit quality ^A	2021			
	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	417	4	—	421
From A+ to BB	800	35	—	835
From BB- to B-	18,655	5,930	—	24,585
CCC and below	222	1,931	1,658.00	3,811
Total exposure^B	20,094	7,900	1,658	29,652
Impairment losses^C	524	1,741	572	2,837

Exposure and impairment losses by stage

EUR million

Credit quality ^A	2020			
	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	359	3	—	362
From A+ to BB	1,330	9	—	1,339
From BB- to B-	20,585	2,694	—	23,279
CCC and below	905	2,137	1,019	4,061
Total exposure^B	23,179	4,843	1,019	29,041
Impairment losses^C	911	1,820	726	3,457

A. Detail of credit quality ratings calculated for Group management purposes.

B. Total exposure includes loan balances (drawn amounts) and off-balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.

C. Includes provisions for undrawn authorized lines (loan commitments).

SC USA reassessed the suitability of macroeconomic scenarios and adjusted them in light of new information. At the end of 2022, Santander updated the most recent scenarios to calculate IFRS 9 provisions by recalibrating and revising the forward-looking information and risk model parameters. In this process, it has been analysed that the scenarios and models adequately capture the macroeconomic effects on the credit risk profile, therefore no additional funds have been allocated in this regard.

In relation to the methodology used to calculate impairment losses, Santander Consumer USA Inc. uses a method for calculating expected losses based on the use of risk parameters: EAD (exposure at default), PD (probability of default) and LGD (loss given default). The expected loss is calculated by adding the estimated monthly expected losses for the entire life of the operation, unless the operation is classified in Stage 1, which will correspond to the sum of the estimated monthly expected losses during the following 12 months.

In general, there is an inverse relationship between the transactions credit quality and the impairment losses projections so that transactions with better credit quality require a lower expected loss. Transactions credit quality, which is reflected in the internal rating associated to each transaction or client, is shown in the probability of default of the transactions.

For the expected losses estimation, prospective information should be taken into account. Specifically, Santander Consumer USA Holdings Inc. considers four macroeconomic scenarios, periodically updated over a 5-year time horizon.



The evolution forecasted in 2022 for a period of five years of the main macroeconomic indicators used by in Santander Consumer USA Holdings Inc in the estimation of expected losses is shown below:

Variables	2023 - 2027			
	Pessimistic scenario 2	Pessimistic scenario 1	Base scenario	Optimistic scenario
Interest rate (annual averaged)	2.5%	2.9%	3.4%	3.2%
Unemployment rate	6.0%	4.6%	4.1%	3.4%
House price change	-1.5%	-0.9%	0.1%	1.7%
GDP growth	1.8%	2.1%	1.6%	2.8%
Manheim ^A index	-3.6%	-3.6%	-3.6%	-3.6%

A. US used vehicle price car index.

Each of the macroeconomic scenarios is associated with a given weight. Santander Consumer USA Inc. associates the highest weighting to the Base scenario, whereas it associates the lowest weightings to the most extreme or acid scenarios:

	2022	2021	2020
Pessimistic scenario 2	18%	18%	18%
Pessimistic scenario 1	20%	20%	20%
Base scenario	33%	33%	33%
Optimistic scenario	30%	30%	30%

The sensitivity analysis of the main portfolios expected loss to variations of +/-100 bp for the macroeconomic variables used in the construction of the scenarios at the end of 2022 is as follows:

	Change in provision
	SC Auto
Manheim index	
-100 bp	2.4%
100 bp	-2.2%
Unemployment Rate	
-100 bp	-2.6%
100 bp	2.8%
House Price Change	
-100 bp	1.3%
100 bp	-0.8%
GDP growth	
-100 bp	1.6%
100 bp	-0.9%

In relation to the stage 2 classification determination, the quantitative criteria applied at SC USA uses the FICO (Fair Isaac Corporation) score at the time of origination and its current value, establishing different absolute threshold for each portfolio according to their characteristics. A SICR implies changes in that score ranging from 100 bp to 60 bp.

Additionally, for each portfolio, a series of specific qualitative criteria are defined, which indicate that the exposure has had a significant increase in credit risk, regardless of the evolution of its PD since the initial recognition. Santander Consumer USA Holdings Inc. among other criteria, considers that a transaction presents a significant increase in credit risk when it has irregular positions for more than 30 days. These criteria depend on the risk management practices of each portfolio.

3.4. Banco Santander (Brasil) S.A.

Santander Brasil's credit risk amounted to EUR 101,801 million. It increased by 19% from 2021. Minus the exchange rate effect, it grew by 6.2%. As of December 2022, Santander Brasil accounts for 9% of Grupo Santander's loan book.

SME lending grew steadily, as practically all subsegments grew in originations, especially among low-risk borrowers. As of August, the relaunch of Government Guarantee Programmes for all subsegments has contributed to the aforementioned increase in production, in order to combat the effects of generalized macroeconomic volatility.

Lending to corporates saw robust growth. New originations had sound risk profiles, which helped keep credit quality indicators within targets and reinforced the portfolio's profitability. The more challenging environment has created some pressure; but it hasn't had any direct effect on provisions during the year.

2022 in Brazil was marked by economic instability and high inflation rates, although it has been declining in the second half of the year, standing at 5.8% in December (the lowest rate since February 2021).

Because of inflation, benchmark rate ("Selic") hikes and other macroeconomic variables, together with the retail unsecured portfolio performance and a single name in SCIB in the fourth quarter, at 31 December 2022 loan-loss provisions reached EUR 4,417 million, a 63% year-on-year increase (excluding the effect of the exchange rate, the increase would remain at 38%) Cost of risk rose from 3.73% in 2021 to 4.79% in 2022.



Information on the estimation of impairment losses

The detail of Banco Santander (Brasil) S.A. exposure and impairment losses associated with each of the stages at 31 December, 2022, 2021 and 2020, is shown below. In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses

EUR million	2022			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	18,033	41	—	18,074
From A+ to BB	35,902	342	—	36,244
From BB- to B-	31,269	3,195	—	34,464
CCC and below	432	4,547	7,705	12,684
Total exposure^B	85,636	8,125	7,705	101,466
Impairment losses^C	575	1,219	4,334	6,128

Exposure and impairment losses

EUR million	2021			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	22,555	296	—	22,851
From A+ to BB	24,003	280	—	24,283
From BB- to B-	27,040	2,241	—	29,281
CCC and below	1,542	2,544	4,182	8,268
Total exposure^B	75,140	5,361	4,182	84,683
Impairment losses^C	1,232	909	2,510	4,651

Exposure and impairment losses

EUR million	2020			
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	13,226	97	—	13,323
From A+ to BB	25,460	112	—	25,572
From BB- to B-	25,180	2,946	—	28,126
CCC and below	986	2,996	3,429	7,411
Total exposure^B	64,852	6,151	3,429	74,432
Impairment losses^C	971	776	2,132	3,879

A. Detail of credit quality ratings calculated for Group management purposes.

B. Total exposure includes loan balances (drawn amounts) and off-balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.

C. Includes provisions for undrawn authorized lines (loan commitments).

For the expected losses estimation, prospective information is taken into account. Particularly, Santander Brazil considers three macroeconomic scenarios, periodically updated. The evolution for a period of five years of the main macroeconomic indicators used to estimate the expected losses in Santander Brazil is as follows:

2023-2027

Variables	Pessimistic scenario	Base scenario	Optimistic scenario
Interest rate (annual averaged)	12.6%	8.6%	6.4%
Unemployment rate	15.2%	11.1%	7.6%
House price change	0.6%	2.8%	7.9%
GDP growth	-0.8%	1.1%	3.3%
Burden income	33.2%	30.0%	23.9%

Each macroeconomic scenario is associated with a given weight. Regarding its assignation, Brazil links the highest weight to the base scenario whilst links the lowest weights to the most extreme scenarios:

	2022	2021	2020
Pessimistic scenario	10%	10%	10%
Base scenario	80%	80%	80%
Optimistic scenario	10%	10%	10%

The sensitivity analysis of the main portfolios expected loss to variations of +/-100 bp for the macroeconomic variables used in the construction of the scenarios is at the end of 2022 as follows:

	Change in provision		
	Consumer	Corporate	Other
GDP growth			
-100 bp	0.7%	3.2%	1.7%
100 bp	-0.3%	-1.0%	-0.9%
Burden income			
-100 bp	-0.5%	-1.4%	-1.5%
100 bp	1.1%	8.9%	3.8%
Interest rate (SELIC)			
-100 bp	-0.2%	-1.5%	-0.4%
100 bp	0.9%	5.6%	2.4%

In relation to the previously mentioned management overlays, Santander Brazil has constituted EUR 181 million .

Regarding the stage 2 classification determination, Santander Brazil analyses whether any increase in PD for the entire expected life of the operation is greater than the combination of an absolute threshold and a relative threshold. The established threshold is different for each portfolio depending on the characteristics of the transactions, considering that a transaction exceeds said threshold when the PD for the entire life of the transaction increases a certain amount over the PD it had at the time of initial recognition. The values of said absolute thresholds depend on their calibration, carried out periodically, currently ranging between 30% and 1% depending on the type of product and the estimated sensitivity. Regarding the relative threshold, they range mainly between 500% and 50% depending on the type of product and the estimated sensitivity.



In addition, for every portfolio, a set of specific qualitative criteria are defined to indicate that the exposure to credit risk has significantly risen, regardless of the evolution of its PD since the initial recognition. Santander Brazil, among other criteria, considers that an operations involves a significant increase in credit risk when it presents irregular positions for more than 30 days, but in Real State, Consigned and Financial portfolios, where, due to their particular attributes, they use a 60 days threshold. Such criteria depend upon each portfolio's risk management practices.

4. Other credit risk aspects

4.1. Credit risk by activity in the financial markets

This section covers credit risk from treasury, with money market financing and counterparty risk products to satisfy the needs of customers (especially credit institutions) and the Group.

Counterparty credit risk is the risk that a customer will default before the final settlement of a transaction's cash flows. It creates a bilateral credit risk because it can affect both parties to a transaction. It is also uncertain because it depends on market factors, which can be volatile.

Grupo Santander manages counterparties with several credit risk models based on their characteristics and needs. Model segmentation is by business and risk treatment and based on counterparty disclosures as well as the credit risk cycle. The exposure that the counterparty credit risk model covers includes derivatives contracts, repurchase agreements, securities and commodities lending, long settlements and margin lending.

An infrastructure that can quickly and dynamically measure current and potential exposure with various degrees of aggregation and granularity to generate detailed reports is important for decision-making.

To measure exposure, Santander uses two methods: "Mark-to-market" (MtM) (replacement cost of derivatives), plus potential future exposure ("add-on"); and the Monte Carlo simulation for certain countries and products. In addition, Santander calculates capital at risk and unexpected loss (e.g. economic capital, net of collateral and recoveries, after deducting expected loss).

At market close, Santander recalculates its exposure by adjusting transactions to a new time horizon, adapting potential future exposure, and applying netting, collateral and other mitigants. That way, Santander can check exposure daily against the limits approved by senior management within risk appetite. For risk control, the Group uses a real-time integrated system that shows the exposure limit with a counterparty, for any product and term, in all subsidiaries.

Counterparty credit risk can also give rise to "wrong-way" risk if exposure to a portfolio or a counterparty increases but credit quality declines. It can happen when rising default risk increases exposure to a counterparty.

Another risk called "settlement risk" occurs if a party might fail to hold their end of a contract and deliver the cash or security needed to settle the transaction.

4.2. Concentration risk

Concentration risk control is a vital part of our management. The Group continuously monitors the degree of concentration of its credit risk portfolios using various criteria: geographic areas and countries, economic sectors and groups of customers.

The board, via the risk appetite framework, determines the maximum levels of concentration.

In line with these maximum levels and limits, the executive risk committee establishes the risk policies and reviews the appropriate exposure levels for the effective management of the degree of concentration in Santander's credit risk portfolios.

Grupo Santander must adhere to the regulation on large risks contained in the CRR, according to which the exposure contracted by an entity with a customer or group of associated customers will be considered a large exposure when its value is equal to or greater than 10% of eligible capital.

In addition, in order to limit large exposures, no entity may assume exposures exceeding 25% of its eligible capital with a single customer or group of associated customers, having factored in the credit risk mitigation effect contained in the regulation.

At the end of December, after applying risk mitigation techniques, no group reaches the above-mentioned thresholds.

Regulatory credit exposure with the 20 largest groups within the scope of large risks represented 5.6% of the outstanding credit risk with customers (lending to customers plus off-balance sheet risks) as of December 2022.



The detail, by activity and geographical area of the Group's risk concentration at 31 December 2022 is as follows:

EUR million

	2022 ^A				
	Total	Spain	Other EU countries	America	Rest of the world
Central banks and Credit institutions	367,620	98,405	61,138	119,005	89,072
Public sector	177,063	41,871	37,936	89,458	7,798
Of which:					
Central government	151,300	30,209	34,681	79,016	7,394
Other central government	25,763	11,662	3,255	10,442	404
Other financial institutions (financial business activity)	152,881	15,271	45,092	54,232	38,286
Non-financial companies and individual entrepreneurs (non-financial business activity) (broken down by purpose)	440,137	114,556	96,354	165,017	64,210
Of which:					
Construction and property development	22,797	3,278	3,569	8,149	7,801
Civil engineering construction	5,178	2,502	1,415	1,113	148
Large companies	267,976	53,355	56,243	111,912	46,466
SMEs and individual entrepreneurs	144,186	55,421	35,127	43,843	9,795
Households – other (broken down by purpose)	566,559	90,597	99,133	141,266	235,563
Of which:					
Residential	361,377	65,077	36,552	45,611	214,137
Consumer loans	185,097	17,074	60,497	90,609	16,917
Other purposes	20,085	8,446	2,084	5,046	4,509
Total	1,704,260	360,700	339,653	568,978	434,929

A. For the purposes of this table, the definition of risk includes the following items in the public balance sheet: 'Loans and advances to credit institutions', 'Loans and advances to Central Banks', 'Loans and advances to Customers', 'Debt securities', 'Equity Instruments', 'Trading Derivatives', 'Hedging derivatives', 'Investments and financial guarantees given'.

4.3 Vulnerable sectors identification

Grupo Santander carries out quarterly monitoring of exposure to customers operating in sectors that could be affected by macroeconomic conditions. The monitoring involves the use of internal tools to forecast customer behaviour and trends in each sector under several macro scenarios, as well as this information:

- Market information: Industries' stock market performance.
- Analysts' EBITDA forecasts for the coming years.
- Internal information: Changes in credit exposure, defaults (in different timelines) and stagings.
- Our industry experts' opinion, based on specific details about our exposures and our relationships with customers

Following the effects of the pandemic, in the second quarter of 2022, Grupo Santander adapted our definition of 'affected sectors' to the current backdrop of rising energy and commodity prices and high inflation, mindful of internal and external factors.

4.4. Sovereign risk and exposure to other public sector entities

Sovereign risk occurs in transactions with a central bank. It includes the regulatory cash reserve, issuer risk with the Treasury (public debt portfolio) and risk from transactions with government institutions whose funding only come from the state's budgetary revenue and not commercial operations.

Grupo Santander's standard for sovereign risk differs somewhat from the European Banking Authority's (EBA) standard for regular stress testing. In particular, the EBA does not consider deposits with central banks, exposures with insurance companies or indirect exposures from guarantees and other financial instruments. However, its standard does generally include entities run by regional, local and central governments.

Santander continues to track and manage transactions with sovereign risk based on available information, such as reports by rating agencies and international organizations. Grupo Santander monitors each country where the Group has cross-border¹ and sovereign risk. Santander analyses events that could affect the country's political or institutional stability and assign its government or central bank a credit rating. This helps us set limits for transactions with sovereign risk.

At the end of December, Grupo Santander's local sovereign exposure, in currencies other than the official currency of the country of issuance, is not significant (EUR 6,039 million, 1.4% of total sovereign risk) according to our management criteria. Furthermore, exposure to non-local sovereign issuers involving cross-border risk is even less significant² (EUR 8,867 million, 2.1% of total sovereign risk).

Sovereign exposure in Latin America is mostly in local currency, and is recognised in the local accounts and concentrated in short-term maturities.

1. Risk with domestic public or private borrowers in foreign currency and originated outside the country.

2. Countries that are not considered low risk by Banco de España.



Over the past few years, total exposure to sovereign risk has remained in line with regulatory requirements and our strategy to manage this portfolio.

The shifts observed in the different countries exposure is due to our liquidity management strategy and the hedging of interest and exchange rates risks. Santander's exposure spreads among countries with varied macroeconomic outlooks and dissimilar scenarios in terms of growth, interest and exchange rates.

Our investment strategy for sovereign risk considers country's credit quality to set the maximum exposure limits^A:

	2022	2021	2020
AAA	27%	15%	18%
AA	19%	32%	25%
A	34%	26%	25%
BBB	11%	11%	14%
Less than BBB	9%	16%	18%

A. Internal ratings are applied.

Sovereign exposure at the end of 31 December 2022 is shown in the table below (data in million euros):

Country	2022				2021	
	Financial assets designated at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Non-trading financial assets mandatorily at fair value through profit or loss	Total net direct exposure	Total net direct exposure
Spain	2,666	240	26,189	—	29,095	19,557
Portugal	(299)	2,005	3,750	—	5,456	6,544
Italy	(1,055)	301	8,169	—	7,415	884
Greece	—	—	—	—	—	—
Ireland	—	—	—	—	—	9
Rest Eurozone	205	789	4,657	—	5,651	3,629
UK	53	315	1,738	—	2,106	366
Poland	4	7,754	957	—	8,715	11,293
Rest of Europe	(7)	14	125	—	132	1,368
US	3,503	8,938	10,857	—	23,298	22,469
Brazil	8,017	9,969	5,742	—	23,728	28,559
Mexico	2,627	11,303	3,376	—	17,306	13,509
Chile	175	818	5,492	—	6,485	6,071
Rest of America	123	1,211	630	—	1,964	1,425
Rest of the World	1	2,012	1,529	—	3,542	3,337
TOTAL	16,013	45,669	73,211	—	134,893	119,020



5. Forborne loan portfolio

The customer debt redirection policy incorporates the regulatory requirements of the EBA guidelines on the management of non-performing exposures, refinancing and restructuring. This policy acts as a reference for the transposition in our subsidiaries and shares the applicable supervisory expectations

This policy also sets down rigorous criteria for evaluating, classifying and monitoring forbearances to ensure the strictest possible care and diligence in recovering due amounts. Thus, it dictates that Santander must adapt payment obligations to customers' current circumstances. Our forbearance policy also defines classification criteria to ensure Grupo Santander recognizes risks appropriately. They must remain classified as non-performing or in watch-list for a prudential period for reasonable certainty of repayment. In no case will repayments be used to delay the immediate recognition of losses or so that their use distorts the timely recognition of the risk of non-payment.

Forbearances may never be used to delay the immediate recognition of losses or hinder the appropriate recognition of risk of default.

After several years where the stock had fallen as a result of the positive economic situation in the main geographies, 2021 was a year of inflection with a growth of 24% to address the financial difficulties of our clients as a result of the situation generated by the pandemic. During 2022 the stock of readjustments has decreased lightly, and has stood at EUR 34,173 million. In terms of credit quality, 44% of the loans is classified as credit impaired, with a coverage ratio of 44%. In addition, 56% of the portfolio is classified as performing.

The following terms are used with the meanings specified below:

- Refinancing transaction: transaction that is granted or used, for reasons relating to current or foreseeable financial difficulties of the borrower, to repay one or more of the transactions granted to it, or through which the payments on such transactions are brought fully or partially up to date, in order to enable the borrowers of the cancelled or refinanced transactions to repay their debt (principal and interest) because they are unable, or might foreseeably become unable, to comply with the conditions there of in due time and form.
- Restructured transaction: transaction with respect to which, for economic or legal reasons relating to current or foreseeable financial difficulties of the borrower, the financial terms and conditions are modified in order to facilitate the payment of the debt (principal and interest) because the borrower is unable, or might foreseeably become unable, to comply with the aforementioned terms and conditions in due time and form, even if such modification is envisaged in the agreement.

**Current refinancing and restructuring balances**

Amounts in EUR million, except number of transactions that are in units

	2022							Impairment of accumulated value or accumulated losses in fair value due to credit risk
	Without real guarantee			Total				
	Number of transactions	Gross amount	Number of transactions	Gross amount	Maximum amount of the actual collateral that can be considered			
					Real estate guarantee	Rest of real guarantees		
Credit entities	—	—	—	—	—	—	—	
Public sector	6,679	227	31	7	2	—	6	
Other financial institutions and: individual shareholder	1,210	321	785	339	88	86	61	
Non-financial institutions and individual shareholder	312,934	9,578	60,003	8,419	4,790	1,834	3,912	
<i>Of which financing for constructions and property development</i>	15,578	125	1,890	570	423	48	208	
Other warehouses	5,878,455	5,790	492,232	9,492	4,835	3,502	4,287	
Total	6,199,278	15,916	553,051	18,257	9,715	5,422	8,266	
Financing classified as non-current assets and disposable groups of items that have been classified as held for sale	—	—	—	—	—	—	—	

Current refinancing and restructuring balances

Amounts in EUR million, except number of transactions that are in units

	2022							Impairment of accumulated value or accumulated losses in fair value due to credit risk
	Of which, non-performing/Doubtful							
	Without real guarantee			With real guarantee				
	Number of transactions	Gross amount	Number of transactions	Gross amount	Maximum amount of the actual collateral that can be considered			
Real estate guarantee					Rest of real guarantees			
Credit entities	—	—	—	—	—	—	—	
Public sector	7	2	13	5	2	—	5	
Other financial institutions and: individual shareholder	641	9	620	135	22	6	55	
Non-financial institutions and individual shareholder	174,300	3,178	39,479	4,890	2,741	886	3,439	
<i>Of which financing for constructions and property development</i>	10,325	78	1,255	335	213	33	188	
Other warehouses	3,735,412	2,911	246,751	4,055	1,917	910	3,122	
Total	3,910,360	6,100	286,863	9,085	4,682	1,802	6,621	
Financing classified as non-current assets and disposable groups of items that have been classified as held for sale	—	—	—	—	—	—	—	

In 2022, the amortised cost of financial assets whose contractual cash flows were modified during the year when the corresponding loss adjustment was valued at an amount equal to the expected credit losses over the life of the asset amounted to EUR 2,379 million (2,480 million in 2021), without these modifications having a material impact on the income statement. Also, during 2022, the total of financial assets that have been modified since the initial recognition, and whose correction for expected loss has gone from being valued during the entire life of the asset to the following twelve months, amounts to EUR 1,677 million (1,868 million in 2021).

The transactions presented in the foregoing tables were classified at 31 December 2022 by nature, as follows:

- Credit impaired: Operations that rest on an inadequate payment scheme will be classified within the non-performing category, regardless they include contract clauses that delay the repayment of the operation throughout regular payments or present amounts written off the balance sheet for being considered irrecoverable.
- Performing: Operations not classifiable as non-performing will be classified within this category. Operations will also be classified as normal if they have been reclassified from the non-performing category for complying with the specific criteria detailed below:
 - a) A period of a year must have passed from the refinancing or restructuring date.



- b) The owner must have paid for the accrued amounts of the capital and interests, thus reducing the rearranged capital amount, from the date when the restructuring of refinancing operation was formalised.
- c) The owner must not have any other operation with amounts past due by more than 90 consecutive days of material delay on the date of the reclassification to the normal risk category.

Attending to the credit attention 56% of the forborne loan transactions are classified as other than non-performing. Particularly noteworthy are the level of existing guarantees (44% of transactions are secured by collateral) and the coverage provided by specific allowances (representing 24% of the total forborne loan portfolio and 44% of the non-performing portfolio).

c) Market, structural and liquidity risk

1. Activities subject to market risk and types of market risk

Activities exposed to market risk encompass transactions where risk is assumed as a consequence of potential changes in interest rates, inflation rates, exchange rates, stock prices, credit spreads, commodity prices, volatility and other market factors; the liquidity risk from our products and markets, and the balance-sheet liquidity risk. Therefore, they include trading risks and structural risks.

- **Interest rate risk** arises from movements in interest rates that reduce the value of a financial instrument, a portfolio or the Grupo Santander. It can affect loans, deposits, debt securities, most assets and liabilities held for trading, and derivatives.
- **Inflation rate risk** arises from movements in inflation that can reduce the value of a financial instrument, a portfolio or the entire group. It can affect loans, debt securities and derivatives (e.g. inflation swaps and futures) whose profitability is linked to inflation.
- **Exchange rate risk** is the possibility of loss because the currency of a long or open position will depreciate against the base currency. It can affect debt in subsidiaries whose local currency is not the euro, as well as loans denominated in a foreign currency.
- **Equity risk** is the possibility of loss from open positions in securities if their market price or expected future dividends fall. It affects shares, stock market indices, convertible bonds and derivatives with shares as the underlying asset (put, call, equity swaps, etc.).
- **Credit spread risk** is the possibility of loss from open positions in fixed-income securities or credit derivatives if their yield curve, or the recovery rate of their issuer or type change. A spread is the yield difference between financial instruments against a benchmark (e.g. the internal rate of return (IRR) of government bonds and interbank interest rates).
- **Commodity price risk** is the possibility of loss from movements in commodity prices. Grupo Santander's commodity exposure is minor and stems mainly from commodity derivatives.

- **Volatility risk** is the possibility of loss caused by movements in interest rates, exchange rates, the stock market, credit spreads and other risk factors affecting portfolio value. It is inherent to all financial instruments whose value considers volatility (especially options contracts).

Derivative contracts (such as options, futures, forwards and swaps) can mitigate market risks partially or fully.

Additionally, other more complex coverage market risks are considered, such as correlation risk, market liquidity risk, prepayment or cancellation risk and subscription risk.

- **Correlation risk** is the possibility of loss due to an adverse correlation between risk variables that affect portfolio value. Risk variables could be the same (e.g. two FX rates) or different (e.g. an interest rate and a commodity price).
- **Market liquidity risk** is the possibility that fewer market makers or institutional investors, a large number of transactions, market instability and other factors will cause the Group or a subsidiary to exit a position at a worse market price or trade cost. Exposure to different products and currencies can also increase this risk.
- **Pre-payment or cancellation risk** originates when mortgages, deposits and other on-balance-sheet instruments give holders the option to buy or sell them, thus altering future cash flows. Potential mismatches on the balance sheet pose a risk since cash flows may have to be reinvested at an interest rate that is potentially lower (assets) or higher (liabilities).
- **Underwriting risk** is the possibility that the bank will have to hold part of a debt issue it has underwritten or agreed to place if it cannot all be placed among potential buyers.

Balance sheet liquidity risk (unlike market liquidity risk) is the possibility of loss caused by forced disposal of assets or cash flow imbalance if the bank meets its payment obligations late or at excessive cost. It can cause losses by forced asset sales or impacts on margins due to the mismatch between expected cash inflows and outflows.

Pension and actuarial risks (explained at the end of this section) also depend on market variables.

Grupo Santander aim to comply with the *Basel Committee's Fundamental Review of the Trading Book (FRTB)* and the *EBA's Guidelines* on the management of interest rate risk arising from non-trading book activities. The purpose of several projects Grupo Santander runs is to provide risk control managers and teams with the best market risk management tools under the right governance framework for the models Grupo Santander uses for metric reporting; and to comply with regulation on the risks mentioned above.



2. Trading market risk management

Setting market risk limits in a dynamic process according to the risk appetite in the annual limits plan prepared by senior management and extended to all subsidiaries.

The standard methodology for risk management and control in trading, measures the maximum expected loss with a specific level of confidence and time frame. The standard for historical simulation is a confidence level of 99% over one day.

Grupo Santander applies statistical adjustments efficiently to incorporate recent developments affecting our levels of risk. Our time frame is two years or at least 520 days from the reference date of the VaR calculation.

The balance sheet items in the Group's consolidated position that are subject to market risk are shown below, distinguishing those positions for which the main risk metric is VaR from those for which risk monitoring is carried out using other metrics:

Risk metric values on the consolidated balance sheet

EUR million

	Balance sheet amount	Main market risk metric		Main risk factor for 'Other' balance
		VaR	Other	
Assets subject to market risk				
Cash, cash balances at central banks and other deposits on demand	223,073		223,073	Interest rate
Financial assets held for trading	156,118	156,118		
Non-trading financial assets mandatorily at fair value through profit or loss	5,713	3,711	2,002	Interest rate, spread
Financial assets designated at fair value through profit or loss	8,989	815	8,174	Interest rate, spread
Financial assets designated at fair value through other comprehensive income	85,239	1,941	83,298	Interest rate, spread
Financial assets at amortized cost	1,147,044		1,147,044	Interest rate, spread
Hedging derivatives	8,069		8,069	Interest rate, exchange rate
Changes in the fair value of hedged items in portfolio hedges of interest risk	(3,749)		(3,749)	Interest rate
Other assets	104,163			
Total assets	1,734,659			
Liabilities subject to market risk				
Financial liabilities held for trading	115,185	115,185		
Financial liabilities designated at fair value through profit or loss	55,947		55,947	Interest rate, spread
Financial liabilities at amortized cost	1,423,858		1,423,858	Interest rate, spread
Hedging derivatives	9,228		9,228	Interest rate, exchange rate
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	(117)		(117)	Interest rate
Other liabilities	32,973			
Total liabilities	1,637,074			
Equity	97,585			



The following table displays the latest and average VaR values at 99% by risk factor over the last three years. It also shows the minimum and maximum VaR values in 2022 and 97.5% ES at the end of December 2022:

VaR statistics and expected shortfall by risk factor^A

EUR million. VaR at 99% and ES at 97.5% with one day time horizon

	2022					2021		2020	
	VaR (99%)			Latest	ES (97.5%)	VaR		VaR	
	Min	Average	Max			Average	Latest	Average	Latest
Total Trading	9.2	14.1	21.5	11.6	10.8	10.5	12.3	12.5	8.3
Diversification effect	(7.8)	(14.6)	(30.5)	(15.5)	(15.6)	(12.9)	(13.4)	(13.0)	(11.8)
Interest rate	8.1	12.6	21.5	9.9	9.8	9.6	9.1	9.2	5.4
Equities	2.4	4.2	7.3	5.5	5.5	3.5	5.1	4.4	3.1
Exchange rate	2.5	4.8	10.3	3.6	3.2	4.2	5.7	5.9	6.0
Credit spread	3.4	5.4	8.5	5.8	4.9	4.8	5.1	5.5	4.5
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	0.5	1.1
Total Europe	7.9	12.2	21.9	10.5	9.2	9.3	9.9	10.5	8.0
Diversification effect	(5.1)	(10.4)	(16.8)	(14.2)	(12.0)	(9.3)	(12.6)	(10.7)	(8.9)
Interest rate	5.5	10.2	18.4	10.1	7.8	7.7	7.1	7.9	6.5
Equities	2.2	3.6	5.8	5.5	5.5	3.3	5.8	4.3	3.0
Exchange rate	1.9	3.4	5.8	3.3	3.0	2.8	4.5	3.5	2.9
Credit spread	3.4	5.4	8.7	5.8	4.9	4.8	5.1	5.5	4.5
Commodities	—	—	—	—	—	—	—	—	—
Total North America	1.5	2.3	4.7	2.7	2.2	2.5	2.7	6.6	2.9
Diversification effect	0.7	(0.8)	(4.0)	(1.1)	(1.3)	(0.7)	(0.6)	(2.2)	(1.0)
Interest rate	0.7	2.2	5.7	2.7	2.4	2.5	2.7	3.4	3.3
Equities	—	0.1	1.0	0.1	0.1	0.1	—	0.3	0.1
Exchange rate	0.1	0.8	2.0	1.0	1.0	0.6	0.6	5.1	0.5
Total South America	5.2	8.0	14.2	6.2	6.5	5.9	6.3	5.6	4.5
Diversification effect	(1.3)	(5.0)	(19.8)	(4.2)	(4.4)	(4.9)	(5.1)	(3.8)	(5.4)
Interest rate	4.5	7.0	14.9	5.5	5.7	5.5	5.8	5.2	4.1
Equities	0.7	1.6	4.8	1.7	1.6	1.2	1.1	1.0	0.5
Exchange rate	0.7	2.7	9.9	0.9	0.6	2.8	3.8	2.7	4.2
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	0.5	1.1

A. In South and North America, VaR levels of credit spreads and commodities are not shown separately due to their low or null materiality.

At the end of 2022, VaR was slightly lower (EUR 0.7 million) than at the end of 2021, consequence of an update in calculation model and a lighter pressure in markets as inflation started to moderate in some regions, as the Eurozone.

Although by risk factor, VaR has followed a generally stable trend in recent years, in 2022 the average VaR rose by EUR 3.6 million compared to 2021. By risk factor, average VaR was greater in all of them, specially in interest rate due to a higher market volatility. The temporary increases in VaR are due more to short-term price volatility than to significant changes in positions.

By region, average VaR grew for all risk types in Europe and South America, which have the highest market risk exposure.

Backtesting

Actual losses can differ from predicted losses because of the VaR's limitations. Grupo Santander measures the accuracy of the VaR calculation model to make sure it is reliable. The most important tests Grupo Santander runs involve backtesting:

- Backtesting of hypothetical P/L and of the entire trading book showed no exceptions to 99% VaR in 2022. Regarding to 99% VaE, there was an exception the 15th of December as a consequence of market volatility concurrent with the last ECB's year meeting where a 50 bp interest rate hike was confirmed.
- The exceptions observed in the past year are consistent with the assumptions of the VaR calculation model.



IBOR reform

Since 2013, different organizations and supranational authorities (IOSCO and FSB) have promoted and monitored initiatives aimed at carrying out reforms to strengthen interest rate indices. In this context, in order to execute the transition in a non-disruptive and progressive manner, central banks and regulators from various jurisdictions have organized working groups to recommend risk-free indices.

The objective was mainly to facilitate the transition to risk-free indices identified in different jurisdictions, highlighting the SONIA index as a replacement for the Libor in pounds, the SOFR for Libor in dollars, and the €STR for Libor in euros.

In this sense, and as a result of the joint effort of authorities and market participants, this transition process has materialized in different milestones during the period between 2019 and 2022, remaining only in 2023 the execution of the substitution plans for GBP LIBOR and USD LIBOR.

According with the regulatory milestones of the transition, the USD LIBOR terms (overnight, 1M, 3M, 6M and 12M) will continue to be calculated using the contributions of panel banks until mid-2023, although their use for new operations was limited from the end 2021. The last date of publication of the USD LIBOR for the overnight and 12M terms will be June 30, 2023. For the 1, 3 and 6 month terms, on November 23, 2022, the FCA announced an inquiry of its proposal to require the LIBOR administrator, IBA, to continue to publish these USD LIBOR terms under a non-representative "synthetic" methodology until the end of September 2024. After that date, publication would cease permanently.

Regarding the GBP LIBOR, its publication is confirmed under the synthetic methodology for the 3-month term until the end of March 2024, while the 1- and 6-month terms will cease to be published in March 2023.

In accordance with the milestones indicated, the Group and its entities have focused on making all the contractual, commercial, operational and technological changes necessary to undertake the transition from these reference indices. In 2023, the following transition milestones will continue to be met in the different jurisdictions where the Grupo Santander operates.

Following is a detail of the carrying amount at 31 December 2022 of financial assets, financial liabilities, derivatives and loan commitments that continue to be referenced to the pending transition ratios:

EUR million

Gross Carrying amount	Loans and advances	Debt securities acquired (Assets)	Deposits	Debt securities issued (Liabilities)	Derivatives (Assets)	Derivatives (Liabilities)	Loan Commitments
Referenced to LIBOR	24,641	3,229	9,150	6,931	12,897	12,385	1,211
<i>of which USD</i>	24,296	2,854	8,840	5,063	12,561	12,339	1,166
<i>of which GBP</i>	345	375	310	1,868	336	46	45
TOTAL	24,641	3,229	9,150	6,931	12,897	12,385	1,211

Additionally, see information included in note 36.



3. Structural balance sheet risks

3.1. Main aggregates and variations

Consistent with previous years, the market risk profile of Grupo Santander's balance sheet remained moderate in 2022 in terms of asset, shareholders' equity and NII volumes.

Each subsidiary's finance division manages interest rate risk from commercial banking and is responsible for handling structural risk from interest rate fluctuations.

To measure interest rate risk, Grupo Santander uses statistical models based on strategies to mitigate structural risk with interest-rate instruments (such as bonds and derivatives) to keep risk profile within risk appetite.

The NII and EVE sensitivities below are based on scenarios of parallel interest rate movements from -100 to +100 basis points.

Structural VaR

With such a homogeneous metric as VaR, Grupo Santander can fully monitor market risk in the banking book (excluding SCIB trading activity). The Bank differentiates fixed income based on interest rates and credit spreads in ALCO portfolios, FX rates and shares.

In general, the structural VaR of Grupo Santander total assets and equity is minor.

Structural VaR

EUR million. Structural VaR 99% with a temporary horizon of one day.

	2022				2021		2020	
	Min	Average	Max	Latest	Average	Latest	Average	Latest
Structural VaR	538.5	664.0	1,084.4	538.5	993.7	1,011.9	911.0	903.1
Diversification effect	(323.5)	(417.1)	(489.5)	(422.4)	(327.3)	(240.2)	(349.8)	(263.4)
VaR Interest Rate ^A	266.2	350.8	577.0	304.5	400.7	287.8	465.1	345.5
VaR Exchange Rate	400.4	493.4	682.3	461.0	600.6	655.2	499.9	502.6
VaR Equities	195.4	236.9	314.6	195.4	319.7	309.1	295.9	318.5

A. Includes credit spread VaR on ALCO portfolios.

Structural interest rate risk

• Europe

At the end of December, the sensitivity of NII on our core balance sheets and of Santander España's EVE to interest rate hikes was positive; but at Santander UK it was negative.

Across our footprint, exposure was moderate in relation to annual budget and capital levels in 2022.

At the end of December, under the scenarios previously described, significant risk of NII sensitivity to the euro amounted to EUR 1,009 million; to the pound sterling, EUR 191 million; to the US dollar, EUR 51 million; and to the Polish złoty, EUR 64 million, all with risk of rate cuts.

Significant risk of EVE sensitivity to yield curves of the euro was EUR 2,820 million; of the pound sterling, EUR 440 million; of the US dollar, EUR 11 million euros; and of the Polish złoty, EUR 91 million euros, mostly with risk of rate cuts.

• North America

At the end of December, sensitivity of NII on our North America balance sheet to interest rate hikes was positive, while EVE sensitivity was negative.

Exposure was moderate in relation to annual budget and capital levels in 2022.

At the end of December, significant risk to NII was mainly in the US and amounted to EUR 151 million.

The most significant risk to EVE was in the US and amounted to EUR 763 million.

• South America

EVE and NII on our main South American balance sheets are positioned for interest rate cuts.

Exposure in all countries was moderate in relation to the annual budget and capital levels in 2022.



At the end of December, most significant risk to NII was mainly in Chile (EUR 72 million) and in Brazil (EUR 169 million).

Most significant risk to EVE was recorded in Chile (EUR 309 million) and in Brazil (EUR 386 million).

Structural foreign currency rate risk/results hedging

Grupo Santander's structural FX risk stems mainly from the income and hedging of foreign currency transactions for permanent financial investments. In the dynamic management of this risk, Grupo Santander aims to limit the impact of FX rate movements on the core capital ratio. In 2022, the hedged of the different currencies that have an impact on our core capital ratio was close to 100%.

In December 2022, our permanent exposures (with potential impact on shareholders' equity) were, from largest to smallest, in US dollars, Brazilian reais, British pounds sterling, Mexican pesos, Chilean pesos and Polish zloty.

Grupo Santander uses FX derivatives to hedge part of those permanent positions. The Finance division manages FX risk and hedging for the expected profits and dividends of subsidiaries whose base currency is not the euro.

Structural equity risk

Grupo Santander holds equity positions in its banking and trading books. They are either equity instruments or stock, depending on the share of ownership or control.

At the end of December 2022, the equities and shareholdings in the banking book were diversified among Spain, China, Morocco, Poland and other countries. Most of them invest in the financial and insurance sectors. Grupo Santander has minor equity exposure to property and other sectors.

Structural equity positions are exposed to market risk. The Group calculates its VaR with a set of market prices and proxies. At the end of the year 2022, VaR at a 99% confidence level over a one-day horizon was EUR 195 million (EUR 309 million and EUR 319 million in 2021 and 2020, respectively).

3.2. Methodologies

Structural interest rate risk

Grupo Santander measures the potential impact of interest rate movements on EVE and NII. Because changing rates may generate impacts, Grupo Santander must manage and control many subtypes of interest rate risk, such as repricing risk, curve risk, basis risk and option risk (e.g. behavioural or automatic).

Interest rate risk in the balance sheet and market conditions and outlooks could necessitate certain financial measures to achieve Grupo Santander's desired risk profile (such as selling positions or setting interest rates on products Grupo Santander markets).

The metrics Grupo Santander uses to monitor IRRBB include NII and EVE sensitivity to interest rate movements.

• Net interest income sensitivity

Net interest income (NII) is the difference between interest income from assets and the interest cost of liabilities in the banking book over a typical one- to three-year horizon (one year being standard in Grupo Santander). Because NII sensitivity is the difference in income between a selected scenario and the base scenario, its values can be as many as considered scenarios. It enables us to see short-term risks and supplement economic value of equity (EVE) sensitivity.

• Economic value of equity sensitivity

Economic value of equity (EVE) is the difference between the current value of all assets minus the current value of all liabilities in the banking book. It does not include shareholders' equity and non-interest-bearing instruments.

Because EVE sensitivity is the difference in EVE between a selected scenario and the base scenario, it can have as many values as considered scenarios. It enables us to see long-term risks and supplement NII sensitivity.

Structural exchange-rate risk/hedging of results

Every day, Grupo Santander measures FX positions, VaR and P/L.

Structural equity risk

Grupo Santander measures equity positions, VaR and P/L.

4. Liquidity risk

Structural **liquidity management** aims to fund the Group's recurring activity optimising maturities and costs, while avoiding taking on undesired liquidity risks.

Santander's liquidity management is based on the following principles:

- Decentralised liquidity model.
- Medium- and long-term (M/LT) funding needs must be covered by medium- and long-term instruments.
- High contribution from customer deposits due to the retail nature of the balance sheet.
- Diversification of wholesale funding sources by instruments/ investors, markets/currencies and maturities.
- Limited recourse to short-term funding.
- Availability of sufficient liquidity reserves, including standing facilities/discount windows at central banks to be used in adverse situations.
- Compliance with regulatory liquidity requirements both at Group and subsidiary level, as a new factor conditioning management.

The effective application of these principles by all institutions comprising the Group required the development of a unique **management framework** built upon three fundamental pillars:



- A solid organisational and governance model that ensures the involvement of the subsidiaries' senior management in decision-taking and its integration into the Group's global strategy. The decision-making process for all structural risks, including liquidity and funding risk, is carried out by local Asset and Liability Committees (ALCOs) in coordination with the global ALCO, which is the body empowered by the Bank's board in accordance with the corporate Asset and Liability Management (ALM) framework.

This governance model has been reinforced as it has been included within Santander's Risk Appetite Framework. This framework meets demands from regulators and market players emanating from the financial crisis to strengthen banks' risk management and control systems.

- In-depth balance sheet analysis and measurement of liquidity risk, supporting decision-taking and its control. The objective is to ensure the Group maintains adequate liquidity levels necessary to cover its short- and long-term needs with stable funding sources, optimising the impact of their costs on the income statement. Grupo Santander's liquidity risk management processes are contained within a conservative risk appetite framework established in each geographic area in accordance with its commercial strategy. This risk appetite establishes the limits within which the subsidiaries can operate in order to achieve their strategic objectives.
- Management adapted in practice to the liquidity needs of each business. Every year, based on business needs, a liquidity plan is developed which seeks to achieve:
 - a solid balance sheet structure, with a diversified presence in the wholesale markets;
 - the use of liquidity buffers and limited encumbrance of assets;
 - compliance with both regulatory metrics and other metrics included in each entity's risk appetite statement.

Over the course of the year, all dimensions of the plan are monitored.

Grupo Santander continues to develop the ILAAP (Internal Liquidity Adequacy Assessment Process), an internal self-assessment of liquidity adequacy which must be integrated into the Group's other risk management and strategic processes. It focuses on both quantitative and qualitative matters and is used as an input to the SREP (Supervisory Review and Evaluation Process). The ILAAP evaluates the liquidity position both in ordinary and stressed scenarios.

i. Liquidity risk measurement

Grupo Santander uses the Basel regulatory definition and calculates a set of metrics and stress scenarios in relation to intraday liquidity risk to maintain a high level of management and control. On the one hand, the regulatory liquidity metrics (LCR, NSFR, etc.) are prepared following the regulatory criteria established in the CRR-II and CRD IV. Regarding internal metrics, liquidity scenarios are determined using a combination of behavioral observation in actual liquidity crises occurred at other banks, regulatory assumptions (e.g. the assumptions in the LiST) and expert judgment.

a) Liquidity buffer

The liquidity buffer is the total liquid assets a bank has to cope with cash outflows during periods of stress. The assets are free of encumbrances and can be used immediately to generate liquidity without losses or excessive discounts. The liquidity buffer is a tool for calculating most liquidity metrics. It is also a metric with defined limits for each subsidiary.

b) Liquidity Coverage Ratio (LCR)

The liquidity coverage ratio (LCR) is a regulatory metric. Its purpose is to promote the short-term resilience of a bank's liquidity profile and make sure it has enough high-quality liquid assets to withstand a considerable idiosyncratic or market stress scenario over 30 calendar days.

c) Wholesale liquidity metric

The wholesale liquidity metric measures the number of days Grupo Santander would survive if it used liquid assets to cover lost liquidity from a wholesale deposit run-off (without possible renewal) over a set time horizon. Grupo Santander also uses it as an internal short-term liquidity metric to reduce risk from dependence on wholesale funding.

d) Net Stable Funding Ratio (NSFR)

The net stable funding ratio (NSFR) is a regulatory metric we use to measure long-term liquidity risk. It is the ratio of available stable funding to required stable funding. It requires banks to keep a robust balance sheet, with off-balance-sheet assets and operations financed by stable liabilities.

e) Asset Encumbrance metrics

Grupo Santander calculates two metrics to measure asset encumbrance risk. On the one hand, the asset encumbrance ratio gives the proportion of encumbered assets to total assets; on the other, the structural asset encumbrance ratio gives the proportion of encumbered assets by structural funding transaction (namely long-term collateralized issues and credit transactions with central banks).

f) Other additional liquidity indicators

In addition to traditional tools to measure short and long-term liquidity and funding risk, Grupo Santander has a set of additional liquidity indicators to complement those and to measure other non-covered liquidity risk factors. These include concentration metrics, such as the main and the five largest funding counterparties, or the distribution of funding by maturity.

In addition, Santander calculates a number of metrics on the institution's ability to generate liquidity through collateralized financing, such as overcollateralization, eligibility ratios assets without charges and deadlines for their placement.

g) Liquidity scenario analysis

As liquidity stress tests, four standard scenarios have been defined:

- An idiosyncratic scenario of events detrimental only to Santander;
- a local market scenario of events highly detrimental to a base country's financial system or real economy;
- a global market scenario of events highly detrimental to the global financial system; and



- iv. combined scenario consisting of a combination of more severe idiosyncratic and market events (local and global) occurring simultaneously and interactively.
- v. climate scenarios where different stress cases derived from the effects that climate change could have on the economy are collected.

Grupo Santander uses these stress test outcomes as tools to determine risk appetite and support business decision-making.

h) Liquidity early warning indicators

The system of early warning indicators (EWI) consists of quantitative and qualitative liquidity indicators that help predict stress situations and weaknesses in the funding and liquidity structure of Grupo Santander entities. External indicators relate to market-based financial variables; internal indicators relate to our own performance.

i) Intraday liquidity metrics

Grupo Santander follows Basel regulation and calculates several metrics and stress scenarios for intraday liquidity risk to maintain a high level of control.

ii. Liquidity coverage ratio and net stable financing ratio

As regards the liquidity coverage ratio (LCR), the regulatory requirement for this ratio, set at 100%, has been at its maximum level since 2018.

Below is a breakdown of the composition of the Group's liquid assets under the criteria set out in the supervisory prudential reporting (Commission Implementing Regulation (EU) 2017/2114 of 9 November 2017) for the determination of high quality liquid assets for the calculation of the LCR ratio (HQLA):

EUR million	2022	2021
	Amount weighted applicable	Amount weighted applicable
High-quality liquid assets-HQLAs		
<i>Cash and reserves available at central banks</i>	127,285	206,507
<i>Marketable assets Level 1</i>	177,887	81,925
<i>Marketable assets Level 2A</i>	3,308	3,422
<i>Marketable assets Level 2B</i>	3,562	5,446
Total high-quality liquid assets	312,042	297,300

In relation to the net stable funding ratio (NSFR), its definition was approved by the Basel Committee in October 2014. The transposition of this requirement to the European regulation took place in June 2019 with the publication in the Official Gazette of the European Union of Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019. The Regulation establishes that entities must have a net stable financing ratio, as defined in the Regulation, higher 100% from June 2021. The liquidity coverage ratio, broken down by component, and the net stable funding ratio for the Group at year-ends 2022 and 2021 are presented below:

EUR million	2022	2021
High-quality liquid assets-HQLAs (numerator)	312,042	297,300
Total net cash outflows (denominator)	204,759	181,953
<i>Cash outflows</i>	270,748	233,294
<i>Cash inflows</i>	65,989	51,341
LCR ratio (%)	152%	163%
NSFR ratio (%)	121%	126%

As regards the funding structure, given the predominantly commercial nature of the Group's balance sheet, the loan portfolio is mainly financed by customer deposits.

In the last quarter of 2022, Grupo Santander has begun to repay in advance a significant part of the financing received under the TLTRO-III program launched by the European Central Bank, which originally matured in 2023. The replacement of these funds has been carried out after having strengthened the balance sheet through a combination of growth in customer deposits, an increase in short-term instruments and greater activity in medium and long-term issuances, which has allowed Grupo Santander to maintain liquidity coverage ratios (LCR) and net stable funding (NSFR) at prudent levels after the repayment.

The movement in the composition of the buffer between 'Cash and reserves available at central banks' to 'Level 1 marketable assets' corresponds to a reclassification of deposits with the Central Bank, due to the change in the remuneration of deposits with the European Central Bank.

Note 22 'Debt securities' shows the composition of these liabilities on the basis of their nature and classification, the movements and maturity profile of the debt securities issued by the Group, reflecting the strategy of diversification by products, markets, issuers and maturities followed by the Group in its approach to the wholesale markets.

iii. Asset encumbrance

Finally, the moderate use of assets by Grupo Santander as collateral in the sources of structural financing of the balance sheet should be highlighted.

In accordance with the guidelines established by the European Banking Authority (EBA) in 2014 on committed and uncommitted assets, the concept of assets committed in financing transactions (asset encumbrance) includes both on-balance sheet assets provided as collateral in transactions to obtain liquidity and off-balance sheet assets that have been received and reused for similar purposes, as well as other assets associated with liabilities for reasons other than financing.



The residual maturities of the liabilities associated with the assets and guarantees received and committed are presented below, as of 31 of December of 2022 (EUR thousand million):

Residual maturities of the liabilities	Unmatured	<=1month	>1 month <=3 months	>3 months <=12 months	>1 year <=2 years	>2 years <=3 years	3 years <=5 years	5 years <=10 years	>10 years	Total
Committed assets	44.6	32.3	10.6	49.7	39.2	50.1	51.6	20.1	10.7	308.9
Guarantees received committed	29.2	37.5	13.3	21.4	0.6	1.3	1.0	—	—	104.3

The reported Group information as required by the EBA at 2022 year-end is as follows:

On-balance-sheet encumbered assets

EUR billion

	Carrying amount of encumbered assets	Fair value of encumbered assets	Fair value of non-encumbered assets	Carrying amount of non-encumbered assets
Loans and advances	197.3		1,143.5	
Equity instruments	8.3	8.3	7.4	7.4
Debt securities	71.7	71.7	122.0	125.8
Other assets	31.6		152.8	
Total assets	308.9		1,425.7	

Encumbrance of collateral received

EUR billion

	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Collateral received	104.3	29.4
Loans and advances	1.3	—
Equity instruments	4.8	6.8
Debt securities	98.2	22.5
Other collateral received	—	0.1
Own debt securities issued other than own covered bonds or ABSs	—	0.5

Encumbered assets and collateral received and matching liabilities

EUR billion

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Total sources of encumbrance (carrying amount)	313.2	413.2

On-balance-sheet encumbered assets amounted to EUR 308,900 million, of which 64% are loans (mortgage loans, corporate loans, etc.). Guarantees received committed amounted to EUR 104,300 million, relating mostly to debt securities received as security in asset purchase transactions and re-used.

Taken together, these two categories represent a total of EUR 413,200 million of encumbered assets, which give rise to EUR 313,200 million matching liabilities.

As of December 2022, total asset encumbrance in funding operations represented 22.1% of the Group's extended balance sheet under EBA criteria (total assets plus guarantees received: EUR 1,868,400 million as of December 2022). This percentage has decreased from 26.1% that presented the Group as of December 2021, mainly as a result of the early repayment of collateralized financing with central banks, especially the European Central Bank (TLTRO) and the Bank of England (TFSME).

d) Capital risk

In the second line of defence, capital risk management can independently challenge business and first-line activities by:

- Supervising capital planning and adequacy exercises through a review of the main components affecting the capital ratios.
- Identifying key metrics to calculate the Group's regulatory capital, setting tolerance levels and analysing significant variations, as well as single transactions with impact on capital.
- Reviewing and challenging the execution of capital actions proposed in line with capital planning and risk appetite.

Grupo Santander commands a sound solvency position, above the levels required by regulators and by the European Central bank.



Regulatory capital

At 1 January 2023, at a consolidated level, the Group must maintain a minimum capital ratio of 9.07% of CET1 (4.50% being the requirement for Pillar I, 0.89% being the requirement for Pillar 2R (requirement), 2.50% being the requirement for capital conservation buffer, 1% being the requirement for global systemically entity (G-SIB) and 0.18% being the requirement for anti-cyclical capital buffer).

Grupo Santander must also maintain a minimum capital ratio of 10.87% of tier 1 and a minimum total ratio of 13.26%.

In 2022, the solvency target set was achieved. Santander's CET1 ratio stood at 12.18%¹ at the close of the year, demonstrating its organic capacity to generate capital. The key regulatory capital figures are indicated below:

Reconciliation of accounting capital with regulatory capital

EUR million	2022	2021	2020
Subscribed capital	8,397	8,670	8,670
Share premium account	46,273	47,979	52,013
Reserves	62,111	56,606	62,777
Treasury shares	(675)	(894)	(69)
Attributable profit	9,605	8,124	(8,771)
Approved dividend ^c	(979)	(836)	—
Shareholders' equity on public balance sheet	124,732	119,649	114,620
Valuation adjustments	(35,628)	(32,719)	(33,144)
Non-controlling interests	8,481	10,123	9,846
Total Equity on public balance sheet	97,585	97,053	91,322
Goodwill and intangible assets	(17,272)	(16,132)	(15,711)
Eligible preference shares and participating securities	8,831	10,050	9,102
Accrued dividend ^c	(942)	(895)	(478)
Other adjustments ^a	(5,169)	(7,624)	(5,734)
Tier 1^b	83,033	82,452	78,501

A. Fundamentally for non-computable non-controlling interests and deductions and reasonable filters in compliance with CRR.

B. Figures calculated by applying the transitional provisions of IFRS 9.

C. Assumes 20% of ordinary profit, see note 4.a for proposed distribution of results.

Note: Certain figures presented in this capital note have been rounded for ease of presentation. Consequently, the amounts corresponding to the rows or columns of totals in the tables presented in this note may not coincide with the arithmetic sum of the concepts or items that make up the total.

The following table shows the capital coefficients and a detail of the eligible internal resources of the Group:

Capital coefficients

EUR million	2022	2021	2020
Level 1 ordinary eligible capital (EUR million)	74,202	72,402	69,399
Level 1 additional eligible capital (EUR million)	8,831	10,050	9,102
Level 2 eligible capital (EUR million)	14,359	14,865	12,514
Risk-weighted assets (EUR million)	609,266	578,930	562,580
Level 1 ordinary capital coefficient (CET 1)	12.18%	12.51%	12.34%
Level 1 additional capital coefficient (AT1)	1.45%	1.73%	1.61%
Level 1 capital coefficient (TIER1)	13.63%	14.24%	13.95%
Level 2 capital coefficient (TIER 2)	2.36%	2.57%	2.23%
Total capital coefficient	15.99%	16.81%	16.18%

Eligible capital

EUR million	2022	2021	2020
Eligible capital			
Common Equity Tier I	74,202	72,402	69,399
Capital	8,397	8,670	8,670
(-) Treasury shares and own shares financed	(60)	(966)	(126)
Share Premium	46,273	47,979	52,013
Reserves	62,246	58,157	64,766
Other retained earnings	(37,439)	(34,784)	(34,937)
Minority interests	7,416	6,736	6,669
Profit net of dividends	7,684	6,394	(9,249)
Deductions	(20,315)	(19,784)	(18,407)
<i>Goodwill and intangible assets</i>	<i>(17,182)</i>	<i>(16,064)</i>	<i>(15,711)</i>
<i>Others</i>	<i>(3,133)</i>	<i>(3,720)</i>	<i>(2,696)</i>
Additional Tier I	8,831	10,050	9,102
Eligible instruments AT1	8,344	10,102	8,854
AT1-excesses-subsidiaries	487	(52)	248
Tier II	14,359	14,865	12,514
Eligible instruments T2	14,770	15,424	13,351
Gen. funds and surplus loans loss prov. IRB	—	75	—
T2-excesses - subsidiaries	(411)	(634)	(837)
Total eligible capital	97,392	97,317	91,015

Note: Banco Santander, S.A. and its affiliates had not taken part in any State aid programmes.



Leverage ratio

Basel III established the leverage ratio as a non-risk sensitive measure aimed at limiting excessive balance sheet growth relative to available capital.

The Group performs the calculation in accordance with Regulation (EU) 2019/876 of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio.

This ratio is calculated as tier 1 capital divided by leverage exposure. Exposure is calculated as the sum of the following items:

- Accounting assets, excluding derivatives and items treated as deductions from tier 1 capital (for example, the balance of loans is included, but not that of goodwill) further excluding the exposures referred to in Article 429.a (1) of the regulation.
- Off-balance-sheet items (mainly guarantees, unused credit limits granted and documentary credits) weighted using credit conversion factors.
- Inclusion of net value of derivatives (gains and losses are netted with the same counterparty, minus collaterals if they comply with certain criteria) plus a charge for the future potential exposure.
- A charge for the potential risk of security funding transactions.
- Lastly, it includes a charge for the risk of credit derivative swaps (CDS).

With the publication of Regulation (EU) 2019/876 of 20 May, 2019, amending Regulation (EU) n.º 575/2013 as regards the leverage ratio, the final calibration of the ratio is set at 3% for all entities and, for systemic entities G-SIB, an additional surcharge is also established which will be 50% of the cushion ratio applicable to the EISM. In addition, modifications are included in its calculation, including the exclusion of certain exposures from the total exposure measure: public loans, transfer loans and officially guaranteed export credits.

Banks implemented this final definition of the leverage ratio in June 2021, however, the new calibration of the ratio (the additional surcharge for G-SIBs) will take effect from January 2023.

EUR million			
	2022	2021	2020
Leverage			
Level 1 Capital	83,033	82,452	78,501
Exposure	1,750,626	1,536,516	1,471,480
Leverage Ratio	4.74%	5.37%	5.33%

Global systemically important banks

Grupo Santander is one of 30 banks designated as global systemically important banks (G-SIBs).

The designation as a globally systemic entity comes from a measurement established by the regulators (FSB and BCBS) that they have implemented based on five indicators (size, interjurisdictional activity, interconnection with other financial entities, substitutability and complexity). The application methodology has been modified in December 2021, incorporating, among other things, an additional score considering the Member States of the SRM as a single jurisdiction.

This definition means it has to fulfil certain additional requirements, which consist mainly of a capital buffer (1%), in TLAC requirements (total loss absorbing capacity), that Grupo Santander has to publish relevant information more frequently than other banks, greater regulatory requirements for internal control bodies, special supervision and drawing up of special reports to be submitted to supervisors.

The fact that Grupo Santander has to comply with these requirements makes it a more solid bank than its domestic rivals.

54. Explanation added for translation to English

These accompanying Consolidated Financial Statements, translation of the Consolidated Financial Statements originally issued in Spanish, are presented on the basis of the regulatory financial reporting framework applicable to the Group in Spain (see note 1.b).

Appendix





Appendix I

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
2 & 3 Triton Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	40	1	12
A & L CF (Guernsey) Limited (n)	Guernsey	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
A & L CF June (2) Limited (e)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
A & L CF June (3) Limited (e)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
A & L CF March (5) Limited (d)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	1	0	0
A & L CF September (4) Limited (f)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	20	0	0
A3T Luxco 1 S.A. (c)	Luxembourg	0.00%	100.00%	100.00%	100.00%	Holding company	4	(1)	4
A3T Luxco 2 S.A. (c)	Luxembourg	100.00%	0.00%	100.00%	100.00%	Holding company	(20)	21	0
Abbey Business Services (India) Private Limited (d)	India	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Abbey Covered Bonds (Holdings) Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Abbey Covered Bonds (LM) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Abbey Covered Bonds LLP	United Kingdom	—	(b)	—	—	Securitization	231	159	0
Abbey National Beta Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National Business Office Equipment Leasing Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National International Limited	Jersey	0.00%	100.00%	100.00%	100.00%	Financial services	4	0	4
Abbey National Nominees Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National PLP (UK) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National Property Investments	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	278	(1)	156
Abbey National Treasury Services Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National Treasury Services Overseas Holdings	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Abbey National UK Investments	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Abbey Stockbrokers (Nominees) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey Stockbrokers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securities company	0	0	0
Abent 3T, S.A.P.I de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Electricity production	52	(86)	0
Ablasa Participaciones, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	233	48	894
Aduro S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payments and collection services	1	(1)	3
Aevis Europa, S.L.	Spain	96.34%	0.00%	96.34%	96.34%	Cards	1	0	1
AFB SAM Holdings, S.L.	Spain	1.00%	99.00%	100.00%	100.00%	Holding company	0	0	0
Afisa S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Fund management company	4	0	4
Allane Leasing GmbH	Austria	0.00%	46.95%	100.00%	100.00%	Renting	(2)	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Allane Location Longue Durée S.a.r.l.	France	0.00%	46.95%	100.00%	100.00%	Renting	14	3	0
Allane Mobility Consulting AG	Switzerland	0.00%	46.95%	100.00%	100.00%	Consulting services	1	0	0
Allane Mobility Consulting B.V.	Netherlands	0.00%	46.95%	100.00%	100.00%	Consulting services	(3)	0	0
Allane Mobility Consulting GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Consulting services	1	1	0
Allane Mobility Consulting Österreich GmbH	Austria	0.00%	46.95%	100.00%	100.00%	Consulting services	(1)	0	0
Allane Mobility Consulting S.a.r.l.	France	0.00%	46.95%	100.00%	100.00%	Consulting services	(1)	0	0
Allane Schweiz AG	Switzerland	0.00%	46.95%	100.00%	100.00%	Renting	14	0	0
Allane SE	Germany	0.00%	46.95%	92.07%	92.07%	Renting	192	4	175
Allane Services GmbH & co. KG	Germany	0.00%	46.95%	100.00%	100.00%	Services	1	0	0
Allane Services Verwaltungs GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Management of portfolios	0	0	0
Alliance & Leicester Cash Solutions Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Commercial Bank Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Investments (Derivatives) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Alliance & Leicester Investments (No.2) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Alliance & Leicester Personal Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	(228)	0	0
Altamira Santander Real Estate, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	20	(109)	0
Alternative Leasing, FIL (Compartimento B)	Spain	100.00%	0.00%	100.00%	100.00%	Investment fund	108	6	105
Amazonia Trade Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Holding company	0	0	0
Amherst ASG Holdings, LLC	United States	0.00%	100.00%	100.00%	—	Holding company	225	(50)	175
Amherst Pierpont Commercial Mortgage Securities LLC	United States	0.00%	100.00%	100.00%	—	Securitization	0	0	0
Amherst Pierpont International Ltd.	Hong-Kong	0.00%	100.00%	100.00%	—	Intermediation	3	0	3
Amherst Pierpont Securities LLC	United States	0.00%	100.00%	100.00%	—	Securities Investment	366	(43)	323
AN (123) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Andaluza de Inversiones, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	37	1	27
ANITCO Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
AP Acquisition Trust I	United States	0.00%	100.00%	100.00%	—	Trust company	0	0	0
AP Asset Acquisition LLC	United States	0.00%	100.00%	100.00%	—	Financial services	1	0	1
Apê11 Tecnologia e Negócios Imobiliários S.A.	Brazil	0.00%	81.26%	90.00%	90.00%	Real estate	7	(1)	5
APSG GP LLC	United States	0.00%	100.00%	100.00%	—	Holding company	0	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Aquanima Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	E-commerce	2	0	0
Aquanima Chile S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Services	3	0	0
Aquanima México S. de R.L. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	E-commerce	3	1	2
Aquanima S.A.	Argentina	0.00%	100.00%	100.00%	100.00%	Services	4	(1)	4
Artarien S.A. (o)	Uruguay	100.00%	0.00%	100.00%	100.00%	Insurance auxiliary services	0	0	1
Asto Digital Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	12	(2)	0
Athena Corporation Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Financial services	(8)	0	0
Atlantes Mortgage No. 2	Portugal	—	(b)	—	—	Securitization	0	0	0
Atlantes Mortgage No. 3	Portugal	—	(b)	—	—	Securitization	0	0	0
Atlantes Mortgage No. 4	Portugal	—	(b)	—	—	Securitization	0	0	0
Atual - Fundo de Invest Multimercado Crédito Privado Investimento no Exterior	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	433	49	436
Auto ABS Belgium Loans 2019 SA/NV	Belgium	—	(b)	—	—	Securitization	0	0	0
Auto ABS DFP Master Compartment France 2013	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Leases 2021	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Leases Master Compartment 2016	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Loans Master	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French LT Leases Master	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Balloon 2019-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Loans 2018-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Rainbow Loans 2020-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Spanish Loans 2018-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Auto ABS Spanish Loans 2020-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Auto ABS Spanish Loans 2022-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2017 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2019 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2019 Plc	United Kingdom	—	(b)	—	—	Securitization	(3)	2	0
Auto ABS UK Loans Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans PLC	United Kingdom	—	(b)	—	—	Securitization	(7)	40	0
Autodescuento, S.L.	Spain	0.00%	93.89%	93.89%	93.89%	Vehicles purchased by internet	2	0	18
Autohaus24 GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Internet	(3)	1	0
Auttar HUT Processamento de Dados Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	IT services	6	0	6
Aviación Antares, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	53	6	28
Aviación Británica, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	26	5	6
Aviación Centaurus, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	0	1	0
Aviación Comillas, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Renting	8	0	8
Aviación Intercontinental, A.I.E.	Spain	99.97%	0.03%	100.00%	100.00%	Renting	42	(11)	31

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Aviación Laredo, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Air transport	3	0	3
Aviación Oyambre, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Renting	1	(4)	1
Aviación Santillana, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Renting	5	1	2
Aviación Suances, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Air transport	8	1	3
Aviación Tritón, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	0	2	0
Aymoré Crédito, Financiamiento e Investimento S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Finance company	7,414	312	6,974
Azor Mortgages PLC (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Banca PSA Italia S.p.A.	Italy	0.00%	50.00%	50.00%	50.00%	Banking	393	69	153
Banco Bandepe S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Banking	902	78	885
Banco de Albacete, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Banking	14	0	9
Banco Hyundai Capital Brasil S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Banking	65	12	35
Banco PSA Finance Brasil S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Banking	42	5	21
Banco Santander - Chile	Chile	0.00%	67.13%	67.18%	67.18%	Banking	3,920	889	3,860
Banco Santander (Brasil) S.A.	Brazil	0.04%	90.25%	90.90%	90.50%	Banking	12,320	2,187	10,795
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso 100740	Mexico	0.00%	96.24%	100.00%	100.00%	Finance company	168	18	128
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso 2002114	Mexico	0.00%	96.58%	100.00%	100.00%	Finance company	5	1	5
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso GFSSLPT	Mexico	0.00%	96.64%	100.00%	100.00%	Finance company	22	1	22
Banco Santander Argentina S.A.	Argentina	0.00%	99.82%	99.77%	99.26%	Banking	1,851	390	578
Banco Santander de Negocios Colombia S.A.	Colombia	94.90%	5.10%	100.00%	100.00%	Banking	120	5	127
Banco Santander International	United States	0.00%	100.00%	100.00%	100.00%	Banking	1,226	134	1,360
Banco Santander International SA	Switzerland	0.00%	100.00%	100.00%	100.00%	Banking	1,215	39	837
Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México	Mexico	21.19%	75.04%	96.24%	96.24%	Banking	6,708	1,270	8,165
Banco Santander Perú S.A.	Peru	99.90%	0.10%	100.00%	100.00%	Banking	236	41	122
Banco Santander S.A.	Uruguay	97.75%	2.25%	100.00%	100.00%	Banking	480	106	191
Banco Santander Totta, S.A.	Portugal	0.00%	99.87%	99.96%	99.96%	Banking	2,887	604	3,815
Bansa Santander S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Real estate	23	4	27
BEN Benefícios e Serviços Instituição de Pagamento S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Payment services	12	(1)	9
Bilkredit 6 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Bilkredit 7 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Blecco Investments, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Real estate	172	10	202
BRS Investments S.A.	Argentina	5.10%	94.90%	100.00%	100.00%	Finance company	76	12	75
Cántabra de Inversiones, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	126	0	115
Cántabro Catalana de Inversiones, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	275	(2)	267
Canyon Multifamily Impact Fund IV LLC (c)	United States	0.00%	98.00%	98.00%	98.00%	Real estate	0	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Capital Street Delaware LP	United States	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Capital Street Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	14	0	14
Capital Street REIT Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	1,184	15	1,200
Capital Street S.A.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Casa de Bolsa Santander, S.A. de C.V., Grupo Financiero Santander México	Mexico	0.00%	99.97%	99.97%	99.97%	Securities company	62	4	66
Cater Allen Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Cater Allen International Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Cater Allen Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Banking	343	56	251
Cater Allen Lloyd's Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Cater Allen Syndicate Management Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
CCAP Auto Lease Ltd.	United States	0.00%	100.00%	100.00%	100.00%	Leasing	365	42	407
Centro de Capacitación Santander, A.C.	Mexico	0.00%	96.24%	100.00%	100.00%	Non-profit institute	1	0	1
Certidesa, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Aircraft rental	(64)	(8)	0
Chrysler Capital Auto Funding II LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	0	37	0
Chrysler Capital Master Auto Receivables Funding 2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(258)	0	0
Chrysler Capital Master Auto Receivables Funding LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	116	3	0
Cobranza Amigable, S.A.P.I. de C.V.	Mexico	0.00%	85.00%	100.00%	100.00%	Collection services	4	0	3
Community Development and Affordable Housing Fund LLC (c)	United States	0.00%	96.00%	96.00%	96.00%	Asset management	(1)	(1)	1
Compagnie Generale de Credit Aux Particuliers - Credipar S.A.	France	0.00%	50.00%	100.00%	100.00%	Banking	460	22	428
Compagnie Pour la Location de Vehicules - CLV	France	0.00%	50.00%	100.00%	100.00%	Banking	22	(1)	26
Compartment German Auto Loans 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
Consulteam Consultores de Gestão, Unipessoal, Lda.	Portugal	100.00%	0.00%	100.00%	100.00%	Real estate	0	0	0
Consumer Totta 1	Portugal	—	(b)	—	—	Securitization	0	0	0
Crawfall S.A. (g) (j)	Uruguay	100.00%	0.00%	100.00%	100.00%	Services	0	0	0
Credileads S.A.	Uruguay	0.00%	100.00%	100.00%	—	Advertising	0	0	4
Darep Designated Activity Company	Ireland	100.00%	0.00%	100.00%	100.00%	Reinsurances	7	0	7
Decarome, S.A.P.I. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Finance company	50	3	52
Deva Capital Advisory Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Advisory services	2	1	2
Deva Capital Holding Company, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	227	(17)	235
Deva Capital Investment Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	117	6	111
Deva Capital Management Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Advisory services	21	(13)	8
Deva Capital Servicer Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	99	(10)	90
Digital Procurement Holdings N.V.	Netherlands	0.00%	100.00%	100.00%	100.00%	Holding company	5	0	1

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Diglo Servicer Company 2021, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Real estate management	19	1	19
Diners Club Spain, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Cards	9	1	10
Dirección Estratega, S.C.	Mexico	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Drive Auto Receivables Trust 2018-5	United States	—	(b)	—	—	Securitization	44	37	0
Drive Auto Receivables Trust 2019-1	United States	—	(b)	—	—	Securitization	57	40	0
Drive Auto Receivables Trust 2019-2	United States	—	(b)	—	—	Securitization	49	46	0
Drive Auto Receivables Trust 2019-3	United States	—	(b)	—	—	Securitization	71	66	0
Drive Auto Receivables Trust 2019-4	United States	—	(b)	—	—	Securitization	60	72	0
Drive Auto Receivables Trust 2020-1	United States	—	(b)	—	—	Securitization	37	79	0
Drive Auto Receivables Trust 2020-2	United States	—	(b)	—	—	Securitization	50	80	0
Drive Auto Receivables Trust 2021-1	United States	—	(b)	—	—	Securitization	(122)	185	0
Drive Auto Receivables Trust 2021-2	United States	—	(b)	—	—	Securitization	(329)	264	0
Drive Auto Receivables Trust 2021-3	United States	—	(b)	—	—	Securitization	(292)	172	0
Drive Auto Receivables Trust 2022-1	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-2	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-3	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-4	United States	—	(b)	—	—	Inactive	0	0	0
Drive S.r.l.	Italy	0.00%	100.00%	100.00%	—	Renting	5	(1)	5
Ductor Real Estate, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	25	1	20
Ebury Brasil Consultoria Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Consulting services	1	0	0
Ebury Brasil Participações Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Holding company	2	0	3
Ebury Facilitadora De Pagamentos Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Software	0	0	0
Ebury Finance Belgium NV (q)	Belgium	0.00%	66.54%	100.00%	—	Finance company	0	0	0
Ebury Mass Payments Holdco Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Holding company	0	0	17
Ebury Mass Payments Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Payment services	5	3	0
Ebury Partners Australia Pty Ltd. (q)	Australia	0.00%	66.54%	100.00%	—	Finance company	1	0	1
Ebury Partners Belgium NV (q)	Belgium	0.00%	66.54%	100.00%	—	Payment services	60	21	82
Ebury Partners Canada Limited (q)	Canada	0.00%	66.54%	100.00%	—	Finance company	3	0	7
Ebury Partners China Limited (q)	China	0.00%	66.54%	100.00%	—	Inactive	5	0	0
Ebury Partners Finance Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Finance company	(8)	(2)	0
Ebury Partners Holdings Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Holding company	0	0	0
Ebury Partners Hong Kong Limited (q)	Hong-Kong	0.00%	66.54%	100.00%	—	Finance company	3	0	3

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Ebury Partners Limited (q)	United Kingdom	0.00%	66.54%	66.54%	51.28%	Holding company	250	(6)	531
Ebury Partners Markets Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Finance company	5	0	0
Ebury Partners SA (Pty) Ltd. (q)	Republic of South Africa	0.00%	66.54%	100.00%	—	Inactive	0	0	0
Ebury Partners Switzerland AG (q)	Switzerland	0.00%	66.54%	100.00%	—	Finance company	5	0	5
Ebury Partners UK Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Electronic money	56	(31)	148
Ebury Payments PTE Ltd. (q)	Singapur	0.00%	66.54%	100.00%	—	Payment services	0	0	0
Ebury Technology Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Software	(48)	(5)	0
EDT FTPYME Pastor 3 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Elcano Renovables, S.L.	Spain	0.00%	70.00%	70.00%	70.00%	Holding company	0	0	0
Electrolyser, S.A. de C.V.	Mexico	0.00%	96.24%	100.00%	100.00%	Services	0	0	0
Elevate Tech Platforms, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Holding company	2	0	2
Entidad de Desarrollo a la Pequeña y Micro Empresa Santander Consumo Perú S.A.	Peru	100.00%	0.00%	100.00%	100.00%	Finance company	33	4	34
Erestone S.A.S.	France	0.00%	90.00%	90.00%	90.00%	Inactive	1	0	1
Esfera Fidelidade S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Services	126	110	213
Evidence Previdência S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance	134	2	121
Eyemobile Tecnologia S.A.	Brazil	0.00%	58.26%	60.00%	60.00%	IT services	2	(1)	0
F1rst Tecnologia e Inovação Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	IT services	52	8	54
Financeira El Corte Inglés, Portugal, S.F.C., S.A.	Portugal	0.00%	51.00%	100.00%	100.00%	Finance company	8	1	4
Financiera El Corte Inglés, E.F.C., S.A.	Spain	0.00%	51.00%	51.00%	51.00%	Finance company	278	58	140
Finsantusa, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	1,257	(2)	1,020
First National Motor Business Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
First National Motor Contracts Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
First National Motor plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
First National Tricity Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	6	0	6
Fondation Holding Auto ABS Belgium Loans	Belgium	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización de Activos Santander Consumer Spain Auto 2014-1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización PYMES Santander 15	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Consumer Spain Auto 2016-1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Consumer Spain Auto 2016-2	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Financiación 1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización, RMBS Santander 7	Spain	—	(b)	—	—	Securitization	0	0	0
Fondos Santander, S.A. Administradora de Fondos de Inversión (en liquidación) (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Fund management company	0	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Foreign Exchange Solutions (UK) Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	IT services	0	0	0
Foreign Exchange Solutions S.L. (q)	Spain	0.00%	66.54%	100.00%	—	IT services	0	(1)	0
Fortensky Trading, Ltd.	Ireland	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Fosse (Master Issuer) Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Fosse Funding (No.1) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	1	81	0
Fosse Master Issuer PLC	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	(1)	0	0
Fosse Trustee (UK) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Freedom Depository Holdings, LLC	United States	0.00%	100.00%	100.00%	—	Holding company	0	0	0
Freedom Depository, LLC	United States	0.00%	100.00%	100.00%	—	Securitization	0	0	0
FTPME Banesto 2, Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Fundo de Investimento em Direitos Creditórios Atacado - Não Padronizado	Brazil	0.00%	90.28%	100.00%	—	Investment fund	83	11	85
Fundo de Investimentos em Direitos Creditórios Multisegmentos NPL Ipanema VI - Não padronizado	Brazil	0.00%	90.28%	100.00%	—	Investment fund	350	38	350
Gamma, Sociedade Financeira de Titularização de Créditos, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Securitization	7	0	8
GC FTPME Pastor 4 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Gesban México Servicios Administrativos Globales, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Services	1	0	0
Gesban Santander Servicios Profesionales Contables Limitada	Chile	0.00%	100.00%	100.00%	100.00%	Accounting services	1	0	0
Gesban Servicios Administrativos Globales, S.L.	Spain	99.99%	0.01%	100.00%	100.00%	Services	5	1	1
Gesban UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Payments and collection services	1	0	0
Gestión de Inversiones JILT, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Services	15	0	15
Gestora de Procesos S.A. en liquidación (j)	Peru	0.00%	100.00%	100.00%	100.00%	Holding company	(1)	0	0
Getnet Adquirência e Serviços para Meios de Pagamento S.A. - Instituição de Pagamento	Brazil	0.04%	97.07%	97.10%	89.91%	Payment services	444	102	356
Getnet Argentina S.A.U.	Argentina	0.00%	100.00%	100.00%	100.00%	Payment methods	26	(10)	16
Getnet Europe, Entidad de Pago, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Payment services	215	2	207
Getnet Fundo de Investimento em Direitos Creditórios	Brazil	0.00%	90.28%	100.00%	—	Investment fund	1	0	1
Getnet Merchant Solutions UK Ltd	United Kingdom	0.00%	100.00%	100.00%	—	Financial services	0	0	0
Getnet Sociedade de Credito Direto S.A.	Brazil	0.00%	97.10%	100.00%	100.00%	Finance company	14	7	21
Gira, Gestão Integrada de Recebíveis do Agronegócio S.A. (e)	Brazil	0.00%	72.23%	80.00%	80.00%	Consulting services	1	(3)	0
GNXT Serviços de Atendimento Ltda.	Brazil	0.00%	97.10%	100.00%	—	Telemarketing	4	(1)	3
Golden Bar (Securitisation) S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2016-1	Italy	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Golden Bar Stand Alone 2018-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2019-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2020-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2020-2	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2021-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2022-1	Italy	—	(b)	—	—	Securitization	0	0	0
Gravity Cloud Technology, S.L.	Spain	100.00%	0.00%	100.00%	—	IT services	33	1	31
Grupo Empresarial Santander, S.L.	Spain	99.62%	0.38%	100.00%	100.00%	Holding company	3,985	571	2,861
Grupo Financiero Santander México, S.A. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Holding company	5,093	954	5,164
Guaranty Car, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Automotive	3	0	2
Hipototta No. 13	Portugal	—	(b)	—	—	Securitization	0	0	0
Hipototta No. 4 FTC	Portugal	—	(b)	—	—	Securitization	(53)	(1)	0
Hipototta No. 4 plc	Ireland	—	(b)	—	—	Securitization	(4)	2	0
Hipototta No. 5 FTC	Portugal	—	(b)	—	—	Securitization	(46)	0	0
Hipototta No. 5 plc	Ireland	—	(b)	—	—	Securitization	(13)	2	0
Holbah Santander, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	563	157	820
Holmes Funding Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	8	58	0
Holmes Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Holmes Master Issuer plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	(11)	(1)	0
Holmes Trustees Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Hyundai Capital Bank Europe GmbH	Germany	0.00%	51.00%	51.00%	51.00%	Banking	701	17	391
Ibérica de Compras Corporativas, S.L.	Spain	97.17%	2.83%	100.00%	100.00%	E-commerce	7	1	6
Independence Community Bank Corp.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	3,596	53	3,649
Insurance Funding Solutions Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Interfinance Holanda B.V.	Netherlands	100.00%	0.00%	100.00%	100.00%	Holding company	0	0	0
Inversiones Capital Global, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	98	(1)	109
Inversiones Marítimas del Mediterráneo, S.A.	Spain	0.00%	100.00%	100.00%	100.00%	Inactive	4	(1)	0
Isar Valley S.A.	Luxembourg	—	(b)	—	—	Securitization	8	0	0
Isla de los Buques, S.A.	Spain	99.98%	0.02%	100.00%	100.00%	Finance company	1	0	1
Klare Corredora de Seguros S.A.	Chile	0.00%	33.63%	50.10%	50.10%	Insurance brokerage	4	(3)	0
Landcompany 2020, S.L.	Spain	17.66%	82.34%	100.00%	100.00%	Real estate management	1,701	(22)	1,689
Langton Securities (2008-1) plc (j)	United Kingdom	—	(b)	—	100.00%	Securitization	0	0	0
Laparanza, S.A.	Spain	61.59%	0.00%	61.59%	61.59%	Agricultural holding	28	0	16
Lerma Investments 2018, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Real estate	10	2	13
Liderança Serviços Especializados em Cobranças Ltda.	Brazil	0.00%	90.28 %	100.00%	100.00%	Collection services	46	1	42

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Liquetine, S.L. Unipersonal	Spain	0.00%	70.00%	100.00%	100.00%	Renewable energies	1	0	2
Liquidity Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Factoring	(1)	0	0
Luri 6, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate investment	1,358	13	1,390
Lynx Financial Crime Tech, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	—	IT services	2	0	2
MAC No. 1 Limited	United Kingdom	—	(b)	—	—	Mortgage credit company	0	0	0
Master Red Europa, S.L.	Spain	96.34%	0.00%	96.34%	96.34 %	Cards	1	0	1
Mata Alta, S.L. Unipersonal	Spain	0.00%	61.59%	100.00%	100.00%	Agricultural holding	0	0	0
Mercadotecnia, Ideas y Tecnología, S.A. de C.V.	Mexico	0.00%	70.00%	70.00%	70.00%	Payment methods	1	7	14
Merciver, S.L.	Spain	99.90%	0.10%	100.00%	100.00%	Financial advisory	1	0	1
Mercury Trade Finance Solutions S.A.S.	Colombia	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions SpA	Chile	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions, S.A. de C.V.	Mexico	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions, S.L.	Spain	0.00%	50.10%	50.10%	50.10%	IT services	10	1	22
Merlion Aviation One Designated Activity Company	Ireland	—	(b)	—	—	Renting	32	(3)	0
Mob Soluções em Tecnologia Ltda. - EPP	Brazil	0.00%	56.88%	100.00%	—	Advertising	0	0	0
Mobills Corretora de Seguros Ltda.	Brazil	0.00%	56.88%	100.00%	—	Insurance brokerage	1	0	0
Mobills Labs Soluções em Tecnologia Ltda. - EPP	Brazil	0.00%	56.88%	100.00%	—	IT services	2	1	2
Monetus Investimentos S.A.	Brazil	0.00%	56.88%	100.00%	—	Securities Investment	2	(1)	1
Motor 2016-1 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Motor 2016-1 PLC	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Motor 2017-1 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Motor 2017-1 PLC (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Motor Securities 2018-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(2)	(1)	0
Mouro Capital I LP	United Kingdom	0.00%	100.00%	100.00%	100.00%	Investment fund	822	(84)	305
Multiplica SpA	Chile	0.00%	100.00%	100.00%	100.00%	Payment services	5	(1)	4
Munduspar Participações S.A.	Brazil	80.00%	0.00%	80.00%	—	Holding company	27	(1)	74
Navegante Américo Vespucio SpA	Chile	0.00%	100.00%	100.00%	—	Real estate	73	(1)	105
Naviera Mirambel, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Naviera Trans Gas, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	34	(2)	38
Naviera Trans Iron, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	26	0	21
Naviera Trans Ore, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	28	9	17
Naviera Transcantábrica, S.L.	Spain	100.00 %	0.00%	100.00%	100.00%	Leasing	5	0	4
Naviera Transchem, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	1	0	1
NeoAuto S.A.C.	Peru	0.00%	55.00%	55.00%	55.00%	Vehicles purchased by internet	1	0	1
Newcomar, S.L., en liquidación (j)	Spain	40.00%	40.00%	80.00%	80.00%	Real estate	1	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Novimovest – Fundo de Investimento Imobiliário	Portugal	0.00%	78.64%	78.74%	78.74%	Investment fund	217	3	174
NW Services CO.	United States	0.00%	100.00%	100.00%	100.00%	E-commerce	7	2	2
One Mobility Management GmbH	Germany	0.00%	46.95%	100.00%	—	Services	0	0	0
Open Bank Argentina S.A.	Argentina	0.00%	99.91%	100.00%	100.00%	Banking	46	(23)	24
Open Bank, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	550	15	566
Open Digital Market, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Commerce	0	0	0
Open Digital Services Argentina S.A.U. en liquidación (j)	Argentina	0.00%	100.00%	100.00%	100.00%	IT services	0	0	0
Open Digital Services, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Services	116	(87)	0
Open Mx Servicios Administrativos, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Financial services	0	(1)	0
Openbank Santander México, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	—	Inactive	0	0	0
Operadora de Carteras Gamma, S.A.P.I. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Holding company	10	1	8
Optimal Investment Services SA	Switzerland	100.00%	0.00%	100.00%	100.00%	Fund management company	44	(1)	29
Optimal Multiadvisors Ireland Plc / Optimal Strategic US Equity Ireland Euro Fund (m) (p)	Ireland	0.00%	0.00%	0.00%	0.00%	Fund management company	0	0	0
Optimal Multiadvisors Ireland Plc / Optimal Strategic US Equity Ireland US Dollar Fund (m) (p)	Ireland	0.00%	0.00%	0.00%	0.00%	Fund management company	0	0	0
Paga Después, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	—	Financial services	4	0	4
PagoFX Europe S.A. (c)	Belgium	0.00%	100.00%	100.00%	100.00%	Inactive	2	(1)	1
PagoFX UK Ltd	United Kingdom	0.00%	100.00%	100.00%	100.00%	Payment services	6	(2)	4
PagoNxt Ltd	United Kingdom	100.00%	0.00%	100.00%	100.00%	Holding company	6	(3)	6
PagoNxt Merchant SoluçõesTecnológicas Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	IT services	85	(30)	54
PagoNxt Merchant Solutions FZ-LLC	United Arab Emirates	0.00%	100.00%	100.00%	100.00%	Financial services	2	1	2
PagoNxt Merchant Solutions India Private Limited	India	0.00%	100.00%	100.00%	100.00%	Financial services	1	0	1
PagoNxt Merchant Solutions, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	1,098	(93)	1,175
PagoNxt One Trade UK Ltd	United Kingdom	0.00%	100.00%	100.00%	100.00%	Financial services	0	0	0
PagoNxt OneTrade España, E.D.E., S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Financial services	2	(1)	1
PagoNxt Payments Platform México, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	—	IT services	0	0	0
PagoNxt Solutions, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Payment services	36	(16)	21
Pagonxt Trade Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	—	Financial services	0	0	0
PagoNxt Trade Chile SpA	Chile	0.00%	100.00%	100.00%	—	Services	0	0	0
PagoNxt Trade Services, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Services	231	(87)	144
PagoNxt Trade, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	IT services	277	(101)	180
PagoNxt, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	2,289	(229)	2,616
Parasant SA	Switzerland	100.00%	0.00%	100.00%	100.00%	Holding company	1,212	(3)	969
Paytec Logística e Armazém Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	Logistic services	0	0	0
Paytec Tecnologia em Pagamentos Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	Commerce	3	2	5

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
PBD Germany Auto 2018 UG (Haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Lease Master 2019	Luxembourg	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Lease Master S.A., Compartment 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Loan 2021 UG (Haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
PBE Companies, LLC	United States	0.00%	100.00%	100.00%	100.00%	Real estate	117	0	117
Pereda Gestión, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Securities brokerage	52	11	4
Phoenix C1 Aviation Designated Activity Company	Ireland	—	(b)	—	—	Renting	18	1	0
Phoenix S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payment methods	0	0	4
Pierpont Advisory Management LLC	United States	0.00%	100.00%	100.00%	—	Administrative services	0	0	0
Pierpont Capital Holdings LLC	United States	0.00%	100.00%	100.00%	—	Holding company	301	(57)	244
Pierpont Financial Services LLC	United States	0.00%	100.00%	100.00%	—	Financial services	(3)	0	0
Pingham International, S.A. (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Pony S.A.	Luxembourg	—	(b)	—	—	Securitization	0	0	0
Portal Universia Argentina S.A.	Argentina	0.00%	75.75%	75.75%	75.75%	Internet	0	0	0
Portal Universia Portugal, Prestação de Serviços de Informática, S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Prime 16 – Fundo de Investimentos Imobiliário	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	22	(2)	16
PSA Bank Deutschland GmbH	Germany	0.00%	50.00%	50.00%	50.00%	Banking	497	47	229
PSA Banque France	France	0.00%	50.00%	50.00%	50.00%	Banking	1,142	62	881
PSA Consumer Finance Polska Sp. z o.o.	Poland	0.00%	40.22%	100.00%	100.00%	Finance company	3	1	0
PSA Finance Belux S.A.	Belgium	0.00%	50.00%	100.00%	100.00%	Finance company	95	14	47
PSA Finance Polska Sp. z o.o.	Poland	0.00%	40.22%	50.00%	50.00%	Finance company	38	5	10
PSA Finance UK Limited	United Kingdom	0.00%	50.00%	100.00%	100.00%	Finance company	323	28	159
PSA Financial Services Nederland B.V.	Netherlands	0.00%	50.00%	100.00%	100.00%	Finance company	58	18	26
PSA Financial Services Spain, E.F.C., S.A.	Spain	0.00%	50.00%	50.00%	50.00%	Finance company	684	60	363
PSA Renting Italia S.p.A.	Italy	0.00%	50.00%	100.00%	100.00%	Renting	13	12	3
Punta Lima Wind Farm, LLC	United States	0.00%	100.00%	100.00%	100.00%	Renewable energies	45	(6)	39
Punta Lima, LLC	United States	0.00%	100.00%	100.00%	100.00%	Leasing	45	(6)	39
Retail Company 2021, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	259	(4)	255
Retop S.A. (f)	Uruguay	100.00%	0.00%	100.00%	100.00%	Finance company	19	7	61
Return Capital S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Collection services	1,131	12	1,031
Riemersma Leasing B.V.	Netherlands	0.00%	100.00%	100.00%	—	Renting	7	2	21
Riobank International (Uruguay) SAIFE (p)	Uruguay	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Roc Aviation One Designated Activity Company	Ireland	—	(b)	—	—	Renting	(4)	(1)	0
Roc Shipping One Designated Activity Company	Ireland	—	(b)	—	—	Renting	(4)	0	0
Rojo Entretenimento S.A.	Brazil	0.00%	85.41%	94.60%	94.60%	Real estate	23	2	21
SAFO Alternative Lending, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	—	Finance company	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
SALCO, Servicios de Seguridad Santander, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Security	2	0	1
SAM Asset Management, S.A. de C.V., Sociedad Operadora de Fondos de Inversión	Mexico	0.00%	100.00%	100.00%	100.00%	Fund management company	35	26	188
SAM Investment Holdings, S.L.	Spain	92.37%	7.63%	100.00%	100.00%	Holding Company	1,373	92	1,597
SANB Promotora de Vendas e Cobrança S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Finance company	3	(3)	0
Sancap Investimentos e Participações S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Holding company	125	112	192
Santander (CF Trustee Property Nominee) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander (CF Trustee) Limited (d)	United Kingdom	—	(b)	—	—	Inactive	0	0	0
Santander (UK) Group Pension Schemes Trustees Limited (d)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander Ahorro Inmobiliario 1, S.A.	Spain	98.53%	0.00%	98.53%	98.53%	Real estate rental	1	0	1
Santander Asesorías Financieras Limitada	Chile	0.00%	67.44%	100.00%	100.00%	Financial advisory	58	5	43
Santander Asset Finance (December) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	74	4	0
Santander Asset Finance Opportunities	Luxembourg	100.00%	0.00%	100.00%	—	Investment fund	42	0	42
Santander Asset Finance plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	282	18	164
Santander Asset Management - S.G.O.I.C., S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Fund management company	9	4	12
Santander Asset Management Chile S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Securities Investment	0	0	0
Santander Asset Management Luxembourg, S.A.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Fund management company	4	4	0
Santander Asset Management S.A. Administradora General de Fondos	Chile	0.00%	100.00%	100.00%	100.00%	Fund management company	3	12	132
Santander Asset Management UK Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	221	14	186
Santander Asset Management UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Management of funds and portfolios	40	8	157
Santander Asset Management, S.A., S.G.I.I.C.	Spain	0.00%	100.00%	100.00%	100.00%	Fund management company	260	52	393
Santander Auto Lease Titling Ltd.	United States	0.00%	100.00%	100.00%	—	Leasing	0	0	0
Santander Back-Offices Globales Mayoristas, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Services	2	0	1
Santander Banca de Inversión Colombia, S.A.S.	Colombia	100.00%	0.00%	100.00%	100.00%	Advisory services	1	0	2
Santander Bank & Trust Ltd.	Bahamas	0.00%	100.00%	100.00%	100.00%	Banking	374	3	332
Santander Bank Polska S.A.	Poland	67.41%	0.00%	67.41%	67.41%	Banking	5,091	523	4,361
Santander Bank, National Association	United States	0.00%	100.00%	100.00%	100.00%	Banking	10,201	276	10,475
Santander Brasil Administradora de Consórcio Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Services	179	77	232
Santander Brasil Gestão de Recursos Ltda.	Brazil	0.08%	99.92%	100.00%	100.00%	Securities Investment	445	39	520
Santander Capital Structuring, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Investment Company	13	(1)	0
Santander Capitalização S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance	(17)	92	67
Santander Cards Ireland Limited	Ireland	0.00%	100.00%	100.00%	100.00%	Cards	(8)	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Cards Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Cards	95	0	95
Santander Cards UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	154	2	109
Santander Chile Holding S.A.	Chile	22.11%	77.75%	99.86%	99.84%	Holding company	1,579	271	1,522
Santander Consulting (Beijing) Co., Ltd.	China	0.00%	100.00%	100.00%	100.00%	Advisory services	9	1	4
Santander Consumer (UK) plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	947	146	294
Santander Consumer Auto Receivables Funding 2013-B2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(88)	84	0
Santander Consumer Auto Receivables Funding 2018-L1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	273	22	0
Santander Consumer Auto Receivables Funding 2018-L3 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	119	20	0
Santander Consumer Auto Receivables Funding 2018-L5 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	161	31	0
Santander Consumer Auto Receivables Funding 2019-B1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	53	85	0
Santander Consumer Auto Receivables Funding 2020-B1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(18)	33	0
Santander Consumer Auto Receivables Funding 2020-L1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	117	10	0
Santander Consumer Auto Receivables Funding 2020-L2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	18	9	0
Santander Consumer Auto Receivables Funding 2022-B1 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(134)	0
Santander Consumer Auto Receivables Funding 2022-B2 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(162)	0
Santander Consumer Auto Receivables Funding 2022-B3 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(267)	0
Santander Consumer Auto Receivables Funding 2022-B4 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(183)	0
Santander Consumer Auto Receivables Funding 2022-B5 LLC	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Consumer Auto Receivables Grantor Trust 2021-D	United States	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander Consumer Bank AG	Germany	0.00%	100.00%	100.00%	100.00%	Banking	3,313	469	5,070
Santander Consumer Bank AS	Norway	0.00%	100.00%	100.00%	100.00%	Banking	2,403	211	2,251
Santander Consumer Bank GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Banking	424	58	363
Santander Consumer Bank S.A.	Poland	0.00%	80.44%	100.00%	100.00%	Banking	744	77	478
Santander Consumer Bank S.p.A.	Italy	0.00%	100.00%	100.00%	100.00%	Banking	833	92	603
Santander Consumer Credit Services Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	(37)	0	0
Santander Consumer Finance Global Services, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	IT	6	3	5
Santander Consumer Finance Inc.	Canada	100.00%	0.00%	100.00%	96.42%	Holding company	91	0	140
Santander Consumer Finance Limitada	Chile	49.00%	34.24%	100.00%	100.00%	Finance company	88	23	52
Santander Consumer Finance Oy	Finland	0.00%	100.00%	100.00%	100.00%	Finance company	368	49	163
Santander Consumer Finance Schweiz AG	Switzerland	0.00%	100.00%	100.00%	100.00%	Leasing	56	10	60
Santander Consumer Finance, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	9,328	852	10,025
Santander Consumer Financial Solutions Sp. z o.o.	Poland	0.00%	80.44%	100.00%	100.00%	Leasing	2	(1)	2
Santander Consumer Finanse Sp. z o.o. w likwidacji (j)	Poland	0.00%	80.44%	100.00%	100.00%	Services	15	0	12

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Consumer Holding Austria GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Holding company	364	0	518
Santander Consumer Holding GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Holding company	5,564	317	6,077
Santander Consumer Inc.	Canada	0.00%	100.00%	100.00%	100.00%	Finance company	82	13	48
Santander Consumer Leasing GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Leasing	70	93	151
Santander Consumer Mobility Services, S.A.	Spain	0.00%	100.00%	100.00%	100.00%	Renting	12	(4)	12
Santander Consumer Multirent Sp. z o.o.	Poland	0.00%	80.44%	100.00%	100.00%	Leasing	58	5	26
Santander Consumer Operations Services GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Services	12	1	18
Santander Consumer Receivables 10 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	1,113	(1)	0
Santander Consumer Receivables 11 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	653	(95)	0
Santander Consumer Receivables 15 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(71)	0
Santander Consumer Receivables 16 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(48)	0
Santander Consumer Receivables 17 LLC	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Consumer Receivables 3 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	397	5	0
Santander Consumer Receivables 7 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	713	(211)	0
Santander Consumer Receivables Funding LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	4	2	0
Santander Consumer Renting S.r.l.	Italy	0.00%	100.00%	100.00%	—	Renting	4	(1)	4
Santander Consumer Renting, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Renting	38	3	38
Santander Consumer S.A.	Argentina	0.00%	99.82%	100.00%	100.00%	Finance company	18	(3)	15
Santander Consumer S.A. Compañía de Financiamiento	Colombia	79.02%	20.98%	100.00%	100.00%	Finance company	22	(1)	23
Santander Consumer Services GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Santander Consumer Services, S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Finance company	13	1	6
Santander Consumer Spain Auto 2019-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2020-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2021-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2022-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Technology Services GmbH	Germany	0.00%	100.00%	100.00%	100.00%	IT services	24	3	22
Santander Consumer USA Holdings Inc.	United States	0.00%	100.00%	100.00%	80.22%	Holding company	3,816	1,203	6,067
Santander Consumer USA Inc.	United States	0.00%	100.00%	100.00%	100.00%	Finance company	4,300	1,007	5,307
Santander Consumo 4, F.T.	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumo, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	100.00%	Cards	1,490	312	1,734
Santander Corredora de Seguros Limitada	Chile	0.00%	67.21%	100.00%	100.00%	Insurance brokerage	78	9	59
Santander Corredores de Bolsa Limitada	Chile	0.00%	83.24%	100.00%	100.00%	Securities company	52	4	46
Santander Corretora de Câmbio e Valores Mobiliários S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Securities company	142	22	148

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Corretora de Seguros, Investimentos e Serviços S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance brokerage	816	250	960
Santander Customer Voice, S.A.	Spain	99.50%	0.50%	100.00%	100.00%	Services	2	0	2
Santander de Titulización, S.G.F.T., S.A.	Spain	81.00%	19.00%	100.00%	100.00%	Fund management company	5	3	2
Santander Distribuidora de Títulos e Valores Mobiliários S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Securities company	100	(17)	75
Santander Drive Auto Receivables Grantor Trust 2022-A	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Drive Auto Receivables LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Santander Drive Auto Receivables Trust 2019-1	United States	—	(b)	—	—	Securitization	46	24	0
Santander Drive Auto Receivables Trust 2019-2	United States	—	(b)	—	—	Securitization	60	35	0
Santander Drive Auto Receivables Trust 2019-3	United States	—	(b)	—	—	Securitization	50	39	0
Santander Drive Auto Receivables Trust 2020-1	United States	—	(b)	—	—	Securitization	24	58	0
Santander Drive Auto Receivables Trust 2020-2	United States	—	(b)	—	—	Securitization	47	76	0
Santander Drive Auto Receivables Trust 2020-3	United States	—	(b)	—	—	Securitization	32	114	0
Santander Drive Auto Receivables Trust 2020-4	United States	—	(b)	—	—	Securitization	(9)	101	0
Santander Drive Auto Receivables Trust 2021-1	United States	—	(b)	—	—	Securitization	(46)	138	0
Santander Drive Auto Receivables Trust 2021-2	United States	—	(b)	—	—	Securitization	(171)	196	0
Santander Drive Auto Receivables Trust 2021-3	United States	—	(b)	—	—	Securitization	(279)	259	0
Santander Drive Auto Receivables Trust 2021-4	United States	—	(b)	—	—	Securitization	(288)	199	0
Santander Drive Auto Receivables Trust 2022-1	United States	—	(b)	—	—	Securitization	0	(139)	0
Santander Drive Auto Receivables Trust 2022-2	United States	—	(b)	—	—	Securitization	0	(193)	0
Santander Drive Auto Receivables Trust 2022-3	United States	—	(b)	—	—	Securitization	0	(195)	0
Santander Drive Auto Receivables Trust 2022-4	United States	—	(b)	—	—	Securitization	0	(267)	0
Santander Drive Auto Receivables Trust 2022-5	United States	—	(b)	—	—	Securitization	0	(314)	0
Santander Drive Auto Receivables Trust 2022-6	United States	—	(b)	—	—	Securitization	0	(323)	0
Santander Drive Auto Receivables Trust 2022-7	United States	—	(b)	—	—	Securitization	0	(156)	0
Santander Drive Auto Receivables Trust 2022-A	United States	—	(b)	—	—	Inactive	0	0	0
Santander Drive Auto Receivables Trust 2023-1	United States	—	(b)	—	—	Inactive	0	0	0
Santander Equity Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	28	6	33
Santander España Servicios Legales y de Cumplimiento, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Services	9	1	8
Santander Estates Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	(6)	(1)	0
Santander European Hospitality Opportunities	Luxembourg	100.00%	0.00%	100.00%	100.00%	Investment fund	23	(4)	20
Santander F24 S.A.	Poland	0.00%	67.41%	100.00%	100.00%	Finance company	2	0	2

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Facility Management España, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	415	(1)	392
Santander Factoring S.A.	Chile	0.00%	99.86%	100.00%	100.00%	Factoring	8	1	15
Santander Factoring Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Financial services	37	11	1
Santander Factoring y Confirming, S.A. Unipersonal, E.F.C.	Spain	100.00%	0.00%	100.00%	100.00%	Factoring	208	73	126
Santander Finance 2012-1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Financial services	3	0	3
Santander Financial Exchanges Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Inactive	0	0	0
Santander Financial Services plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Banking	351	45	436
Santander Financiamientos S.A.	Peru	100.00%	0.00%	100.00%	100.00%	Finance company	18	(4)	15
Santander Financing S.A.S.	Colombia	100.00%	0.00%	100.00%	100.00%	Financial advisory	0	(1)	0
Santander Finanse Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Financial services	66	7	19
Santander Fintech Holdings, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	327	(13)	357
Santander Fintech Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Finance company	(21)	22	0
Santander Fundo de Investimento Santillana Multimercado Crédito Privado Investimento No Exterior (e)	Brazil	—	(b)	—	—	Investment fund	455	23	478
Santander Fundo de Investimento SBAC Referenciado di Crédito Privado (h)	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	1,638	187	1,586
Santander Gestión de Recaudación y Cobranzas Ltda.	Chile	0.00%	99.86%	100.00%	100.00%	Financial services	6	2	8
Santander Global Cards & Digital Solutions Brasil S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	IT consulting	36	(1)	40
Santander Global Cards & Digital Solutions, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	IT services	25	(4)	17
Santander Global Consumer Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	7	0	7
Santander Global Facilities, S.A. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Services	143	5	152
Santander Global Services S.A. (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Santander Global Services, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	393	(1)	394
Santander Global Sport, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Sports activity	19	(2)	18
Santander Global Technology and Operations Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	IT services	4	0	1
Santander Global Technology and Operations Chile Limitada	Chile	0.00%	100.00%	100.00%	100.00%	IT services	21	2	20
Santander Global Technology and Operations, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	IT services	454	36	438
Santander Green Investment, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Holding company	32	0	32
Santander Guarantee Company	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	4	0	3
Santander Hipotecario 2 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Hipotecario 3 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Holding Imobiliária S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Real estate	81	4	77
Santander Holding Internacional, S.A.	Spain	99.95%	0.05%	100.00%	100.00%	Holding company	4,057	67	2,432

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Holdings USA, Inc.	United States	100.00%	0.00%	100.00%	100.00%	Holding company	15,477	1,316	13,468
Santander Inclusión Financiera, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	100.00%	Finance company	14	(7)	7
Santander Innoenergy Climate VC I, S.C.R., S.A. (i)	Spain	0.00%	100.00%	100.00%	—	Inactive	—	—	—
Santander Innoenergy Climate VC II, S.C.R., S.A. (i)	Spain	0.00%	100.00%	100.00%	—	Inactive	—	—	—
Santander Insurance Agency, U.S., LLC	United States	0.00%	100.00%	100.00%	100.00%	Insurance	1	0	1
Santander Insurance Services UK Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Asset management	42	1	43
Santander Intermediación Correduría de Seguros, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Insurance brokerage	26	3	18
Santander International Products, Plc. (l)	Ireland	99.99%	0.01%	100.00%	100.00%	Finance company	1	0	0
Santander Inversiones S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Holding company	1,237	198	1,032
Santander Investment Bank Limited	Bahamas	0.00%	100.00%	100.00%	100.00%	Banking	468	5	583
Santander Investment Chile Limitada	Chile	0.00%	100.00%	100.00%	100.00%	Finance company	508	41	321
Santander Investment Securities Inc.	United States	0.00%	100.00%	100.00%	100.00%	Securities company	517	(2)	516
Santander Investment, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	1,309	8	245
Santander Investments GP 1 S.à.r.l.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Fund management company	1	0	1
Santander Inwestycje Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Securities company	20	0	7
Santander ISA Managers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Management of funds and portfolios	43	5	6
Santander Lease, S.A., E.F.C.	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	61	7	51
Santander Leasing Poland Securitization 01 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Santander Leasing S.A.	Poland	0.00%	67.41%	100.00%	100.00%	Leasing	152	15	36
Santander Leasing S.A. Arrendamento Mercantil	Brazil	0.00%	90.28%	100.00%	100.00%	Leasing	1,964	101	1,864
Santander Leasing, LLC	United States	0.00%	100.00%	100.00%	100.00%	Leasing	2	(1)	1
Santander Lending Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Mortgage credit company	239	8	234
Santander Mediación Operador de Banca-Seguros Vinculado, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Insurance intermediary	50	1	3
Santander Merchant Platform Operations, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Financial services	2	0	2
Santander Merchant Platform Services, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Financial services	1	0	1
Santander Merchant Platform Solutions México, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Holding company	148	32	150
Santander Merchant Platform Solutions Uruguay S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payment methods	8	(3)	5
Santander Merchant S.A.	Argentina	5.10%	94.90%	100.00%	100.00%	Finance company	1	0	2
Santander Mortgage Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	(23)	1	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Santander Paraty Qif PLC	Ireland	0.00%	90.28%	100.00%	100.00%	Investment Company	(39)	414	381
Santander Pensiones, S.A., E.G.F.P.	Spain	0.00%	100.00%	100.00%	100.00%	Pension fund management company	85	14	184
Santander Pensões - Sociedade Gestora de Fundos de Pensões, S.A.	Portugal	100.00%	0.00%	100.00%	100.00%	Pension fund management company	3	0	3
Santander Prime Auto Issuance Notes 2018-A Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(4)	2	0
Santander Prime Auto Issuance Notes 2018-B Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(31)	(7)	0
Santander Prime Auto Issuance Notes 2018-C Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(7)	(1)	0
Santander Prime Auto Issuance Notes 2018-D Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(28)	(11)	0
Santander Prime Auto Issuance Notes 2018-E Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(15)	(6)	0
Santander Private Banking Gestión, S.A., S.G.I.I.C.	Spain	100.00%	0.00%	100.00%	100.00%	Fund management company	64	10	35
Santander Private Banking s.p.a. in Liquidazione (j)	Italy	100.00%	0.00%	100.00%	100.00%	Finance company	13	1	7
Santander Private Banking UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	288	338	392
Santander Private Real Estate Advisory & Management, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Real estate	4	0	4
Santander Private Real Estate Advisory, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	15	1	16
Santander Real Estate, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Inactive	1	0	1
Santander Retail Auto Lease Funding LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Santander Retail Auto Lease Trust 2020-A	United States	—	(b)	—	—	Securitization	87	30	0
Santander Retail Auto Lease Trust 2020-B	United States	—	(b)	—	—	Securitization	70	43	0
Santander Retail Auto Lease Trust 2021-A	United States	—	(b)	—	—	Securitization	67	53	0
Santander Retail Auto Lease Trust 2021-B	United States	—	(b)	—	—	Securitization	67	52	0
Santander Retail Auto Lease Trust 2021-C	United States	—	(b)	—	—	Securitization	93	48	0
Santander Retail Auto Lease Trust 2022-A	United States	—	(b)	—	—	Securitization	0	14	0
Santander Retail Auto Lease Trust 2022-B	United States	—	(b)	—	—	Securitization	0	22	0
Santander Retail Auto Lease Trust 2022-C	United States	—	(b)	—	—	Inactive	0	0	0
Santander Revolving Auto Loan Trust 2019-A	United States	—	(b)	—	—	Securitization	(1)	32	0
Santander Revolving Auto Loan Trust 2021-A	United States	—	(b)	—	—	Inactive	0	0	0
Santander Río Asset Management Gerente de Fondos Comunes de Inversión S.A.	Argentina	0.00%	100.00%	100.00%	100.00%	Fund management company	16	8	3
Santander RMBS 6, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander S.A. Sociedad Securitizadora	Chile	0.00%	67.25%	100.00%	100.00%	Fund management company	1	0	1

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Secretariat Services Limited	United Kingdom	0.00%	100.00%	100.00%	100.00 %	Holding company	0	0	0
Santander Securities LLC	United States	0.00%	100.00%	100.00%	100.00 %	Securities company	27	(2)	26
Santander Seguros y Reaseguros, Compañía Aseguradora, S.A.	Spain	100.00%	0.00%	100.00%	100.00 %	Insurance	1,473	128	1,188
Santander Servicios Corporativos, S.A. de C.V.	Mexico	0.00%	96.24%	100.00%	100.00 %	Services	12	0	12
Santander Servicios Especializados, S.A. de C.V.	Mexico	0.00%	96.24%	100.00%	100.00 %	Services	3	0	3
Santander Technology USA, LLC	United States	0.00%	100.00%	100.00%	100.00 %	IT services	73	(11)	62
Santander Tecnología Argentina S.A.	Argentina	0.00%	99.83%	100.00%	100.00 %	IT services	7	7	10
Santander Tecnología México, S.A. de C.V.	Mexico	0.00%	96.24%	100.00%	100.00 %	IT services	52	0	50
Santander Totta Seguros, Companhia de Seguros de Vida, S.A.	Portugal	0.00%	99.91%	100.00%	100.00 %	Insurance	92	15	47
Santander Totta, SGPS, S.A.	Portugal	99.91%	0.00%	99.91%	99.91 %	Holding company	3,008	1,508	5,352
Santander Towarzystwo Funduszy Inwestycyjnych S.A.	Poland	50.00%	33.70%	100.00%	100.00 %	Fund management company	4	16	10
Santander Trade Services Limited	Hong-Kong	0.00%	100.00%	100.00%	100.00 %	Inactive	24	2	16
Santander Trust S.A.	Argentina	0.00%	99.99%	100.00%	100.00 %	Services	0	0	0
Santander UK Group Holdings plc	United Kingdom	77.67%	22.33%	100.00%	100.00 %	Holding company	13,935	1,359	17,015
Santander UK Investments	United Kingdom	100.00%	0.00%	100.00%	100.00 %	Finance company	48	(2)	45
Santander UK Operations Limited	United Kingdom	0.00%	100.00%	100.00%	100.00 %	Finance company	7	0	17
Santander UK plc	United Kingdom	0.00%	100.00%	100.00%	100.00 %	Banking	13,075	956	14,913
Santander UK Technology Limited	United Kingdom	0.00%	100.00%	100.00%	100.00 %	IT services	40	1	6
Santander Valores S.A.	Argentina	5.10%	94.73%	100.00%	100.00 %	Securities company	4	0	4
Santander Wealth Management International SA, en liquidation (j)	Switzerland	0.00%	100.00%	100.00%	100.00 %	Inactive	0	0	0
Santusa Holding, S.L.	Spain	69.76%	30.24%	100.00%	100.00 %	Holding company	8,940	273	6,504
SC Austria Consumer Loan 2021 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SC Austria Finance 2020-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2014-2 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2016-2 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2018-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2019-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Consumer 2014-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Consumer 2018-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Mobility 2019-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A.	Luxembourg	—	(b)	—	—	Securitization	0	0	0

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
SC Germany S.A., Compartment Consumer 2020-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Consumer 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Consumer 2022-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Mobility 2020-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany Vehicles 2013-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Vehicles 2015-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Poland Consumer 23-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto I Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto II Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto IX Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto KIMI VI Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto VII Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto VIII Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto X Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto XI Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Eastside Locks GP Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate management	0	0	0
SCF Rahoituspalvelut I Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut II Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut IX DAC	Ireland	—	(b)	—	—	Securitization	11	0	0
SCF Rahoituspalvelut KIMI VI Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut VII Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut VIII Designated Activity Company	Ireland	—	(b)	—	—	Securitization	2	0	0
SCF Rahoituspalvelut X DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut XI Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SCM Poland Auto 2019-1 DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
SDMX Superdigital, S.A. de C.V., Institución de Fondos de Pago Electrónico	Mexico	0.00%	100.00%	100.00%	100.00%	Payment platform	4	(1)	3
Securor Finance 2021-1, DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
Services and Promotions Delaware Corp.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	64	2	66
Services and Promotions Miami LLC	United States	0.00%	100.00%	100.00%	100.00%	Real estate	57	3	60
Servicios de Cobranza, Recuperación y Seguimiento, S.A. de C.V.	Mexico	0.00%	85.00%	85.00%	85.00%	Finance company	39	2	32
Sheppards Moneybrokers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Shiloh III Wind Project, LLC	United States	0.00%	100.00%	100.00%	100.00%	Renewable energies	344	1	345

**Subsidiaries of Banco Santander, S.A.**¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Silk Finance No. 5	Portugal	—	(b)	—	—	Securitization	9	42	0
SMPS Merchant Platform Solutions México, S.A de C.V	Mexico	0.00%	98.16%	100.00%	100.00%	Payments and collection services	145	32	173
Sociedad Integral de Valoraciones Automatizadas, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Appraisals	1	2	1
Sociedad Operadora de Tarjetas de Pago Santander Getnet Chile S.A.	Chile	0.00%	67.13%	100.00%	100.00%	Payments and collection services	12	4	11
Socur S.A. (f)	Uruguay	100.00%	0.00%	100.00%	100.00%	Finance company	58	13	59
Solarlaser Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Solution 4Fleet Consultoria Empresarial S.A.	Brazil	0.00%	72.23%	80.00%	80.00%	Vehicle rental	3	(1)	1
Sovereign Community Development Company	United States	0.00%	100.00%	100.00%	100.00%	Holding company	41	1	42
Sovereign Delaware Investment Corporation	United States	0.00%	100.00%	100.00%	100.00%	Holding company	143	4	147
Sovereign Lease Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Financial services	235	1	236
Sovereign REIT Holdings, Inc.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	8,035	159	8,194
Sovereign Spirit Limited (n)	Bermudas	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
SSA Swiss Advisors AG	Switzerland	0.00%	100.00%	100.00%	100.00%	Asset management	1	0	4
Sterrebeeck B.V.	Netherlands	100.00%	0.00%	100.00%	100.00%	Holding company	4,771	633	10,840
Suleyado 2003, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Securities Investment	31	(1)	28
Summer Empreendimentos Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Real estate management	4	1	4
Superdigital Argentina S.A.U.	Argentina	0.00%	100.00%	100.00%	100.00%	IT services	3	(2)	2
Superdigital Colombia S.A.S.	Colombia	0.00%	100.00%	100.00%	100.00%	IT services	1	0	0
Superdigital Holding Company, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	144	(12)	132
Superdigital Instituição de Pagamento S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	Payment services	46	(11)	100
Superdigital Perú S.A.C.	Peru	0.00%	100.00%	100.00%	100.00%	Financial services	1	(1)	0
Suzuki Servicios Financieros, S.L.	Spain	0.00%	51.00%	51.00%	51.00%	Intermediation	12	2	0
Svensk Autofinans WH 1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
Swesant SA	Switzerland	0.00%	100.00%	100.00%	100.00%	Holding company	63	42	0
SX Negócios Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Telemarketing	13	2	14
SX Tools Soluções e Serviços Compartilhados Ltda.	Brazil	0.00%	90.28%	100.00%	—	Services	33	1	31
Tabasco Energia España, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	1	0	0
Taxagest Sociedade Gestora de Participações Sociais, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Holding company	56	0	0
Taxos Luz, S.L. Unipersonal	Spain	0.00%	70.00%	100.00%	—	Renewable energies	0	0	9
Teatinos Siglo XXI Inversiones S.A.	Chile	50.00%	50.00%	100.00%	100.00%	Holding company	1,869	285	2,136
The Alliance & Leicester Corporation Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	14	0	14
The Best Specialty Coffee, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Restaurant services	2	(1)	1

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Time Retail Finance Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
TIMFin S.p.A.	Italy	0.00%	51.00%	51.00%	51.00%	Finance company	45	(4)	28
Tonopah Solar I, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	5	0	5
Tornquist Asesores de Seguros S.A. (j)	Argentina	0.00%	99.99%	99.99%	99.99%	Inactive	0	0	0
Toro Corretora de Títulos e Valores Mobiliários Ltda.	Brazil	0.00%	56.88%	63.00%	60.00%	Securities company	53	1	31
Toro Investimentos S.A.	Brazil	0.00%	56.88%	91.32%	100.00%	Securities company	38	0	22
Totta (Ireland), PLC (h)	Ireland	0.00%	99.87%	100.00%	100.00%	Finance company	451	5	450
Totta Urbe - Empresa de Administração e Construções, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Real estate	98	(10)	100
Trabajando.com Mexico, S.A. de C.V. en liquidación (j)	Mexico	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Trade Maps 3 Ireland Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Trans Rotor Limited (j)	United Kingdom	100.00%	0.00%	100.00%	100.00%	Renting	0	0	0
Transolver Finance EFC, S.A.	Spain	0.00%	51.00%	51.00%	51.00%	Leasing	71	3	17
Tresmares Santander Direct Lending, SICC, S.A.	Spain	99.60%	0.00%	99.60%	99.60%	Fund management company	685	19	678
Tuttle and Son Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Universia Brasil S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia Chile S.A.	Chile	0.00%	86.84%	86.84%	86.84%	Internet	0	0	0
Universia Colombia S.A.S.	Colombia	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia España Red de Universidades, S.A.	Spain	0.00%	89.45%	89.45%	89.45%	Internet	2	0	2
Universia Holding, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	20	(5)	17
Universia México, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia Perú, S.A.	Peru	0.00%	99.76%	99.76%	99.76%	Internet	0	0	0
Universia Uruguay, S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Uro Property Holdings, S.A.	Spain	99.99%	0.00%	99.99%	99.99%	Real estate investment	178	(22)	179
Verbena FCVS - Fundo de Investimentos em Direitos Creditórios (e)	Brazil	—	(b)	—	—	Investment fund	(3)	3	0
Wallcesa, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Financial services	(928)	6	0
Wave Holdco, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Waycarbon Soluções Ambientais e Projetos de Carbono S.A.	Brazil	0.00%	80.00%	100.00%	—	Consulting services	27	(1)	21

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Waypoint Insurance Group, Inc.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	9	0	9
WIM Servicios Corporativos, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Advisory services	0	0	0
WTW Shipping Designated Activity Company	Ireland	100.00%	0.00%	100.00%	100.00%	Leasing	16	(3)	9

- a. Amount according to the provisional books of each company as of the date of publication of these annexes, generally referring to 31 December 2022 without considering, where appropriate, interim dividends that have been made during the year. In the book value (net provision cost), the percentage of ownership of the Group has been applied to the figure of each of the holding companies, without considering the impairment of goodwill made in the consolidation process. The data for foreign companies are converted into euros at the exchange rate at the end of the year.
- b. Companies over which effective control is maintained.
- c. Data as at 31 December 2021, latest available accounts.
- d. Data as at 31 March 2022, latest accounts available.
- e. Data as at 30 June 2022, last accounts available.
- f. Data as at 30 September 2022, last accounts available.
- g. Data as at 31 July 2022, last accounts available.
- h. Data as at 30 November 2022, last accounts available.
- i. Recently created company, with no available financial information.
- j. Company in liquidation as at 31 December 2022.
- k. Pursuant to Article 3 of Royal Decree 1159/2010, of 17 September, approving the rules for the preparation of consolidated annual accounts, in order to determine the voting rights, voting rights held directly by the parent company have been added to those held by companies controlled by the parent company or by other persons acting in their own name but on behalf of a Group company. For these purposes, the number of votes corresponding to the parent company, in relation to the companies indirectly dependent on it, is that corresponding to the dependent company that directly participates in the share capital of the latter.
- l. Company resident for tax purposes in Spain.
- m. Data as of 30 June 2022, latest available accounts.
- n. Company resident for tax purposes in the United Kingdom.
- o. Data as at 28 February 2022, last accounts available.
- p. Companies in liquidation. Pending registration.
- q. Data as at 30 April 2022, latest available accounts.

(1) Companies issuing preference shares are listed in Annex III, together with other relevant information.

Appendix II

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Abra 1 Limited (k)	Cayman Island	—	(h)	—	—	Leasing	Joint ventures	—	—	—
Achmea Tussenholding, B.V. (b)	Netherlands	8.89%	0.00%	8.89%	8.89%	Holding company	—	356	356	20
Administrador Financiero de Transantiago S.A.	Chile	0.00%	13.43%	20.00%	20.00%	Payments and collection services	Associated	67	20	4
Aegon Santander Portugal Não Vida - Companhia de Seguros, S.A.	Portugal	0.00%	48.96%	49.00%	49.00%	Insurance	Joint ventures	64	12	12
Aegon Santander Portugal Vida - Companhia de Seguros Vida, S.A.	Portugal	0.00%	48.96%	49.00%	49.00%	Insurance	Joint ventures	139	19	20
Aeroplan - Sociedade Construtora de Aeroportos, Lda. (e)	Portugal	0.00%	19.97%	20.00%	20.00%	Inactive	—	0	0	0
Aguas de Fuensanta, S.A. (e) (k)	Spain	36.78%	0.00%	36.78%	36.78%	Food	—	—	—	—
Alcuter 2, S.L. (k)	Spain	37.23%	0.00%	37.23%	37.23%	Technical services	—	—	—	—
Alma UK Holdings Ltd (b)	United Kingdom	30.00%	0.00%	30.00%	30.00%	Holding company	Joint ventures	4	4	0
Altamira Asset Management, S.A. (consolidado)	Spain	0.00%	15.00%	15.00%	15.00%	Real estate	—	171	2	(21)
Apolo Fundo de Investimento em Direitos Creditórios	Brazil	0.00%	30.09%	33.33%	33.33%	Investment fund	Joint ventures	405	343	63
Attijariwafa Bank Société Anonyme (consolidado) (b)	Morocco	0.00%	5.10%	5.10%	5.10%	Banking	—	53,452	4,898	461
AutoFi Inc. (b)	United States	0.00%	19.75%	19.75%	—	E-commerce	—	7	7	(8)
Autopistas del Sol S.A. (b)	Argentina	0.00%	14.17%	14.17%	14.17%	Motorway concession	—	156	77	(3)
Avanath Affordable Housing IV LLC	United States	0.00%	7.27%	7.27%	—	Investment Company	—	258	188	1
Banco RCI Brasil S.A.	Brazil	0.00%	36.02%	39.89%	39.89%	Banking	Joint ventures	1,945	215	37
Banco S3 Caceis México, S.A., Institución de Banca Múltiple	Mexico	0.00%	50.00%	50.00%	50.00%	Banking	Joint ventures	244	79	8
Bank of Beijing Consumer Finance Company	China	0.00%	20.00%	20.00%	20.00%	Finance company	Associated	1,430	125	12
Bank of Shanghai Co., Ltd. (consolidado) (b)	China	6.54%	0.00%	6.54%	6.54%	Banking	—	360,213	24,944	2,993
Bizum, S.L. (b)	Spain	20.92%	0.00%	20.92%	—	Payment services	Associated	11	2	1
CACEIS (consolidado)	France	0.00%	30.50%	30.50%	30.50%	Custody services	Associated	124,340	4,182	278
Campo Grande Empreendimentos Ltda. (k)	Brazil	0.00%	22.86%	25.32%	—	Inactive	—	—	—	—
Cantabria Capital, SGEIC, S.A.	Spain	50.00%	0.00%	50.00%	50.00%	Venture capital	Associated	0	0	0
Car10 Tecnologia e Informação S.A.	Brazil	0.00%	42.13%	46.67%	46.67%	Internet	Joint ventures	13	0	(2)
CCPT - ComprarCasa, Rede Serviços Imobiliários, S.A.	Portugal	0.00%	49.98%	49.98%	49.98%	Real estate services	Joint ventures	0	0	0
Centro de Compensación Automatizado S.A.	Chile	0.00%	22.38%	33.33%	33.33%	Payments and collection services	Associated	21	11	5
Centro para el Desarrollo, Investigación y Aplicación de Nuevas Tecnologías, S.A. (b)	Spain	0.00%	49.00%	49.00%	49.00%	Technology	Associated	3	3	0
CIP S.A.	Brazil	0.00%	16.13%	17.87%	—	Financial services	Associated	468	354	49
CNP Santander Insurance Europe Designated Activity Company	Ireland	49.00%	0.00%	49.00%	49.00%	Insurance	Associated	1,075	189	40
CNP Santander Insurance Life Designated Activity Company	Ireland	49.00%	0.00%	49.00%	49.00%	Insurance	Associated	1,226	119	52

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
CNP Santander Insurance Services Ireland Limited	Ireland	49.00%	0.00%	49.00%	49.00%	Services	Associated	26	5	1
Comder Contraparte Central S.A	Chile	0.00%	8.37%	12.47%	12.47%	Financial services	Associated	37	11	3
Companhia Promotora UCI	Brazil	0.00%	25.00%	25.00%	25.00%	Financial services	Joint ventures	1	0	0
Compañía Española de Financiación de Desarrollo, Cofides, S.A., SME (b)	Spain	20.18%	0.00%	20.18%	20.18%	Finance company	—	179	152	21
Compañía Española de Seguros de Crédito a la Exportación, S.A., Compañía de Seguros y Reaseguros (consolidado) (b)	Spain	23.33%	0.55%	23.88%	23.88%	Credit insurance	—	1,078	431	96
Compañía Española de Viviendas en Alquiler, S.A.	Spain	24.07%	0.00%	24.07%	24.07%	Real estate	Associated	556	353	27
Compañía para los Desarrollos Inmobiliarios de la Ciudad de Hispalis, S.L., en liquidación (d) (e)	Spain	21.98%	0.00%	21.98%	21.98%	Real estate promotion	—	38	(325)	0
Connecting Visions Ecosystems, S.L.	Spain	19.90%	0.00%	19.90%	19.90%	Consulting services	Joint ventures	1	1	(1)
Corkfoc Cortiças, S.A. (c)	Portugal	0.00%	27.55%	27.58%	27.58%	Cork industry	—	3	20	0
CSD Central de Serviços de Registro e Depósito Aos Mercados Financeiro e de Capitais S.A.	Brazil	0.00%	18.06%	20.00%	—	Financial services	Associated	38	37	0
Desarrollo Eólico las Majas VI, S.L.	Spain	45.00%	0.00%	45.00%	45.00%	Renewable energies	Joint ventures	52	6	1
Energías Renovables de Ormonde 25, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables de Ormonde 26, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables de Ormonde 27, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables de Ormonde 30, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables de Titania, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables Gladiateur 45, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables Prometeo, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Euro Automatic Cash Entidad de Pago, S.L.	Spain	50.00%	0.00%	50.00%	50.00%	Payment services	Associated	54	35	(6)
European Hospitality Opportunities S.à r.l. (b)	Luxembourg	0.00%	49.00%	49.00%	49.00%	Holding company	Joint ventures	1	1	0
Evolve SPV S.r.l.	Italy	—	(h)	—	—	Securitization	Joint ventures	91	0	0
FAFER- Empreendimentos Urbanísticos e de Construção, S.A. (b) (e)	Portugal	0.00%	36.57%	36.62%	36.62%	Real estate	—	0	1	0
Federal Home Loan Bank of Pittsburgh (b)	United States	0.00%	6.05%	6.05%	—	Banking	—	35,264	2,482	81
Federal Reserve Bank of Boston (b)	United States	0.00%	19.12%	19.12%	20.09%	Banking	—	214,885	1,640	7
Fondo de Titulización de Activos UCI 11	Spain	—	(h)	—	—	Securitization	Joint ventures	113	0	0
Fondo de Titulización de Activos UCI 14	Spain	—	(h)	—	—	Securitization	Joint ventures	269	0	0
Fondo de Titulización de Activos UCI 15	Spain	—	(h)	—	—	Securitization	Joint ventures	337	0	0
Fondo de Titulización de Activos UCI 16	Spain	—	(h)	—	—	Securitization	Joint ventures	454	0	0
Fondo de Titulización de Activos UCI 17	Spain	—	(h)	—	—	Securitization	Joint ventures	397	0	0
Fondo de Titulización Hipotecaria UCI 12	Spain	—	(h)	—	—	Securitization	Joint ventures	154	0	0


Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Fondo de Titulización, RMBS Prado IX	Spain	—	(h)	—	—	Securitization	Joint ventures	479	0	0
Fondo de Titulización, RMBS Prado V	Spain	—	(h)	—	—	Securitization	Joint ventures	277	0	0
Fondo de Titulización, RMBS Prado VI	Spain	—	(h)	—	—	Securitization	Joint ventures	311	0	0
Fondo de Titulización, RMBS Prado VII	Spain	—	(h)	—	—	Securitization	Joint ventures	467	0	0
Fondo de Titulización, RMBS Prado VIII	Spain	—	(h)	—	—	Securitization	Joint ventures	422	0	0
Fondo de Titulización, RMBS Prado X	Spain	—	(h)	—	—	Securitization	Joint ventures	566	0	0
Fortune Auto Finance Co., Ltd	China	0.00%	50.00%	50.00%	50.00%	Finance company	Joint ventures	2,039	434	54
Fremman limited	United Kingdom	33.00%	0.00%	4.99%	4.99%	Finance company	Associated	10	2	(1)
Gestora de Inteligência de Crédito S.A.	Brazil	0.00%	14.05%	10.00%	20.00%	Collection services	Joint ventures	277	84	(14)
Gire S.A.	Argentina	0.00%	58.22%	58.33%	58.33%	Payments and collection services	Associated	157	76	4
HCUK Auto Funding 2017-2 Ltd	United Kingdom	—	(h)	—	—	Securitization	Joint ventures	395	0	0
HCUK Auto Funding 2022-1 Limited (m)	United Kingdom	—	(h)	—	—	Securitization	Joint ventures	456	0	0
Healthy Neighborhoods Equity Fund I LP (b)	United States	0.00%	22.37%	22.37%	22.37%	Real estate	—	13	12	(1)
Hyundai Capital UK Limited	United Kingdom	0.00%	50.01%	50.01%	50.01%	Finance company	Joint ventures	4,658	381	65
Hyundai Corretora de Seguros Ltda.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance brokerage	Joint ventures	1	0	0
Imperial Holding S.C.A. (e) (i)	Luxembourg	0.00%	36.36%	36.36%	36.36%	Securities investment	—	0	(112)	0
Imperial Management S.à r.l. (b) (e)	Luxembourg	0.00%	40.20%	40.20%	40.20%	Holding company	—	0	0	0
Innohub S.A.P.I. de C.V.	Mexico	0.00%	40.84%	40.84%	20.00%	IT services	Associated	2	4	(2)
Invertur Aguilas I, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	0	0	0
Invertur Aguilas II, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	1	1	0
Inversiones Ibersuizas, S.A. (b)	Spain	25.42%	0.00%	25.42%	25.42%	Venture capital	—	11	11	0
Inversiones ZS América Dos Ltda.	Chile	0.00%	49.00%	49.00%	49.00%	Real estate and securities investment	Associated	285	285	36
Inversiones ZS América SpA	Chile	0.00%	49.00%	49.00%	49.00%	Real estate and securities investment	Associated	395	395	34
J.C. Flowers I L.P. (b) (l)	United States	0.00%	0.00%	0.00%	0.00%	Holding company	—	2	3	(1)
LB Oprent, S.A. (b)	Spain	40.00%	0.00%	40.00%	40.00%	Industrial machinery rent	Associated	4	1	1
Loop Gestão de Pátios S.A.	Brazil	0.00%	32.23%	35.70%	35.70%	Business services	Joint ventures	8	0	(2)
Mapfre Santander Portugal - Companhia de Seguros, S.A.	Portugal	0.00%	49.94%	49.99%	49.99%	Insurance	Associated	17	7	0
Massachusetts Business Development Corp. (consolidado) (b)	United States	0.00%	21.61%	21.61%	21.61%	Finance company	—	75	14	3
MB Capital Fund IV, LLC (b)	United States	0.00%	21.51%	21.51%	21.51%	Finance company	—	27	27	2
Merlin Properties, SOCIMI, S.A. (consolidado) (b)	Spain	19.01%	5.63%	24.64%	24.77%	Real estate investment	Associated	14,273	6,585	512

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Metrovacesa, S.A. (consolidado) (b)	Spain	31.94%	17.50%	49.44%	49.44%	Real estate promotion	Associated	2,777	2,061	18
Niuco 15, S.L. (k)	Spain	57.10%	0.00%	57.10%	37.23%	Technical services	—	—	—	—
Ocyener 2008, S.L.	Spain	0.00%	45.00%	45.00%	45.00%	Holding company	Associated	2	2	0
Operadora de Activos Beta, S.A. de C.V.	Mexico	49.99%	0.00%	49.99%	49.99%	Finance company	Associated	0	0	0
Pag10 Fomento Mercantil Eireli	Brazil	0.00%	42.13%	46.67%	46.67%	Factoring	Joint ventures	0	0	0
Payever GmbH	Germany	0.00%	10.00%	10.00%	10.00%	Software	Associated	3	2	0
Platinum Care, S.A.	Spain	0.00%	50.00%	50.00%	—	Holding company	Joint ventures	5	5	(3)
Play Digital S.A.	Argentina	0.00%	15.35%	15.38%	15.70%	Payment platform	Associated	23	42	(24)
POLFUND - Fundusz Poręczeń Kredytowych S.A.	Poland	0.00%	33.70%	50.00%	50.00%	Management company	Associated	29	20	0
Portland SPV S.r.l.	Italy	—	(h)	—	—	Securitization	Joint ventures	195	0	0
Procapital - Investimentos Imobiliários, S.A. (b) (e)	Portugal	0.00%	39.97%	40.00%	40.00%	Real estate	—	0	13	0
Project Quasar Investments 2017, S.L. (consolidado) (b)	Spain	49.00%	0.00%	49.00%	49.00%	Holding company	—	5,861	679	(317)
Promontoria Manzana, S.A. (consolidado) (b)	Spain	20.00%	0.00%	20.00%	20.00%	Holding company	Associated	953	279	(55)
PSA Corretora de Seguros e Serviços Ltda.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance brokerage	Joint ventures	1	0	0
Redbanc S.A.	Chile	0.00%	22.44%	33.43%	33.43%	Services	Associated	34	11	2
Redsys Servicios de Procesamiento, S.L. (consolidado)	Spain	24.90%	0.06%	24.96%	24.96%	Cards	Associated	126	75	4
Relevante e Astuto, S.A.	Portugal	0.00%	70.00%	70.00%	70.00%	Real estate management	Joint ventures	0	0	0
Retama Real Estate, S.A. Unipersonal	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	21	(46)	(1)
Rías Redbanc S.A.	Uruguay	0.00%	25.00%	25.00%	25.00%	Services	—	4	1	0
RMBS Belém No.2	Portugal	—	(h)	—	—	Securitization	Joint ventures	333	0	0
RMBS Green Belém No. 1	Portugal	—	(h)	—	—	Securitization	Joint ventures	241	0	0
S3 Caceis Brasil Distribuidora de Títulos e Valores Mobiliários S.A.	Brazil	0.00%	50.00%	50.00%	50.00%	Securities company	Joint ventures	237	168	28
S3 Caceis Brasil Participações S.A.	Brazil	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	199	170	28
San Preca Federal I Fundo de Investimento em Direitos Creditórios Não-Padronizados	Brazil	0.00%	45.14%	50.00%	—	Investment fund	Joint ventures	10	10	0
Sancus Green Investments II, S.C.R., S.A. (b)	Spain	0.00%	41.60%	41.60%	43.29%	Venture capital	—	4	5	0
Santander Allianz Towarzystwo Ubezpieczeń na Życie S.A.	Poland	0.00%	33.03%	49.00%	49.00%	Insurance	Associated	303	12	27
Santander Allianz Towarzystwo Ubezpieczeń S.A.	Poland	0.00%	33.03%	49.00%	49.00%	Insurance	Associated	82	36	9
Santander Assurance Solutions, S.A.	Spain	0.00%	66.67%	66.67%	66.67%	Insurance intermediary	Joint ventures	14	5	1
Santander Auto S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance	Associated	39	6	5
Santander Caceis Colombia S.A. Sociedad Fiduciaria	Colombia	0.00%	50.00%	50.00%	50.00%	Finance company	Joint ventures	6	6	0
Santander Caceis Latam Holding 1, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	731	722	10
Santander Caceis Latam Holding 2, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	2	2	0

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Santander Generales Seguros y Reaseguros, S.A.	Spain	0.00%	49.00%	49.00%	49.00%	Insurance	Joint ventures	770	185	44
Santander Mapfre Seguros y Reaseguros, S.A.	Spain	0.00%	49.99%	49.99%	49.99%	Insurance	Associated	123	65	(1)
Santander Vida Seguros y Reaseguros, S.A.	Spain	0.00%	49.00%	49.00%	49.00%	Insurance	Joint ventures	1,023	333	44
Sepacon 31, S.L. (k)	Spain	37.23%	0.00%	37.23%	37.23%	Technical services	—	—	—	—
Servicios de Infraestructura de Mercado OTC S.A.	Chile	0.00%	8.38%	12.48%	12.48%	Services	Associated	39	14	1
SIBS-SGPS, S.A. (consolidado) (b)	Portugal	0.00%	16.53%	16.55%	16.55%	Management of portfolios	—	396	67	44
Siguler Guff SBIC Fund LP (b)	United States	0.00%	20.00%	20.00%	20.00%	Investment company	—	28	14	1
Sistema de Tarjetas y Medios de Pago, S.A. (b)	Spain	20.61%	0.00%	20.61%	20.61%	Payment methods	Associated	749	5	0
Sistemas Técnicos de Encofrados, S.A. (consolidado) (b)	Spain	27.15%	0.00%	27.15%	27.15%	Construction materials	—	102	15	4
Sociedad Conjunta para la Emisión y Gestión de Medios de Pago, E.F.C., S.A.	Spain	45.70%	0.00%	45.70%	45.70%	Payment services	Joint ventures	112	36	1
Sociedad de Garantía Recíproca de Santander, S.G.R. (b)	Spain	25.35%	0.25%	25.60%	25.60%	Financial services	—	17	11	0
Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria, S.A. (b)	Spain	22.21%	0.00%	22.21%	22.21%	Financial services	—	25,311	586	(1,626)
Sociedad Interbancaria de Depósitos de Valores S.A.	Chile	0.00%	19.66%	29.29%	29.29%	Securities deposits	Associated	8	7	2
Solar Maritime Designated Activity Company (b)	Ireland	—	(h)	—	—	Leasing	Joint ventures	148	(1)	0
STELLANTIS Insurance Europe Limited	Malta	0.00%	50.00%	50.00%	50.00%	Insurance	Joint ventures	245	60	28
STELLANTIS Life Insurance Europe Limited	Malta	0.00%	50.00%	50.00%	50.00%	Insurance	Joint ventures	110	11	16
Stephens Ranch Wind Energy Holdco LLC (consolidado) (b)	United States	0.00%	20.50%	20.50%	17.10%	Renewable energies	—	220	176	(2)
Tbforte Segurança e Transporte de Valores Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	Security	Associated	111	74	(3)
Tbnet Comércio, Locação e Administração Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	Telecommunications	Associated	107	79	(2)
Tecban Serviços Integrados Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	IT services	Associated	4	1	0
Tecnologia Bancária S.A.	Brazil	0.00%	17.13%	18.98%	19.81%	ATM	Associated	527	160	9
Tonopah Solar Energy Holdings I, LLC (k)	United States	0.00%	26.80%	26.80%	26.80%	Holding company	Joint ventures	—	—	—
Trabajando.com Chile S.A.	Chile	0.00%	33.33%	33.33%	33.33%	Services	Associated	2	(1)	1
Transbank S.A.	Chile	0.00%	16.78%	25.00%	25.00%	Cards	Associated	1,648	93	29
Tresmares Growth Fund II, S.C.R., S.A.	Spain	40.00%	0.00%	40.00%	40.00%	Holding company	—	54	42	12
Tresmares Growth Fund III, S.C.R., S.A.	Spain	40.00%	0.00%	40.00%	40.00%	Holding company	—	41	32	9
Tresmares Growth Fund Santander, S.C.R., S.A. (n)	Spain	100.00%	0.00%	100.00%	100.00%	Holding Company	—	59	53	(1)
U.C.I., S.A.	Spain	50.00%	0.00%	50.00%	50.00%	Holding company	Joint ventures	794	261	(2)
UCI Hellas Credit and Loan Receivables Servicing Company S.A.	Greece	0.00%	50.00%	50.00%	50.00%	Financial services	Joint ventures	1	1	0
UCI Holding Brasil Ltda.	Brazil	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	2	0	0
UCI Mediação de Seguros Unipessoal, Lda.	Portugal	0.00%	50.00%	50.00%	50.00%	Insurance brokerage	Joint ventures	0	0	0
UCI Servicios para Profesionales Inmobiliarios, S.A. Unipersonal	Spain	0.00%	50.00%	50.00%	50.00%	Real estate services	Joint ventures	1	0	0



Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Unicre-Instituição Financeira de Crédito, S.A.	Portugal	0.00%	21.83%	21.86%	21.86%	Finance company	Associated	452	110	24
Unión de Créditos Inmobiliarios, S.A. Unipersonal, EFC	Spain	0.00%	50.00%	50.00%	50.00%	Mortgage credit company	Joint ventures	11,247	1,080	(53)
VCFS Germany GmbH	Germany	0.00%	50.00%	50.00%	50.00%	Marketing	Joint ventures	1	0	0
Venda de Veículos Fundo de Investimento em Direitos Creditórios	Brazil	—	(h)	—	—	Securitization	Joint ventures	217	196	20
Volvo Car Financial Services UK Limited	United Kingdom	0.00%	50.01%	50.01%	50.01%	Leasing	Joint ventures	1,755	107	16
Webmotors S.A.	Brazil	0.00%	63.20%	70.00%	70.00%	Services	Joint ventures	70	41	14
Zurich Santander Brasil Seguros e Previdência S.A.	Brazil	0.00%	48.79%	48.79%	48.79%	Insurance	Associated	15,099	359	183
Zurich Santander Brasil Seguros S.A.	Brazil	0.00%	48.79%	48.79%	48.79%	Insurance	Associated	189	(14)	44
Zurich Santander Holding (Spain), S.L. Unipersonal	Spain	0.00%	49.00%	49.00%	49.00%	Holding company	Associated	937	936	193
Zurich Santander Holding Dos (Spain), S.L. Unipersonal	Spain	0.00%	49.00%	49.00%	49.00%	Holding company	Associated	384	382	101
Zurich Santander Insurance América, S.L.	Spain	49.00%	0.00%	49.00%	49.00%	Holding company	Associated	1,497	1,490	322
Zurich Santander Seguros Argentina S.A. (j)	Argentina	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	60	36	6
Zurich Santander Seguros de Vida Chile S.A.	Chile	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	254	24	37
Zurich Santander Seguros Generales Chile S.A.	Chile	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	326	60	26
Zurich Santander Seguros México, S.A.	Mexico	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	1,169	45	158
Zurich Santander Seguros Uruguay S.A.	Uruguay	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	42	18	8

- a. Amount according to the provisional books at the date of publication of these annexes of each company, generally referring to 31 December 2022, except where otherwise indicated due to the fact that the annual accounts are pending formulation. The data for foreign companies are converted into euros at the exchange rate at the end of the year.
- b. Data as at 31 December 2021, latest available accounts.
- c. Data as at 31 December 2019, latest available accounts.
- d. Data as at 30 November 2021, latest available accounts.
- e. Company in liquidation as at 31 December 2022.
- f. Pursuant to Article 3 of Royal Decree 1159/2010, of 17 September, approving the rules for the preparation of consolidated annual accounts, in order to determine the voting rights, voting rights held directly by the parent company have been added to those held by companies controlled by the parent company or by other persons acting in their own name but on behalf of a group company. For these purposes, the number of votes corresponding to the parent company, in relation to the companies indirectly dependent on it, is that corresponding to the dependent company that directly participates in the share capital of the latter.
- g. Excluding the Group companies listed in Appendix I, as well as those which are of negligible interest with respect to the true and fair view that the consolidated financial statements must give (in accordance with articles 48 of the Commercial Code and 260 of the Spanish Companies Act).
- h. Companies over which joint control is maintained.
- i. Data as at 31 October 2021, latest available accounts.
- j. Data as at 30 June 2022, latest available accounts.
- k. Company with no financial information available.
- l. Company in liquidation. Pending registration.
- m. Data as at 30 September 2022, latest available accounts
- n. Investment managed discretionally by a manager outside the Santander Group, the voting rights not being, in this case, decisive in determining control of the entity.



Appendix III

Issuing subsidiaries of shares and preference shares

Company	Location	% of ownership held by Banco Santander			EUR million (a)			
		Direct	Indirect	Activity	Capital	Reserves	Cost of preferred	Net results
Emisora Santander España, S.A. Unipersonal	Spain	100.00%	0.00%	Finance company	2	0	0	0
Santander UK (Structured Solutions) Limited	United Kingdom	0.00%	100.00%	Finance company	0	0	0	0
Sovereign Real Estate Investment Trust	United States	0.00%	100.00%	Finance company	5,231	(3,477)	55	13

a. Amount according to the books of each interim company as at 31 December 2022, converted into euro (in the case of foreign companies) at the year-end exchange rate.



Appendix IV

Notifications of acquisitions and disposals of investments in 2022

Details of the notifications of acquisitions and disposals of participations for 2022 in accordance with Article 125 of the Securities Market Law may be found below:

On 13 May 2022, Banco Santander, S.A. disclosed to the CNMV the decrease of its stake in REPSOL, S.A. below the 3% threshold, keeping a stake of 2.291%, as of 9 May 2022.

With respect to compliance with Article 125 of the Securities Market Law, no communications required under this article were made in 2020. In relation to the information required by 155 of the Corporate Enterprises Act, on the shareholdings in which Grupo Santander owns more than 10% of the capital of another company, and the successive acquisitions of more than 5% of the share capital, see appendices I, II and III..



Appendix V

Other information on the Group's banks

Following is certain information on the share capital of the Group's main banks based on their total assets.

1. Santander UK plc

a) Number of financial equity instruments held by the Group.

At 31 December 2022, the Company was a subsidiary of Banco Santander, S.A. and Santusa Holding, S.L.

On 12 November 2004 Banco Santander, S.A. acquired the then entire issued ordinary share capital of 1,485,893,636 Ordinary shares of 10p. each. On 12 October 2008 a further 10 billion Ordinary shares of 10p. each were issued to Banco Santander, S.A. and an additional 12,631,375,230 Ordinary shares of 10p. each were issued to Banco Santander, S.A. on 9 January on 2009. On 3 August 2010, 6,934,500,000 Ordinary shares of 10p. each were issued to Santusa Holding, S.L.. With effect from 10 January 2014, Santander UK Group Holdings Limited, a subsidiary of Banco Santander, S.A. and Santusa Holding, S.L., became the beneficial owner of 31,051,768,866 Ordinary shares of 10p. each, being the entire issued ordinary share capital of the Company, by virtue of a share exchange agreement between Santander UK Group Holdings Limited, Banco Santander, S.A. and Santusa Holding, S.L.. Santander UK Group Holdings Limited became the legal owner of the entire issued Ordinary share capital of the Company on 1 April 2014 and on 25 March 2015 became a public limited company and changed its name from Santander UK Group Holdings Limited to Santander UK Group Holdings plc. In addition to this, there are 325,000,000 Non-Cumulative Non-Redeemable 10.375% and 8.625% Sterling Preference Shares of GBP 1.00 each. In addition to this there were 13,780 Series A Fixed (6.222%)/Floating Rate Non-Cumulative Callable Preference Shares of GBP 1.00 each which were redeemed and cancelled in their entirety on 24 May 2019. The legal and beneficial title to the entire issued Preference share capital is held by third parties and is not held by Banco Santander, S.A.

b) Capital increases in progress

At 31 December 2022, there were no approved capital increases.

c) Share capital authorised by the shareholders at the general meeting

The shareholders resolved at the Annual General Meeting held on 1 April 2022, to authorise unconditionally, the company to carry out the following repurchases of the share capital:

(1) To buy back its own 8.625% Sterling Preference shares on the following terms:

- (a) The Company may buy back up to 125,000,000 8.625% Sterling Preference shares;
- (b) The lowest price which the Company can pay for 8.625% Sterling Preference shares is 75% of the average of the market values of the preference shares for five business days before the purchase is made; and

- (c) The highest price (not including expenses) which the Company can pay for each 8.625% Sterling Preference share is 125% of the average of the market values of the preference shares for five business days before the purchase is made.

This authority shall begin on the date of the passing of this resolution and end on the conclusion of the next Annual General Meeting of the Company. The Company may agree, before this authorisation ends, to buy back its own 8.625% preference shares even though the purchase may be completed after this authorisation ends.

(2) To buy back its own 10.375% Sterling Preference shares on the following terms:

- (a) The Company may buy up to 200,000,000 10.375% Sterling Preference shares;
- (b) The lowest price which the Company can pay for 10.375% Sterling Preference shares is 75% of the average of the market values of the preference shares for five business days before the purchase is made; and
- (c) The highest price (not including expenses) which the Company can pay for each 10.375% Sterling Preference share is 125% of the average of the market values of the preference shares for five business days before the purchase is made.

This authority shall begin on the date of the passing of this resolution and end on the conclusion of the next Annual General Meeting of the Company. The Company may agree, before this authorisation ends, to buy back its own 10.375% preference shares even though the purchase may be completed after this authorisation ends.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Not applicable.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

The preference share capital of Santander UK plc is traded on the London Stock Exchange under the following details:

- 10.375% Sterling Preference - ISIN: GB0000064393
- 8.625% Sterling Preference - ISIN: GB0000044221

2. Santander Financial Services plc

a) Number of financial equity instruments held by the Group

The Group holds ordinary shares amounting to GBP 249,998,000 through Santander UK Group Holdings plc (249,998,000 ordinary shares with a par value of GBP 1 each).



The Group also holds 1,000 tracker shares (shares without voting rights but with preferential dividend rights) amounting to GBP 1,000 and 1,000 B tracker shares amounting to GBP 1,000 through Santander UK Group Holdings plc, both with a par value of GBP 1 each.

Additionally, the company issued GBP 50 million additional tier 1 (AT) capital securities to Santander UK Group Holdings plc on 19 December 2022.

b) Capital increases in progress

No approved capital increases are in progress.

c) Capital authorised by the shareholders at the general meeting

Not applicable.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Not applicable.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

Not applicable.

3. Banco Santander (Brasil) S.A.

a) Number of financial equity instruments held by the Group

The Group holds 3,440,170,512 ordinary shares and 3,273,507,089 preference shares through Banco Santander, S.A. and its subsidiaries Sterrebeeck B.V., Grupo Empresarial Santander, S.L., Banco Santander, S.A..

The shares composing the share capital of Banco Santander (Brasil) S.A. have no par value and there are no pending payments. At 2022 year-end, the bank's treasury shares consisted of 31,161,607 ordinary shares and 31,161,607 preferred shares, with a total of 62,323,214 shares.

In accordance with current bylaws (Article 5.7), the preference shares do not confer voting rights on their holders, except under the following circumstances:

- a) In the event of transformation, merger, consolidation or spin-off of the company.
- b) In the event of approval of agreements between the company and the shareholders, either directly, through third parties or other companies in which the shareholders hold a stake, provided that, due to legal or bylaw provisions, they are submitted to a general meeting.
- c) In the event of an assessment of the assets used to increase the company's share capital.

The General Assembly may, at any moment decide to convert the preference shares into ordinary shares, establishing a reason for the conversion.

However, the preference shares do have the following advantages (Article 5.6):

- a) Their dividends are 10% higher than those distributed to ordinary shares.
- b) Priority in the dividends distribution.
- c) Participation, on the same terms as ordinary shares, in capital increases resulting from the reserves and profits capitalization and in the distribution of bonus shares arising from the capitalization of retained earnings, reserves or any other funds.
- d) Priority in the reimbursement of capital in the event company's dissolution.
- e) In the event of a public offering due to a change in control of the company, the holders of preferred shares are guaranteed the right to sell the shares at the same price paid for the block of shares transferred as part of the change of control, i.e. they are treated the same as shareholders with voting rights.

b) Capital increases in progress

No approved capital increases are in progress.

c) Capital authorised by the shareholders at the general meeting

The company is authorised to increase share capital, subject to approval by the Board of Directors, up to a limit of 9,090,909,090 ordinary shares or preferred shares, and without need to maintain any ratio between any of the different classes of shares, provided they remain within the limits of the maximum number of preferred shares provided in Law.

As of 31 December 2022, the share capital consists of 7,498,531,051 shares (3,818,695,031 ordinary shares and 3,679,836,020 preferred shares).

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

At the general meeting held on 21 December 2016 the shareholders approved the rules relating to the deferred remuneration plans for the directors, management and other employees of the company and of companies under its control. Shares delivery is linked to achievement of certain targets.

e) Specific circumstances that restrict reserves availability

The only restriction on the availability of Banco Santander (Brasil) S.A.'s reserves is connected to the requirement for the legal reserve formation (restricted reserves), which can only be used to offset losses or to increase capital.

The legal reserve requirement is set-forth in Article 193 of the Brazilian Corporations Law, which establishes that before allocating profits to any other purpose, 5% of profits must be transferred to the legal reserve, which must not exceed 20% of the company's share capital.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

**g) Listed capital instruments**

All the shares are listed on the São Paulo Stock Exchange (B3 - Brasil, Bolsa, Balcão) and the shares deposit certificates (American Depositary Receipts - ADR) are listed on the New York Stock Exchange (NYSE).

4. Santander Bank, National Association**a) Number of financial equity instruments held by the Group**

At 31 December 2022, the Group held 530,391,043 ordinary shares that carry the same voting and dividend acquisition rights over Santander Holdings USA, Inc. (SHUSA). This holding company and Independence Community Bank Corp. (ICBC) hold 1,237 ordinary shares with a par value of USD 1 each, which carry the same voting rights. These shares constitute all the share capital of Santander Bank, National Association (SBNA). SHUSA holds an 80.84% ownership interest in SBNA, and the remaining 19.16% belongs to ICBC. ICBC is wholly owned by SHUSA. There is no shareholders' meeting for the ordinary shares of SBNA.

b) Capital increases in progress

At 31 December 2022 there were no approved capital increases.

c) Capital authorised by the shareholders at the general meeting

Not applicable.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Not applicable.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

Not applicable.

5. Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México**a) Number of financial instruments of capital held by the group.**

Grupo Financiero Santander México, S.A. de C.V. ('Grupo Financiero') and Gesban México Servicios Administrativos Globales, S.A. de C.V. (México), hold 5,087,801,602 shares which represent the 74.97% of the capital stock of Banco Santander México and Banco Santander, S.A. holds 1,438,256,710 shares which represent the 21.19% of such capital stock.

On November 30, 2022, an Extraordinary Shareholders' Meeting of Banco Santander México, S.A. was held at which it was approved (a) to cancel the registration of all of the shares representing the capital stock of the Company in the National Securities Registry maintained by the National Banking and Securities Commission and to delist them from the Mexican Stock Exchange (Bolsa Mexicana de Valores, S.A.B. de C.V.), and (b) delist the American Depositary Shares (each representing five series "B" shares of the Company) from the New York Stock Exchange and delist the Company's series "B" shares and such American Depositary Shares from registration with the US Securities and Exchange Commission; and (c) to conduct certain tender offers for the series "B" shares representing the capital stock of the Company and the American Depositary Shares, which tender offers are expected to take place in the first quarter of 2023.

b) Ongoing capital stock increases.

To this date there are not ongoing capital stock increases.

c) Authorized Capital by the Shareholders Meeting.

On April 20, 2021, the Company held an Extraordinary General Shareholders' Meeting, at which, among other items, it was approved an increase in the authorized capital stock of the Company to 6,825,447,481.00 Mexican pesos represented by 1,805,300,000 unsubscribed and unpaid shares, which are held in treasury so that the Company may issue Capital Instruments representing non-preferred subordinated debt. This increase was approved by the National Banking and Securities Commission (CNBV) through official communication number 312-3/10039041/2021 dated November 8, 2021.

As a result of said agreement, the Company requested the update of the registration of the shares representing the capital stock of Banco Santander Mexico, S.A. in the National Securities Registry, which was authorized by the CNBV through official communication number 153/2800/2022 dated May 20, 2022. In the aforementioned official communication, it was requested that the Company adjusted the amounts in pesos corresponding to the capital stock to include cents, and therefore, through an Extraordinary General Stockholders' Meeting held on July 19, 2022, the corresponding adjustment was made, which was authorized by the CNBV through official communication number 312-3/93573/2023 dated January 3, 2023.

The capital stock of the Bank is 32,485,600,109.44 Mexican pesos represented by a total of 8,592,294,357 shares with a nominal value of 3.780782962 Mexican pesos each one; divided in 4,385,824,012 stocks "F" Series and 4,206,470,345 shares "B" Series. The capital stock is constituted as follows:

- Paid-in and subscribed capital of the Bank is 25,660,152,628.14 Mexican pesos represented by a total of 6,786,994,357 shares with a nominal value of 3.780782962 Mexican pesos each one; divided in 3,464,309,145 shares "F" Series and 3,322,685,212 shares Series.
- The authorized capital stock for the conversion of obligations into shares of the Company is 6,825,447,481.30 Mexican pesos, represented by a total of 1,805,300,000 shares with a nominal value of 3,780782962 Mexican pesos each; divided into 921,514,867 Series "F" shares and 883,785,133 Series "B shares". which are kept in the treasury of the Bank.

**d) Rights incorporated into parts of founder, bonds or debt, convertible obligations and securities or similar rights.**

- (i) The Board of Directors on its meeting held on October 22, 2015, was updated regarding the situation of the debt issuance of Banco Santander Mexico, S.A. , which had been previously ratified in the meeting held on October 17, 2013, in order to issue debt for the amount of 6,500 million dollars in local or international markets, for a maximum period of 15 years, senior or subordinated debt including debt instruments qualifying for purposes of capital in accordance with the legislation in force, which can be implemented individually or through several issuance programs.

The approved debt issuance of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México is currently composed as follows:

Instrument	Type	Term	Amount	Available
Issuance Program of unsecured bonds and unsecured certificates of deposit	Revolving	4-Mar-2026	55,000 million Mexican pesos, or its equivalent in UDIs, dollars or any other foreign currency	\$35,040 million Mexican pesos With fix rate according to Banxico 31/Dec/ 2022
Private banking structured bonds Act with subsequent placements (JBSANPRIV 21-1)	Not Revolving ^A	28-Ene-2026	20,000 million Mexican pesos	\$3,356 million Mexican pesos
Private banking structured bonds Act with subsequent placements (JBSANPRIV 22-1)	Not Revolving ^A	9-Mar-2027	20,000 million Mexican pesos	\$0 million Mexican pesos
Private banking structured bonds Act with subsequent placements (JBSANPRIV 22-2)	Not Revolving ^A	28-Oct-2027	20,000 million Mexican pesos	\$14,719 million Mexican pesos
Public banking structured bonds Act with subsequent placements (JBSANPRIV 22-1)	Not Revolving	16-Dic-2027	10,000 million Mexican pesos	\$10,000 million Mexican pesos
Capital Notes (Tier 2 Capital)	Not Revolving	1-Oct-2028	1,300 million American dollars	N/A
Senior notes 144. ^a /RegS	Not Revolving	17-Abr-2025	1,750 million American dollars	N/A
Subordinated Notes, perpetual and convertible (Tier 1)	Not Revolving	perpetual	700 million American dollars	N/A

A. The issuance of the structured private banking bonds isn't revolving. Once placed the amount laid down in the corresponding brochure a new certificate will be issued on the authorized amount.

- (ii) The Board of Directors on its meeting held on January 27, 2011 approved the general conditions for the senior debt issue among international markets. On October 18, 2012 such issuance was approved on the amount of 500 and 1,000 million American dollars, for a term of 5 to 10 years. The issuance was approved with the purpose of obtaining resources to finance the increase in business assets and the liquidity of the Bank. Under these agreements adopted by the Board of Directors, the debt was issued for an amount of 1,000 million American dollars on November 9, 2012.

The amount issued of 1,300 million American dollars covers in full the sum of the repurchase of the Subordinated Notes 2013, for 1,222,907,000 American dollars.

Regarding the acquisition of the Subordinated Notes 2013: (a) the acquired total amount was 1,222,907,000 American dollars (nominal value), at a price of 1,010.50 American dollars and (b) the amount acquired by Banco Santander, S.A. (Spain), was a nominal 1,078,094,000 American dollars.

In connection with the issuance of the Instruments, the total amount distributed with Banco Santander, S.A. (Spain), was 75% of such issuance; that is, the placed amount was 975 million.

- (iii) On September 20, 2018, Banco Santander México, issued and placed equity instruments, subordinated, preferential, and not convertible into shares, governed by foreign law, representative of the complementary part of the net capital of Banco Santander Mexico (Tier 2 subordinated preferred capital notes), for the amount of 1,300 million American dollars (the "Instruments"), whose resources were used mainly for the acquisition of the 94.07% of the Subordinated Notes 2013.

Therefore, the Bank's General Extraordinary Shareholder's Meeting held on September 10, 2018, among other subjects, approved to ratify the issuance limit for up to 6,500 million and a term of 15 years, senior or subordinate, in local and/or international markets, instrumented individually or through issuance programs, which was previously authorized by the Board of Directors on its meeting held on April 26, 2018.



On January 30, 2019, Banco Santander México paid off the total remaining due amount of the Subordinated Notes 2013.

On April 17th., 2020, Banco Santander Mexico issued an international Senior Note, due on five years in the global market, on the amount of 1,750 million dollars, with a rate of 5.375 per cent, whereas the demand exceeded three times the placed amount. The due date of such notes will be April 17th, 2025.

On April 20, 2021, a General Extraordinary Shareholders' Meeting of Banco Santander México was held, where among other issues, it was approved that the Bank may issue subordinated non preferential perpetual and convertible capital notes, to be placed abroad, in accordance with the Banco de Mexico authorization.

On September 15, 2021, Banco Santander Mexico issued abroad the "Perpetual Subordinated Non-Preferred Contingent Convertible Additional Tier 1 Notes", up to an amount of 700 million American dollars. On the same date, the Bank paid the "2016 Obligations" above mentioned, on a fixed initial rate of 4.625% up to an amount of 700,000,000 American dollars.

e) Specific circumstances restricting the availability of reserves.

According to the Law of Financial Institutions, general dispositions applicable to financial institutions, General Corporations law and the bylaws, the Bank has to constitute or increase its capital reserves to ensure the solvency to protect the payments system and the public savings.

The Bank increases its legal reserve annually accordingly to the results obtained in the fiscal year (benefits).

The Bank must constitute the different reserves established in the legal provisions applicable to financial institutions, which are determined accordingly to the qualification granted to credits and they are released when the credit rating improves, or when it is settled.

f) Entities outside the Group which own, directly or through subsidiaries, a stake equal to or greater than 10% of the equity.

Not applicable.

g) Equity instruments admitted to trading.

Not applicable.

6. Banco Santander Totta, S.A

a) Number of equity instruments held by the Group

The Group holds 1,391,241,670 ordinary shares through its subsidiaries: Santander Totta, SGPS, S.A. with 1,376,219,267 shares, Taxagest Sociedade Gestora de Participações Sociais, S.A. with 14,593,315 shares, and Banco Santander Totta, S.A. with 429,088 treasury shares, all of which have a par value of EUR 1 each and identical voting and dividend rights and are subscribed and paid in full.

b) Capital increases in progress

At 31 December 2022, there were no equity increases in progress.

c) Capital authorised by the shareholders at the general meeting

Not applicable.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Under Article 296 of the Portuguese Companies' Code, the legal and merger reserves can only be used to offset losses or to increase capital.

Non-current asset revaluation reserves are regulated by Decree-Law 31/98, under which losses can be offset or capital increased by the amounts for which the underlying asset is depreciated, amortised or sold.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Equity instruments

Not applicable.

7. Santander Consumer Bank AG

a) Number of financial equity instruments held by the Group

At 31 December 2022, through Santander Consumer Holding GmbH, the Group held 30,002 ordinary shares with a par value of EUR 1,000 each, all of which carry the same voting rights.

b) Capital increases in progress

Not applicable.

c) Capital authorised by the shareholders at the general meeting

Not applicable.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Not applicable.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

Not applicable.



8. Banco Santander - Chile

a) Number of equity instruments held by the Group

The Group holds a 67.18% ownership interest in its subsidiary in Chile corresponding to 126,593,017,845 ordinary shares of Banco Santander - Chile through its subsidiaries: Santander Chile Holding S.A. with 66,822,519,695 ordinary shares, Teatinos Siglo XXI Inversiones S.A., with 59,770,481,573 ordinary shares and Santander Inversiones S.A. with 16,577 fully subscribed and paid ordinary shares that carry the same voting and dividend rights.

b) Capital increases in progress

At 31 December 2022, there were no approved capital increases.

c) Capital authorised by the shareholders at the general meeting

Share capital at 31 December 2022 amounted to CLP 891,302,881,691.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Remittances to foreign investors in relation to investments made under the Statute of Foreign Investment (Decree-Law 600/1974) and the amendments thereto require the prior authorisation of the foreign investment promotion agency.

f) Non-Group entities which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

All the shares are listed on the Chilean stock exchanges and, through American Depositary Receipts (ADRs), on the New York Stock Exchange (NYSE).

f) Non-Group entities, which hold, directly or through subsidiaries, 10% or more of equity

Not applicable.

g) Quoted equity instruments

All the shares of Santander Bank Polska S.A. are listed on the Warsaw Stock Exchange.

9. Santander Bank Polska S.A.

a) Number of financial equity instruments held by the Group

At 31 December, 2022, Banco Santander, S.A. held 68,880,774 ordinary shares with a par value of PLN 10 each, all of which carry the same voting rights.

b) Capital increases in progress

At 31 December, 2022, there were no equity increases in progress.

c) Capital authorised by the shareholders at the general meeting

There was no share capital increase in 2022.

d) Rights on founder's shares, "rights" bonds, convertible debentures and similar securities or rights

Not applicable.

e) Specific circumstances that restrict the availability of reserves

Not applicable.



Appendix VI

Annual banking report

Grupo Santander's total tax contribution (taxes incurred directly and by third parties, generated in the course of business) is around EUR 20.5 billion, including more than EUR 9.7 billion in taxes incurred directly (corporate income tax, non-recoverable value added tax (VAT) and other indirect taxes, employer Social Security contributions, payroll taxes and other taxes and levies).

This report complies with Article 89 of Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, and its transposition into Spanish law pursuant to Article 87 of Act 10/2014 of 26 June on the regulation, supervision and capital adequacy of credit institutions.

The criteria used to prepare this report were:

a) Name(s), activities and location

Appendices I to III to the consolidated financial statements contain details of the companies operating in each jurisdiction, including their name(s), location and activities.

Santander main activity in the jurisdictions where operate is commercial banking. The Group primarily operates in ten markets through subsidiaries that are autonomous in capital and liquidity. This has clear strategic and regulatory advantages, since it limits the risk of contagion between units, imposes a double layer of global and local oversight, and facilitates crisis management and resolution.

b) Turnover and profit or loss before tax

Turnover in this report is Total income, and profit or loss before tax, Operating profit/(loss) before tax, both as defined and presented in the consolidated income statement that forms part of the consolidated financial statements.

c) Number of full time equivalent employees

The data on full-time equivalent employees stem from the average headcount of each jurisdiction.

d) Tax on profit or loss

In the absence of specific criteria, we have included the amount effectively paid (EUR 5,498 million in 2022, with an effective tax rate of 36.1%) in respect of taxes whose effect is recognized under Income tax in the consolidated income statement.

Taxes effectively paid by the companies in each jurisdiction include:

- Supplementary payments relating to income tax returns, usually for prior years.
- Advances, prepayments, withholdings made or borne in respect of tax on profit or loss for the year. We included taxes borne abroad in the jurisdiction of the company that bore them.
- Refunds received with respect to prior years' returns.
- Where appropriate, the amount payable from assessments and litigation relating to these taxes.

The foregoing form part of the cash flow statement and differ from the corporate income tax expense recognized in the consolidated income statement (EUR 4,486 million in 2022, representing an effective rate of 29.4%, see note 27). This is because each country's tax regulations establish:

- when taxes must be paid. There is often a mismatch between the payment dates and the generation of the income bearing the tax.
- their own calculation criteria to define temporary or permanent restrictions on expense deduction, exemptions and relief or deferrals of certain income, generating the differences between the accounting profit (or loss) and taxable profit (or tax loss) which is ultimately taxed; tax loss carry forwards from prior years, tax credits and/or relief, etc., must also be added. In certain cases, special regimes such as the tax consolidation of companies in the same jurisdiction are established.

e) Public subsidies

In the context of the legally-required disclosures, this was interpreted as any aid or subsidy in line with the European Commission's Guidance on the notion of State aid. Grupo Santander did not receive public subsidies in 2022.



The breakdown of information is as follows:

2022				
Jurisdiction	Turnover (EUR million)	Employees	Gross profit or loss before tax (EUR million)	Tax on profit or loss (EUR million)
Germany	1,701	5,206	633	167
Argentina	1,810	8,274	410	34
Austria	198	334	106	21
Bahamas	10	27	3	—
Belgium	60	160	24	6
Brazil ¹	12,315	52,483	3,513	1,295
Canada	60	216	18	5
Chile	2,388	9,762	1,024	(2)
China	14	82	(9)	—
Colombia	66	730	8	11
United Arab Emirates	1	42	—	—
Spain ²	7,122	33,157	(378)	1,652
United States	7,607	14,185	2,258	610
Denmark	174	208	90	25
Finland	104	150	65	23
France	867	975	487	74
Greece	2	24	(4)	—
Hong Kong	103	187	14	5
India	1	75	—	—
Ireland	(18)	1	(30)	1
Isle of Man	48	70	30	1
Italy	547	1,015	279	50
Jersey	30	78	21	2
Luxembourg	375	21	366	107
Mexico	4,459	28,841	1,555	331
Norway	245	502	142	64
Netherlands	87	265	34	77
Peru	152	616	62	26
Poland	2,749	12,183	941	182
Portugal	1,339	5,274	798	135
Puerto Rico	—	3	—	—
United Kingdom	6,694	19,905	2,472	553
Singapore	20	25	11	1
Sweden	172	235	58	—
Switzerland	160	295	51	4
Uruguay	455	1,488	198	38
Consolidated Group Total	52,117	197,094	15,250	5,498

1. Including the information relating to a branch in the Cayman Islands, the profits of which are taxed in full in Brazil. The contribution of this branch profit before tax from continuing operations is EUR 438 million.

2. Includes the Corporate Centre.

At 31 December 2022, the Group's return on assets (ROA) was 0.63%.



Pursuant to Article 253, section 1 of the revised Spanish Companies Act (Ley de Sociedades de Capital), the board of directors of Banco Santander, S.A. draws up the consolidated financial statements (comprising the consolidated balance sheet, income statement, statement of recognized income and expense, statement of changes in total equity, statement of cash flows and the notes to the consolidated financial statements) and the consolidated directors' report for the 2022 fiscal year in eXtensible HyperText Markup Language (XHTML) format and, with respect to the main consolidated financial statements and the notes to the consolidated financial statements, with tags in the standard eXtensible Business Reporting Language (XBRL), all of which conforms to the single electronic reporting format required under Directive 2004/109/EC and Delegated Regulation (EU) 2019/815.

The directors of Banco Santander, S.A., listed below with an indication of their respective positions, declare that, to the best of their knowledge, the company's consolidated financial statements for the 2022 financial year were drawn up in accordance with the applicable accounting principles and give a true and fair view of the assets, liabilities, financial position and profit or loss of the company and of the undertakings included in the consolidation taken as a whole, and that the consolidated directors' report includes a fair review of the development, performance and position of the company and of the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

Boadilla del Monte (Madrid), 27 February 2023

ANA PATRICIA BOTÍN-SANZ DE SAUTUOLA Y O'SHEA
Chair

HÉCTOR BLAS GRISI CHECA
Chief Executive Officer

BRUCE CARNEGIE-BROWN
Vice Chair

JOSÉ ANTONIO ÁLVAREZ ÁLVAREZ
Vice Chair



MEMBERS:

HOMAIRA AKBARI

FRANCISCO JAVIER BOTÍN-SANZ DE SAUTUOLA
Y O'SHEA

SOL DAURELLA COMADRÁN

HENRIQUE MANUEL DRUMMOND BORGES
CIRNE DE CASTRO

GERMÁN DE LA FUENTE ESCAMILLA

GINA LORENZA DÍEZ BARROSO AZCÁRRAGA

GLENN HOGAN HUTCHINS

LUIS ISASI FERNÁNDEZ DE BOBADILLA

RAMIRO MATO GARCÍA-ANSORENA

BELÉN ROMANA GARCÍA

PAMELA ANN WALKDEN

General information

Corporate information

Banco Santander, S.A. is a Spanish bank, incorporated as sociedad anónima in Spain and is the parent company of Grupo Santander. Banco Santander, S.A. operates under the commercial name Santander.

The Bank's Legal Entity Identifier (LEI) is 5493006QMFDDMYWIAM13 and its Spanish tax identification number is A-39000013. The Bank is registered with the Companies Registry of Cantabria, and its Bylaws have been adapted to the Spanish Companies Act by means of the notarial deed instrument executed in Santander on 29 July 2011 before the notary Juan de Dios Valenzuela García, under number 1209 of his book and filed with the Companies Registry of Cantabria in volume 1006 of the archive, folio 28, page number S-1960, entry 2038.

The Bank is also registered in the Official registry of entities of Bank of Spain with code number 0049.

The Bank's registered office is at:

Paseo de Pereda, 9-12
39004 Santander
Spain

The Bank's principal executive offices are located at:

Santander Group City
Avda. de Cantabria s/n
28660 Boadilla del Monte
Madrid
Spain
Telephone: (+34) 91 259 65 20

Corporate history

The Bank was established in the city of Santander by public deed before the notary José Dou Martínez on 3 March 1856, which was later ratified and amended in part by a second public deed dated 21 March 1857 executed before the notary José María Olarán. The Bank commenced operations upon incorporation on 20 August 1857 and, according to article 4 of the Bylaws, its duration shall be for an indefinite period. It was transformed into a credit corporation (sociedad anónima de crédito) by public deed, executed before notary Ignacio Pérez, on 14 January 1875 and registered in the Companies Registry Book of the Government's Trade Promotion Section in the province of Santander. The Bank amended its Bylaws to conform to the Spanish public companies act of 1989 by means of a public deed executed in Santander on 8 June 1992 before the notary José María de Prada Díez and recorded in his notarial record book under number 1316.

On 15 January 1999, the boards of directors of Santander and Banco Central Hispanoamericano, S.A. agreed to merge Banco Central Hispanoamericano, S.A. into Santander, and to change Banco Santander's name to Banco Santander Central Hispano, S.A. The shareholders of Santander and Banco Central Hispanoamericano, S.A. approved the merger on 6 March 1999, at their respective general meetings and the merger became effective in April 1999.

The Bank's general shareholders' meeting held on 23 June 2007 approved the proposal to change back the name of the Bank to Banco Santander, S.A.

As indicated above, the Bank brought its Bylaws into line with the Spanish Companies Act by means of a public deed executed in Santander on 29 July 2011.

The Bank's general shareholders' meeting held on 22 March 2013 approved the merger by absorption of Banco Español de Crédito, S.A.

On 7 June 2017, Santander acquired the entire share capital of Banco Popular Español, S.A. in an auction in connection with a resolution plan adopted by the European Single Resolution Board (the European banking resolution authority) and executed by the FROB (the Spanish banking resolution authority) following a determination by the European Central Bank that Banco Popular was failing or likely to fail, in accordance with Regulation (EU) 806/2014 establishing a framework for the recovery and resolution of credit institutions and investment firms. On 24 April 2018, the Bank announced that the boards of directors of Banco Santander, S.A. and Banco Popular Español, S.A.U. had agreed to an absorption of Banco Popular by Banco Santander. The legal absorption was effective on 28 September 2018.

Shareholder and investor relations

Santander Group City
Pereda, 2ª planta
Avda. de Cantabria, s/n
28660 Boadilla del Monte
Madrid
Spain
Telephone: (+34) 91 276 92 90
accionistas@santander.com
investor@gruposantander.com

Hard copies of the Bank's annual report can be requested by shareholders free of charge at the address and phone number indicated above.

Customer service department

Apartado de Correos 35.250
28080 Madrid
Fax: 91 759 48 36
santander_reclamaciones@gruposantander.es

Media enquiries

Santander Group City
Arrecife, 2ª planta
Avda. de Cantabria, s/n
28660 Boadilla del Monte
Madrid
Spain
Telephone: (+34) 91 289 52 11
comunicacion@gruposantander.com

Banking Ombudsman in Spain (Defensor del cliente en España)

Mr José Luis Gómez-Dégano
Calle Raimundo Fernández Villaverde, 61
28003 Madrid
Telephone: (+34) 91 429 56 61
oficina@defensorcliente.es



Part 2.

Supplemental information

Table of contents:

1. Supplemental information to the consolidated directors' report	814
Corporate governance code	814
Branches	814
Important events	814
2. Financial statements of Banco Santander, S.A.	815
Auditor's report	
Annual accounts	

1. Supplemental information to the consolidated directors' report

1.1. Corporate governance code

The CNMV's Good Governance Code for Listed Companies (Spanish Corporate Governance Code), referred to in section 9 of the 'Corporate governance' chapter and to which Banco Santander is subject, is publicly available on the website of the CNMV (Comisión Nacional del Mercado de Valores), https://www.cnmv.es/DocPortal/Publicaciones/CodigoGov/CBG_2020_ENen.PDF.

1.2. Branches

Details of Santander's branches are set out in note 3 to the consolidated annual accounts.

1.3. Important events

The following events occurred from 1 January 2023 to 27 February 2023, being the date on which the consolidated financial statements were authorized for issue (see note 1.g to the consolidated financial statements).

On 28 December 2022 the Law establishing a new temporary levy on credit institutions and financial credit institutions was published in Spain (see note 27 for additional information). On 1 January 2023 an estimated amount of EUR 225 million has been accounted for in accordance with IFRIC 21 due to this new levy.

In accordance with the agreement reached by the April 2022 general shareholders' meeting, on 1 February 2023 the board of directors approved a capital reduction, subject to corresponding regulatory authorization from the ECB, of EUR 170,203,286 through the redemption of 340,406,572 shares, representing 2.03% of the capital, acquired in the first share buyback.

The following significant events occurred from 28 February 2023 to the date of filing of this report:

Execution of the 2022 shareholder remuneration policy

On 28 February 2023, Banco Santander announced that in line with the 2022 shareholder remuneration policy, the board of directors resolved to:

- submit to the ordinary general shareholders' meeting, whose call is being published today, the approval of a final gross cash dividend of €5.95 cents per share entitled to receive dividends. Subject to the approval of the ordinary general shareholders meeting, the dividend would be payable from 2 May 2023. Thus, the last day to trade shares with a right to receive the dividend would be 26 April, the ex-dividend date would be 27 April and the record date would be 28 April; and

- implement a new share buy-back programme, to which the Bank will allocate an amount of 921 million euros (the "Buy-Back Programme" or the "Programme"). The appropriate regulatory authorization for the new programme has already been obtained and its execution will therefore commence from tomorrow as detailed below.

Once the above-mentioned actions are completed, the Bank's shareholder remuneration for the 2022 results will total 3,842 million euros (c. 40% of the underlying profit in 2022) split in approximately equal parts in cash dividends (1,942 million euros) and share buybacks (1,900 million euros). (These amounts have been estimated assuming that, after the

execution of the share buy-back programme described above, the number of outstanding shares entitled to receive the final dividend will be 16,190,866,119. Therefore, the total dividend will be higher if fewer shares than planned are acquired in the buy-back programme and will be lower in the opposite scenario)

Second Buy-Back Programme for 2022 results

On 28 February 2023, Banco Santander announced that the Buy-Back Programme will be executed pursuant to the resolutions adopted by the general shareholders' meeting held on 3 April 2020 and, if applicable, the authorization for the acquisition of own shares which is submitted for approval by the 2023 Annual Shareholders' Meeting under item 5° C of the agenda, as well as in accordance with the provisions of Article 5 of Regulation (EU) No. 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (the "Market Abuse Regulation") and in Commission Delegated Regulation (EU) 2016/1052 (the "Delegated Regulation"), and will have the following characteristics:

- **Purpose of the Buy-Back Programme:** to reduce the Bank's share capital through the redemption of the shares acquired under the Programme in the share capital reduction submitted for approval by the 2023 Annual Shareholders' Meeting under item 5°A of the agenda.
- **Maximum investment:** the Buy-Back Programme will have a maximum monetary amount of 921 million euros.
- **Maximum price:** Banco Santander intends to implement the Buy-Back Programme in a way that causes the average purchase price of shares not to exceed 4.26 euro, corresponding to the tangible book value per share at 31 December 2022.
- **Maximum number of shares:** The maximum number of shares that may be acquired pursuant to the Programme will depend on the average price at which they are acquired, but will not exceed 1,514,451,957 shares. Assuming that the average purchase price at which shares are acquired pursuant to the Programme were 3.50 euros, the maximum number of shares that would be acquired would be 263,142,857 (1.57% of the Bank's share capital).
- **Other conditions:** shares will be purchased at market price, subject to some restrictions.

2. Financial statements of Banco Santander, S.A.

Banco Santander, S.A.

Auditor's report, Annual accounts and directors' report for the year ended 31 December 2022

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.



This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation

Independent auditor's report on the annual accounts

To the shareholders of Banco Santander, S.A.

Report on the annual accounts

Opinion

We have audited the annual accounts of Banco Santander, S.A. (the Bank), which comprise the balance sheet as at 31 December 2022, and the income statement, statement of recognised income and expense, statement of changes in total equity, statement of cash flow and related notes for the year then ended.

In our opinion, the accompanying annual accounts present fairly, in all material respects, the equity and financial position of the Bank as at 31 December 2022, as well as its financial performance and cash flows for the year then ended, in accordance with the applicable financial reporting framework (as identified in note 1 of the notes to the annual accounts), and in particular, with the accounting principles and criteria included therein.

Basis for opinion

We conducted our audit in accordance with legislation governing the audit practice in Spain. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the annual accounts* section of our report.

We are independent of the Bank in accordance with the ethical requirements, including those relating to independence, that are relevant to our audit of the annual accounts in Spain, in accordance with legislation governing the audit practice. In this regard, we have not rendered services other than those relating to the audit of the accounts, and situations or circumstances have not arisen that, in accordance with the provisions of the aforementioned legislation, have affected our necessary independence such that it has been compromised.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts of the current period. These matters were addressed in the context of our audit of the annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

PricewaterhouseCoopers Auditores, S.L., Torre PwC, Pº de la Castellana 259 B, 28046 Madrid, España
Tel.: +34 915 684 400 / +34 902 021 111, Fax: +34 915 685 400, www.pwc.es

1



Key audit matters	How our audit addressed the key audit matters
-------------------	---

Estimation of impairment of financial assets at amortised cost - loans and advances to customers – for credit risk

The models used to estimate the expected credit losses along with the adaptations made in the context of the current environment, imply a high complexity by incorporating new estimates and judgements, especially those related to the management overlays made to the models to determine the expected credit loss in the current uncertain macroeconomic environment. These estimates require an elevated component of judgment by management and are one of the most significant and complex estimates in the preparation of the annual accounts as at December 31, 2022 included herein, therefore they have been considered one of the key audit matters.

The main judgements and assumptions used by management are the following:

- The estimation of the Probability of Default (PD) and Loss Given Default (LGD) parameters.
- Identification and classification of the staging criteria of loans and advances to customers.
- The definition and evaluation of management overlays to adapt the parameters estimated by the models to the conditions and current environment.
- The main assumptions used in the determination of provisions for expected credit losses estimated individually.

The Bank's business is focused on commercial banking products.

As a result, for the year ended 2022 the Bank has recognised an amount of 1,391 million euros of impairment of financial assets at amortised cost.

We have obtained, in collaboration with our credit risk and economic forecasts experts, an understanding of management's process to estimate the impairment of financial assets at amortised cost - loans and advances to customers – over the estimation of impairment of financial assets assessed collectively and individually. In addition, and as a part of our audit procedures, we have made inquiries to management to understand the extent of the potential impact of climate change on credit risk.

In regards with the internal control, we have focused on testing the design and operating effectiveness of key controls over the following processes:

- Calculation methodologies, calibrations, monitoring and back-testing performed by management.
- Compliance with internal policies and functionality of the internal models approved by management.
- Reliability of the data sources used in the calculations and the suitability of the models taking into account the circumstances.
- Periodic review process of borrower to determine proper staging criteria.
- Review process over the calculation of the principal models and portfolios.
- Review process of the management overlays to the expected credit loss models made by management due to the conditions and current environment.
- Loan collateral assignment and valuation process associated with mortgage collateral operations, including collateral recovery process.



Banco Santander, S.A.

Key audit matters	How our audit addressed the key audit matters
<p>Please refer to notes 2, 6, 10 and 49 of the annual accounts as at December 31, 2022.</p>	<p>In addition, we performed the following tests of details:</p> <ul style="list-style-type: none"> • Tests of principal models with respect to: i) calculation and segmentation methods; ii) methodology used for the estimation of the expected loss parameters; iii) data and main assumptions used, iv) staging criteria and v) scenario information and assumptions. • Evaluation of the management overlays to the expected credit loss models made by management due to the conditions and current environment. • Verification of the correct assignment of the loan collaterals, especially those that are classified as doubtful. • Reperformance of collective impairment losses based on the expected credit loss models parameters. • On a sample basis, evaluating individual credit files to determine the adequacy of their accounting and classification, discounted cash flows and, where appropriate, corresponding impairment. <p>In the procedures described above, no exceptions were identified outside of a reasonable range.</p>
<p>Litigation provisions and contingencies</p> <p>The Bank is party to a range of tax and legal proceedings - administrative and judicial – which primarily arose in the ordinary course of its operations. Also, there are other situations not yet subject to any judicial process that, however, have required the recognition of provisions, such as aspects of conduct with clients and the possible compensations that could be derived.</p> <p>These proceedings generally take a long period of time to run their course, giving rise to complex processes in accordance with the applicable legislation, therefore it has been considered one of the key audit matters.</p>	<p>We have obtained, in collaboration with our experts, an understanding of the estimation process performed by management for litigation provisions and contingencies.</p> <p>In regards with the internal control, we have focused on testing the design and operating effectiveness of key controls over the following processes:</p> <ul style="list-style-type: none"> • Additions, logs and updates over the completeness of the legal matters in the systems. • Accuracy of the key data, maintained in the systems, used in the calculation of the litigations provisions and contingencies.



Banco Santander, S.A.

Key audit matters	How our audit addressed the key audit matters
<p>The management decides when to recognise a provision for these contingent liabilities, based on an amount estimated using certain procedures consistent with the nature of the uncertainty of the obligations.</p> <p>Among these provisions, some of the most significant are those for customer compensation for the sale of certain products; these estimates are based on the number of claims expected to be received, the number expected to be accepted, and the estimated average pay out per case.</p> <p>The amount of the litigation provisions and contingencies as at December 31, 2022 is 1,243 million euros.</p> <p>Please refer to notes 2 and 23 of the annual accounts as at December 31, 2022.</p>	<ul style="list-style-type: none"> • Assessment of the criteria used to estimate the expected losses from litigation provisions and contingencies and evaluation of the adequacy over the calculation of the provisions for regulatory, legal or tax procedures and their recognition. • Reconciliation between the minutes of the inspections and the amounts accounted for. <p>In addition, we performed the following tests of details:</p> <ul style="list-style-type: none"> • Analysis for reasonableness of the expected outcomes of the most significant tax and legal proceedings. • Assessment of possible contingencies relating to compliance with the tax obligations for all the years open to inspection, of the communications with the regulatory bodies and analysis of the ongoing regulatory inspections. • Sending, obtaining and analysing, if any, audit confirmation letters from external and internal lawyers and external tax advisors who work with the Bank or performing alternative procedures if confirmations are not received. • Analysis of the recognition and reasonableness of the provisions recorded. • Verifying the adequacy of the information disclosed in the annual accounts in accordance with applicable regulations. <p>In the procedures described above, no exceptions were identified outside of a reasonable range.</p>

Impairment of investments in subsidiaries

As indicated in note 13 of the accompanying annual accounts, Banco Santander, S.A. is the parent company of a group of entities, whose fundamental activities are in the financial services sector. The carrying value of the investments in subsidiaries as at December 31, 2022 is 90,936 million euros.

We have obtained an understanding of the valuation process of the investment in subsidiaries. In addition, where the valuation of investment requires the use of an elevated component of judgment, we have relied on the assistance of our valuation experts.

Key audit matters

Management performs an analysis of the potential losses in investments in subsidiaries that it has registered in its accounting records. This analysis is performed using different parameters such as the market price or the net equity adjusted for the unrealised gains existing at the valuation date, including goodwill net of its corresponding impairment.

The valuation or analysis of the impairment of some of these investments require an elevated component of judgment, principally for those investments measured using the net equity adjusted for the unrealised gains existing at the valuation date including its goodwill, therefore it has been considered one of the key audit matters.

This valuation, performed by Bank's management, is based on the analysis performed as part of the goodwill impairment assessment, where assumptions such as financial projections, discount rates, perpetual growth rates and market quotes (if available).

Please refer to note 13 of the annual accounts as at December 31, 2022.

How our audit addressed the key audit matters

With respect to internal controls, we have focused on the design and operating effectiveness of the controls in the valuation process and over the methodology, inputs and relevant assumptions used by management for the year-end estimates, including the controls performed to supervise the process and the related approvals.

Additionally, we have performed tests of details consisting of the following:

- Verify the valuation performed by the Bank, using as a reference the recoverable balance of the investments in subsidiaries.
- Verify that management's valuation methodology is in line with the applicable accounting standards, market practice and the specific expectations of the sector.
- For investments whose valuation is calculated considering goodwill, we evaluated the reasonableness of the valuation models based on projected discounted cash flows.
- Verifying the adequacy of the information disclosed in the annual accounts in accordance with applicable regulations.

In the procedures described above, no exceptions were identified outside of a reasonable range.

Information systems

The Bank's financial information is highly dependent on information technology (IT) systems, therefore an adequate control of these systems is crucial to ensuring correct data processing.

In this context, it is vital to evaluate aspects such as the organization of the Bank's Technology and Operations department, controls over software maintenance and development, physical and logical security controls, and controls over computer operations, therefore it has been considered one of the key audit matters.

In this respect, management continues monitoring the internal controls over IT systems, including the access controls that support the Bank's technology processes.

We have evaluated, in collaboration with our IT system specialists, the internal controls over the IT systems, databases and applications that support the Bank's financial reporting.

For this purpose, we have performed procedures over the design and operating effectiveness of key controls and test of details related to:

- The function of the IT governance framework.
- Access and logical security controls over the applications, operating systems and databases that support the relevant financial information.
- Application development and change management.
- Maintenance of computer operations.



Banco Santander, S.A.

Key audit matters	How our audit addressed the key audit matters
	<p data-bbox="846 537 1304 625">In addition, considering the monitoring carried out by management over its internal controls over IT systems, our approach and audit plan included the following aspects:</p> <ul data-bbox="846 646 1304 814" style="list-style-type: none"><li data-bbox="846 646 1304 720">• Evaluation of the monitoring made by management as part of its internal control environment of the Bank.<li data-bbox="846 741 1304 814">• Testing of the design and operating effectiveness of the controls implemented by management, including access controls. <p data-bbox="846 835 1304 882">In the procedures described above, no relevant exceptions were identified related to this matter.</p>

Other information: Director's report

Other information comprises only the director's report for the 2022 financial year, the formulation of which is the responsibility of the Bank's directors and does not form an integral part of the annual accounts.

Our audit opinion on the annual accounts does not cover the director's report. Our responsibility regarding the director's report, in accordance with legislation governing the audit practice, is to:

- a) Verify only that the statement of non-financial information, certain information included in the Annual Corporate Governance Report and the Annual Report on Directors' Remuneration, as referred to in the Auditing Act, have been provided in the manner required by applicable legislation and, if not, we are obliged to disclose that fact.
- b) Evaluate and report on the consistency between the rest of the information included in the director's report and the annual accounts as a result of our knowledge of the Company obtained during the audit of the aforementioned financial statements, as well as to evaluate and report on whether the content and presentation of this part of the director's report is in accordance with applicable regulations. If, based on the work we have performed, we conclude that material misstatements exist, we are required to report that fact.

On the basis of the work performed, as described above, we have verified that the information mentioned in section a) above has been provided in the manner required by applicable legislation and that the rest of the information contained in the director's report is consistent with that contained in the annual accounts for the 2022 financial year, and its content and presentation are in accordance with applicable regulations.

Responsibility of the directors and the audit committee for the annual accounts

The directors are responsible for the preparation of the accompanying annual accounts, such that they fairly present the equity, financial position and financial performance of the Bank, in accordance with the financial reporting framework applicable to the entity in Spain, and for such internal control as the aforementioned directors determine is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the directors are responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Bank or to cease operations, or have no realistic alternative but to do so.



Banco Santander, S.A.

The audit committee is responsible for overseeing the process of preparation and presentation of the annual accounts.

Auditor's responsibilities for the audit of the annual accounts

Our objectives are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with legislation governing the audit practice in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.

As part of an audit in accordance with legislation governing the audit practice in Spain, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts, including the disclosures, and whether the annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the entity's audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the entity's audit committee with a statement that we have complied with relevant ethical requirements, including those relating to independence, and we communicate with the aforementioned those matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the entity's audit committee, we determine those matters that were of most significance in the audit of the annual accounts of the current period and are therefore the key audit matters.



Banco Santander, S.A.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Report on other legal and regulatory requirements

European single electronic format

We have examined the digital file of the European single electronic format (ESEF) of Banco Santander, S.A. for the 2022 financial year that comprises an XHTML file of the annual accounts for the financial year, which will form part of the annual financial report.

The directors of Banco Santander, S.A. are responsible for presenting the annual financial report for 2022 financial year in accordance with the formatting requirements established in the Delegated Regulation (EU) 2019/815 of 17 December 2018 of the European Commission (hereinafter the ESEF Regulation). In this regard, the Annual Corporate Governance Report and the Annual Report on Directors' Remuneration have been incorporated by reference in the director's report.

Our responsibility is to examine the digital file prepared by the Bank's directors, in accordance with legislation governing the audit practice in Spain. This legislation requires that we plan and execute our audit procedures in order to verify whether the content of the annual accounts included in the aforementioned file completely agrees with that of the annual accounts that we have audited, and whether the format of these accounts has been affected, in all material respects, in accordance with the requirements established in the ESEF Regulation.

In our opinion, the digital file examined completely agrees with the audited annual accounts, and these are presented, in all material respects, in accordance with the requirements established in the ESEF Regulation.

Report to the audit committee

The opinion expressed in this report is consistent with the content of our additional report to the audit committee of the Bank dated 27 February 2023.

Appointment period


The General Ordinary Shareholders' Meeting held on 1 April 2022 appointed us as auditors for a period of one year, for the year ended 31 December 2022.

Previously, we were appointed by resolution of the General Ordinary Shareholders' Meeting for a period of three years and we have audited the accounts continuously since the year ended 31 December 2016.

Services provided

Services provided to the audited entity and its subsidiaries for services other than the audit of the accounts are disclosed in note 43 to the annual accounts.

PricewaterhouseCoopers Auditores, S.L. (S0242)



Julián González Gómez (20179)

27 February 2023

Banco Santander, S.A.

Financial statements for the year ended 31 December 2022

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

Banco Santander, S.A.

BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR Million

ASSETS	Note	2022	2021 ^A
CASH, CASH BALANCES AT CENTRAL BANKS AND OTHER DEPOSITS ON DEMAND	6	130,083	91,736
FINANCIAL ASSETS HELD FOR TRADING		103,868	86,085
Derivatives	9 & 11	54,456	42,023
Equity instruments	8	9,450	14,619
Debt securities	7	17,846	14,320
Loans and advances		22,116	15,123
Central banks	6	1,933	1,118
Credit institutions	6	9,807	6,980
Customers	10	10,376	7,025
<i>Memorandum items: lent or delivered as guarantees with disposal or pledge rights</i>	31	26,730	22,440
NON-TRADING FINANCIAL ASSETS MANDATORILY AT FAIR VALUE THROUGH PROFIT OR LOSS		3,168	2,355
Equity instruments	8	1,041	908
Debt securities	7	950	734
Loans and advances		1,177	713
Central banks	6	—	—
Credit institutions	6	—	—
Customers	10	1,177	713
<i>Memorandum items: lent or delivered as guarantees with disposal or pledge rights</i>	31	627	154
FINANCIAL ASSETS DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS		6,641	13,403
Debt securities	7	—	—
Loans and advances		6,641	13,403
Central banks	6	—	—
Credit institutions	6	934	3,445
Customers	10	5,707	9,958
<i>Memorandum items: lent or delivered as guarantees with disposal or pledge rights</i>	31	—	—
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		10,607	15,035
Equity instruments	8 & 25	1,268	1,705
Debt securities	7 & 25	4,120	9,394
Loans and advances		5,219	3,936
Central banks	6	—	—
Credit institutions	6	1	—
Customers	10	5,218	3,936
<i>Memorandum items: lent or delivered as guarantees with disposal or pledge rights</i>	31	1,517	2,348

ASSETS	Note	2022	2021^A
FINANCIAL ASSETS AT AMORTIZED COST		378,147	339,053
Debt securities	7	40,182	17,208
Loans and advances		337,965	321,845
Central banks	6	94	26
Credit institutions	6	35,067	35,084
Customers	10	302,804	286,735
<i>Memorandum items: lent or delivered as guarantees with disposal or pledge rights</i>	31	6,019	1,513
HEDGING DERIVATIVES	32	1,450	1,648
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK	32	(125)	120
INVESTMENTS		94,214	88,549
Group entities	13	90,936	85,272
Joint venture entities		324	257
Associated entities	13	2,954	3,020
TANGIBLE ASSETS	15	6,512	6,515
Property, plant and equipment		6,270	6,244
For own-use		5,392	5,392
Leased out under an operating lease		878	852
Investment property		242	271
<i>Of which, Leased out under an operating lease</i>		242	271
<i>Memorandum items: acquired in financial leasing</i>		2,662	2,695
INTANGIBLE ASSETS	16	859	896
Goodwill		334	396
Other intangible assets		525	500
TAX ASSETS	24	11,220	9,622
Current tax assets		2,977	1,003
Deferred tax assets		8,243	8,619
OTHER ASSETS		2,680	1,940
Insurance contracts linked to pensions	14, 17 & 23	313	381
Inventories	17	—	—
Other	17	2,367	1,559
NON-CURRENT ASSETS HELD FOR SALE	12	702	993
TOTAL ASSETS		750,026	657,950

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the balance sheet as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR Million

LIABILITIES	Note	2022	2021 ^A
FINANCIAL LIABILITIES HELD FOR TRADING		86,373	56,969
Derivatives	9 & 11	52,126	40,672
Short positions	9	14,453	9,244
Deposits		19,794	7,053
Central banks	18	4,265	44
Credit institutions	18	8,949	5,718
Customers	19	6,580	1,291
Marketable debt securities	20	—	—
Other financial liabilities	22	—	—
FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS		38,568	12,743
Deposits		38,479	12,743
Central banks	18	1,740	607
Credit institutions	18	2,160	1,067
Customers	19	34,579	11,069
Marketable debt securities	20	89	—
Other financial liabilities	22	—	—
<i>Memorandum items: subordinated liabilities</i>		—	—
FINANCIAL LIABILITIES AT AMORTIZED COST		541,679	510,272
Deposits		403,212	396,154
Central banks	18	15,728	64,649
Credit institutions	18	41,609	35,262
Customers	19	345,875	296,243
Marketable debt securities	20	125,969	104,094
Other financial liabilities	22	12,498	10,024
<i>Memorandum items: subordinated liabilities</i>	20 & 21	19,640	20,399
HEDGING DERIVATIVES	32	3,955	2,076
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK		(26)	—
PROVISIONS	23	3,886	4,349
Pensions and other post-retirement obligations		1,220	1,677
Other long term employee benefits		781	1,053
Taxes and other legal contingencies		622	516
Contingent liabilities and commitments		220	190
Other provisions		1,043	913
TAX LIABILITIES	24	1,796	1,697
Current tax liabilities		162	176
Deferred tax liabilities		1,634	1,521
OTHER LIABILITIES	17	3,749	3,271
LIABILITIES ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE		—	—
TOTAL LIABILITIES		679,980	591,377

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the balance sheet as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR Million

EQUITY	Note	2022	2021 ^A
SHAREHOLDERS' EQUITY	26	72,576	68,375
CAPITAL		8,397	8,670
Called up paid capital	27	8,397	8,670
Unpaid capital which has been called up		—	—
<i>Memorandum items: uncalled up capital</i>		—	—
SHARE PREMIUM	28	46,273	47,979
EQUITY INSTRUMENTS ISSUED OTHER THAN CAPITAL	30	688	658
Equity component of compound financial instruments		—	—
Other equity instruments issued		688	658
OTHER EQUITY INSTRUMENTS	30	175	147
ACCUMULATED RETAINED EARNINGS	29	11,910	9,683
REVALUATION RESERVES		—	—
OTHER RESERVES	29	(1,195)	(1,017)
(-) OWN SHARES	30	(614)	(841)
RESULTS FOR THE PERIOD	4	7,921	3,932
(-) INTERIM DIVIDENDS	4	(979)	(836)
OTHER COMPREHENSIVE INCOME OR LOSS		(2,530)	(1,802)
ITEMS THAT WILL NOT BE RECLASSIFIED TO PROFIT OR LOSS	25	(2,062)	(1,858)
Actuarial gains or - losses in defined benefit pension plans		(1,133)	(1,329)
Non-current assets and disposal groups that have been classified as held for sale		—	—
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income		(908)	(468)
Ineffectiveness of fair value hedges of equity instruments measured at fair value with changes in other comprehensive income		—	—
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income [hedged item]		289	271
Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income [hedging instrument]		(289)	(271)
Changes in the fair value of financial liabilities at fair value through profit or loss attributable to changes in credit risk		(21)	(61)
ITEMS THAT MAY BE RECLASSIFIED TO PROFIT OR LOSS	25	(468)	56
Hedge of net investments in foreign operations [effective part]		—	—
Currency conversion		—	—
Hedging derivatives. Cash flow hedge reserve [effective part]		(381)	(87)
Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income		(87)	143
Hedging instruments [non-designated items]		—	—
Non-current assets and disposal groups that have been classified as held for sale		—	—
TOTAL EQUITY		70,046	66,573
TOTAL LIABILITIES AND EQUITY		750,026	657,950
MEMORANDUM ITEMS: OFF BALANCE SHEET AMOUNTS			
Financial guarantees granted	31	11,956	10,489
Loan commitments granted	31	122,374	111,410
Other commitments granted	31	71,948	59,421

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the balance sheet as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

INCOME STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR Million

	Note	(Debit) Credit	
		2022	2021 ^A
Interest income	34	10,156	6,405
<i>Financial assets at fair value through other comprehensive income</i>		210	236
<i>Financial assets at amortized cost</i>		7,118	4,847
<i>Other interest income</i>		2,828	1,322
Interest expense	35	(5,958)	(2,785)
Expenses for capital stock repayable on demand		—	—
Interest income/(changes)		4,198	3,620
Dividend income	36	9,166	5,489
Commission income	37	3,259	3,119
Commission expense	38	(602)	(541)
Gains or losses on financial assets and liabilities not measured at fair value through profit or loss, net	39	75	318
<i>Financial assets at amortized cost</i>	39	(27)	19
<i>Other financial assets and liabilities</i>	39	102	299
Gains or losses on financial assets and liabilities held for trading, net	39	412	175
<i>Reclassification of financial assets at fair value through other comprehensive income</i>		—	—
<i>Reclassification of financial assets at amortized cost</i>		—	—
<i>Other gains (losses)</i>		412	175
Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss, net	39	498	(45)
<i>Reclassification of financial assets at fair value through other comprehensive income</i>		—	—
<i>Reclassification of financial assets at amortized cost</i>		—	—
<i>Other gains (losses)</i>		498	(45)
Gains or losses on financial assets and liabilities measured at fair value through profit or loss, net	39	106	38
Gains or losses from hedge accounting, net	39	(15)	(28)
Exchange differences, net	40	(877)	(205)
Other operating income	41	451	441
Other operating expenses	41	(890)	(894)
Total income		15,781	11,487
Administrative expenses		(4,683)	(4,673)
<i>Staff costs</i>	42	(2,796)	(2,707)
<i>Other general administrative expenses</i>	43	(1,887)	(1,966)
Depreciation and amortisation cost	15 & 16	(561)	(570)
Provisions or reversal of provisions, net	23	(630)	(758)
Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes	7 & 10	(1,398)	(2,287)
<i>Financial assets at fair value through other comprehensive income</i>		(7)	(1)
<i>Financial assets at amortized cost</i>		(1,391)	(2,286)
Impairment or reversal of impairment of investments in subsidiaries, joint ventures and associates, net	44	(512)	800
Impairment or reversal on non-financial assets, net		—	(85)
<i>Tangible assets</i>	15	—	(85)
<i>Intangible assets</i>	16	—	—
<i>Others</i>		—	—
Gain or losses on non-financial assets and investments, net	45	7	—

	Note	(Debit) Credit	
		2022	2021 ^A
Negative goodwill recognised in results		—	—
Gains or losses on non-current assets held for sale not classified as discontinued operations	12 & 46	(40)	(50)
Operating profit/(loss) before tax		7,964	3,864
Tax expense or income from continuing operations	24	(43)	68
Profit/(loss) from continuing operations		7,921	3,932
Profit/(loss) after tax		—	—
Profit/(loss) for the year		7,921	3,932

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the income statement the year ended as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

STATEMENTS OF RECOGNISED INCOME AND EXPENSE FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR Million

	Note	2022	2021 ^A
PROFIT (LOSS) FOR THE YEAR		7,921	3,932
OTHER RECOGNISED INCOME AND EXPENSES	25	(735)	(662)
Items that will not be reclassified to profit or loss		(211)	(397)
Actuarial gains and losses on defined benefit pension plans		279	29
Other recognised income and expense of investments in subsidiaries, joint venture and associates		—	—
Changes in the fair value of equity instruments measured at fair value through other comprehensive income, net		(450)	(347)
Gains or losses resulting from the accounting for hedges of equity instruments measured at fair value through other comprehensive income, net		—	—
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedged item)</i>		18	117
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedging instrument)</i>		(18)	(117)
Changes in the fair value of financial liabilities at fair value through profit or loss attributable to changes in credit risk		58	(93)
Income tax relating to items that will not be reclassified	24	(98)	14
Items that may be reclassified to profit or loss		(524)	(265)
Hedges of net investments in foreign operations (effective portion)		—	—
<i>Revaluation gains (losses)</i>		—	—
<i>Amounts transferred to income statement</i>		—	—
<i>Other reclassifications</i>		—	—
Exchanges differences		—	—
<i>Revaluation gains (losses)</i>		—	—
<i>Amounts transferred to income statement</i>		—	—
<i>Other reclassifications</i>		—	—
Cash flow hedges (effective portion)		(420)	146
<i>Revaluation gains or (losses)</i>		(505)	152
<i>Amounts transferred to income statement</i>		85	(6)
<i>Transferred to initial carrying amount of hedged items</i>		—	—
<i>Other reclassifications</i>		—	—
Hedging instruments (items not designated)		—	—
<i>Revaluation gains (losses)</i>		—	—
<i>Amounts transferred to income statement</i>		—	—
<i>Other reclassifications</i>		—	—
Debt instruments at fair value with changes in other comprehensive income		(328)	(524)
<i>Revaluation gains (losses)</i>		(242)	(243)
<i>Amounts transferred to income statement</i>		(86)	(281)
<i>Other reclassifications</i>		—	—
Non-current assets held for sale		—	—
<i>Revaluation gains (losses)</i>		—	—
<i>Amounts transferred to income statement</i>		—	—
<i>Other reclassifications</i>		—	—
Income tax related to items that may be reclassified to profit or loss	24	224	113
Total recognised income and expenses for the year		7,186	3,270

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the statement of recognized income and expenses for the year ended as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 50). In the event of a discrepancy, the Spanish-language version prevails.

STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR Million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings	Revaluation reserves	Other reserves	(-) Own Equity shares	Result for the period	(-) Interim dividends	Other comprehensive income	Total
Balance at 31 December 2021^A	8,670	47,979	658	147	9,683	—	(1,017)	(841)	3,932	(836)	(1,802)	66,573
Adjustments due to errors	—	—	—	—	—	—	—	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—	—	—	—	—	—	—	—
Opening balance at 1 January 2022^A	8,670	47,979	658	147	9,683	—	(1,017)	(841)	3,932	(836)	(1,802)	66,573
Total recognised income and expense	—	—	—	—	—	—	—	—	7,921	—	(735)	7,186
Other changes in equity	(273)	(1,706)	30	28	2,227	—	(178)	227	(3,932)	(143)	7	(3,713)
Issuance of ordinary shares	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of preferred shares	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—
Conversion of financial liabilities into equity	—	—	—	—	—	—	—	—	—	—	—	—
Capital reduction	(273)	(1,706)	—	—	—	—	273	1,706	—	—	—	—
Dividends	—	—	—	—	(869)	—	—	—	—	(979)	—	(1,848)
Purchase of equity instruments	—	—	—	—	—	—	—	(1,847)	—	—	—	(1,847)
Disposal of equity instruments	—	—	—	—	—	—	—	368	—	—	—	368
Transfer from equity to liabilities	—	—	—	—	—	—	—	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—	—	—	—	—	—	—	—
Transfers between equity items	—	—	—	—	3,096	—	(7)	—	(3,932)	836	7	—
Increases (decreases) due to business combinations	—	—	—	—	—	—	—	—	—	—	—	—
Share-based payment	—	—	—	(48)	—	—	—	—	—	—	—	(48)
Others increases or (-) decreases of the equity	—	—	30	76	—	—	(444)	—	—	—	—	(338)
Balance at 31 December 2022	8,397	46,273	688	175	11,910	—	(1,195)	(614)	7,921	(979)	(2,530)	70,046

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the statement of changes in total equity for the year ended as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR Million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings	Revaluation reserves	Other reserves	(-) Own Equity shares	Result for the period	(-) Interim dividends	Other comprehensive income	Total
Balance at 31 December 2020^A	8,670	52,013	627	157	9,683	—	(1,095)	—	(3,557)	—	(1,561)	64,937
Adjustments due to errors	—	—	—	—	—	—	—	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—	—	—	—	—	—	—	—
Opening balance at 1 January 2021^A	8,670	52,013	627	157	9,683	—	(1,095)	—	(3,557)	—	(1,561)	64,937
Total recognised income and expense	—	—	—	—	—	—	—	—	3,932	—	(662)	3,270
Other changes in equity	—	(4,034)	31	(10)	—	—	78	(841)	3,557	(836)	421	(1,634)
Issuance of ordinary shares	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of preferred shares	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—
Conversion of financial liabilities into equity	—	—	—	—	—	—	—	—	—	—	—	—
Capital reduction	—	—	—	—	—	—	—	—	—	—	—	—
Dividends	—	(477)	—	—	—	—	—	—	—	(836)	—	(1,313)
Purchase of equity instruments	—	—	—	—	—	—	—	(1,446)	—	—	—	1,446
Disposal of equity instruments	—	—	—	—	—	—	—	605	—	—	—	605
Transfer from equity to liabilities	—	—	—	—	—	—	—	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—	—	—	—	—	—	—	—
Transfers between equity items	—	(3,557)	—	—	—	—	(421)	—	3,557	—	421	—
Increases (decreases) due to business combinations	—	—	—	—	—	—	—	—	—	—	—	—
Share-based payment	—	—	—	(62)	—	—	—	—	—	—	—	(62)
Other increases or (-) decreases of the equity	—	—	31	52	—	—	499	—	—	—	—	582
Balance at 31 December 2021^A	8,670	47,979	658	147	9,683	—	(1,017)	(841)	3,932	(836)	(1,802)	66,573

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the statements of changes in total equity for the year ended 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In the event of a discrepancy, the Spanish-language version prevails.

STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR Million

	Note	2022	2021 ^A
A. CASH FLOWS FROM OPERATING ACTIVITIES		36,832	20,034
Profit or loss for the year	4	7,921	3,932
Adjustments made to obtain the cash flows from operating activities		3,370	2,052
Depreciation and amortization cost	15 & 16	561	570
Other adjustments		2,809	1,482
Net increase/(decrease) in operating assets		58,102	9,622
Financial assets held-for-trading		17,783	4,648
Non-trading financial assets mandatorily at fair value through profit or loss		812	130
Financial assets designated at fair value through profit or loss		(6,762)	(20,496)
Financial assets at fair value through other comprehensive income		(3,723)	(7,166)
Financial assets at amortized cost		50,793	36,675
Other operating assets		(801)	(4,169)
Net increase/(decrease) in operating liabilities		85,367	24,024
Financial liabilities held-for-trading		29,403	(4,045)
Financial liabilities designated at fair value through profit or loss		25,881	(4,147)
Financial liabilities at amortized cost		31,847	32,660
Other operating liabilities		(1,764)	(444)
Income tax recovered/(paid)		(1,724)	(352)
B. CASH FLOWS FROM INVESTING ACTIVITIES		6,595	4,083
Payments		4,257	2,266
Tangible assets	15	404	501
Intangible assets	16	164	110
Investments	13	3,689	1,655
Subsidiaries and other business units		—	—
Non-current assets held for sale and associated liabilities		—	—
Other payments related to investing activities		—	—
Proceeds		10,852	6,349
Tangible assets	15	160	119
Intangible assets	16	—	—
Investments	13 & 36	10,338	5,959
Subsidiaries and other business units		—	—
Non-current assets held for sale and associated liabilities		354	271
Other proceeds related to investing activities		—	—
C. CASH FLOW FROM FINANCING ACTIVITIES		(5,184)	(277)
Payments		5,553	5,322
Dividends	4	1,848	1,313
Subordinated liabilities	21	1,678	2,248
Redemption of own equity instruments		—	—
Acquisition of own equity instruments		1,847	1,446
Other payments related to financing activities		180	315
Proceeds		369	5,045
Subordinated liabilities	21	—	4,440
Issuance of own equity instruments		—	—
Disposal of own equity instruments		369	605
Other proceeds related to financing activities		—	—
D. EFFECT OF FOREIGN EXCHANGE RATE CHANGES		104	335

	Note	2022	2021 ^A
E. NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS		38,347	24,175
F. CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR		91,736	67,561
G. CASH AND CASH EQUIVALENTS AT END OF THE YEAR		130,083	91,736
MEMORANDUM ITEMS			
COMPONENTS OF CASH AND CASH EQUIVALENTS AT END OF THE YEAR			
<i>Cash</i>		1,257	1,184
<i>Cash equivalents at central banks</i>		124,577	88,268
<i>Other financial assets</i>		4,249	2,284
TOTAL OF CASH AND CASH EQUIVALENTS AT END OF THE YEAR		130,083	91,736

A. Presented for comparison purposes only (note 1.d).

The accompanying notes 1 to 49 and appendices are an integral part of the statement of cash flows for the year ended as of 31 December 2022.

Translation of annual accounts originally issued in Spanish and prepared in accordance with the regulatory financial reporting framework applicable to Banco Santander in Spain (see notes 1 and 49). In case of discrepancy, the Spanish version prevails.

Banco Santander, S.A.

Notes to the financial statements (annual accounts) for the year ended 31 December 2022.

1. Introduction, basis of presentation of the financial statements (annual accounts) and other information

a) Introduction

Banco Santander, S.A. ('the parent' or 'Banco Santander'), is a private-law entity subject to the rules and regulations applicable to banks operating in Spain, where it was constituted and currently maintains its legal domicile, which is paseo de Pereda, numbers 9 to 12, 39004, Santander, Spain.

The principal headquarters of Banco Santander are located in Ciudad Grupo Santander, Avenida Cantabria s/n, 28660, Boadilla del Monte, Madrid, Spain.

The corporate purpose of Banco Santander, S.A., mainly entails carrying out all kinds of activities, operations and services inherent to the banking business in general and permitted by current legislation, and the acquisition, holding, enjoyment and disposal of all kinds of securities.

In addition to the operations carried on directly by it, Banco Santander is the head of a group of subsidiaries that engage in various business activities and which compose, together with it, Grupo Santander ('Grupo Santander' or 'the Group'). Therefore, Banco Santander is obliged to prepare, in addition to its own separate financial statements, the Group's consolidated financial statements, which also include the interests in joint ventures and investments in associates.

Banco Santander financial statements for 2021 were approved by the shareholders at the group's annual general meeting on 1 April 2022. The Group's 2022 consolidated financial statements, the financial statements of Banco Santander and of substantially all the Group companies have not been approved yet by their shareholders at the respective annual general meetings. However, Banco Santander board of directors considers that the aforementioned financial statements will be approved without any significant changes.

Appendix VII includes the list of agents that assist Banco Santander on the performance of its business activities in Spain.

b) Basis of presentation of the financial statements (annual accounts)

Banco Santander financial statements for the year ended 2022 have been formulated by Banco Santander's directors (at the Board of Directors meeting on February 27, 2023) in accordance with Bank of Spain Circular 4/2017 and subsequent amendments, as well as the commercial regulations applicable to the Bank. Accounting principles, policies and measurement criteria are applied by the bank as set forth in note 2, in order to faithfully represent Banco Santander's equity and financial position as of 31 December 2022 and 2021, results of its operations, recognized revenue and expense, changes in total equity and cash flows pertaining to financial year 2022 and 2021. These annual accounts have been prepared using the accounting records maintained by Banco Santander.

The notes to the financial statements contain additional information to that presented in the balance sheet, income statement, statement of recognised income and expense, statement of changes in total equity and statement of cash flows. The notes provide, in a clear, relevant, reliable and comparable manner, narrative descriptions and breakdowns of these statements.

The figures of the annual accounts are presented in millions of euros unless another alternative monetary unit is indicated, rounded to the nearest million unit.

Adoption of new standards and related interpretations

The following is a summary of the main Bank of Spain Circulars issued that became applicable to Banco Santander in financial year 2022:

Bank of Spain Circular 2/2022, of March 15, on rules for the submission to the Bank of Spain of payment statistics by payment service providers and payment system operators.

This circular determines the form and periodicity with which payment service providers must provide Bank of Spain with the statistical data on fraud related to different means of payment referred to in Article 67, paragraph 4, of Royal Decree-Law 19/2018. Because the statistical data on fraud, related to the different means of payment, is substantially aligned with part of the statistical information specified in Regulation (EU) 1409/2013, payment service providers shall provide such data to the Bank of Spain by sharing this statistical

information that matches with the terms and assumptions specified on this regulation and aligned with the rules on this circular.

However, in cases where a parent company consolidates, in its statistical information on fraudulent payment transactions, the transactions of its subsidiaries that are payment service providers pursuant to Annex I, Part 1.3 of Regulation (EU) 1409/2013, such parent and subsidiaries shall also submit, on an individual basis, their statistical data on fraud related to different means of payment, in compliance with Article 67.4 of Royal Decree-Law 19/2018 and in accordance with the rules set forth in Circular 2/2022 itself.

The application of the circular has not had a significant effect on the Bank's annual accounts.

Circular 3/2022, of March 30, of the Bank of Spain, amending Circular 2/2016, of February 2, to credit institutions, on supervision and solvency; Circular 2/2014, of January 31, to credit institutions, on the exercise of various regulatory options contained in Regulation (EU) No. 575/2013, of the European Parliament and of the Council, of June 2013, on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 675/2013, of the European Parliament and of the Council, of June 2013, on prudential requirements for credit institutions and investment firms. No. 575/2013, of the European Parliament and of the Council, of 26 June 2013, on prudential requirements for credit institutions and investment firms, and amending Regulation (EU) No. 648/2012; and Circular 5/2012, of 27 June, to credit institutions and payment service providers, on transparency of banking services and responsibility in the granting of loans.

The amendments to Circular 2/2016, dated February 2, affect rules in its nine chapters, incorporate an additional provision, eliminate two transitory provisions, modify three annexes and eliminate another.

In Standard 1, Chapter 1 on definitions and scope of application, the definition of delegation has been added, aligned with the European Banking Authority's guidelines on outsourcing, and the equivalence of the concept of delegation with that of outsourcing is also clarified.

In Standard 2, on scope of application, paragraph 1, a clarification is introduced to take into account that the supervisory requirements or powers apply on a consolidated or sub-consolidated basis to financial holding companies and mixed financial holding companies approved in accordance with Article 15 bis of Law 10/2014.

Section 4, on suitability, clarifies that the standard is applicable to all financial holding companies and mixed financial holding companies, and not only to dominant companies.

On section 5, the scope of application of the remuneration section is modified to take into account the exceptions established in sections 4 and 5 of article 32 of Law 10/2014, as well as the discretion for the Bank of Spain established in section 6 of the same article.

Section 6, on delegation of the provision of services or the exercise of functions, the scope of application has been revised to adjust it to the amendments made to Article 109 of the CRD and Article 43.4 of Royal Decree 84/2015, which establish the scope of application of the internal governance systems, procedures and mechanisms of the entities.

And, on section 7, the scope of application of the capital self-assessment has been modified to include some cases that were not contemplated and that have arisen from supervisory experience.

On section 4, on branches and provision of services without a branch in Spain by credit institutions headquartered in non-EU Member States, the empowerment regarding additional information that the Bank of Spain may request from branches of credit institutions headquartered in non-EU Member States has been exercised, and the content and terminology of the rule regarding the provision of services without a branch in Spain has been aligned with Royal Decree 84/2015, of February 13.

On section 2, on the exercise by the Bank of Spain of permanent regulatory options provided for in Regulation (EU) No. 575/2013, the terminology relating to the classification of exposures to the Administration has been modified in order to clarify that public health foundations may receive the same risk weighting as exposures to the General State Administration.

Finally, on section 3, on capital buffers, has been amended to introduce the changes incorporated in CRD V, including the inclusion of capital requirements that cannot be covered by capital intended to meet the combined capital buffer requirement.

The application of the circular has not had a significant effect on the Bank's annual accounts.

c) Use of critical estimates

The results and the determination of equity are sensitive to the accounting policies, measurement bases and estimates used by the directors of Banco Santander in preparing the financial statements.

The main accounting policies and measurement bases are set forth in note 2.

In the financial statements estimates were occasionally made by the senior management of Banco Santander in order to quantify certain of the assets, liabilities, income, expenses and obligations reported herein. These estimates, which were made on the basis of the best information available, relate basically to the following:

- The impairment losses on certain assets: it applies to financial assets at fair value through other comprehensive income, financial assets at amortised cost, non-current assets held for sale, investments, tangible assets and intangible assets (see notes 6, 7, 10, 12, 13, 15, 16 and 49)-.
- The assumptions used in the actuarial calculation of the post-employment benefit liabilities and commitments and other obligations (see note 23).
- The useful life of the tangible and intangible assets (see notes 15 and 16).
- Assessment of the impairment of investments in group, joint venture and associated entities (see note 13).
- The measurement of goodwill (see note 16).
- The calculation of provisions and the consideration of contingent liabilities (see note 23).
- The fair value of certain unquoted assets and liabilities (see notes 6, 7, 8, 9, 10, 11, 18, 19 and 20).
- The recoverability of deferred tax assets (see note 24).
- The fair value of the identifiable assets acquired and the liabilities assumed in business combinations (see note 3).

To update the previous estimates, the Bank's management has taken into account the current macroeconomic scenario resulting from the Ukrainian war, as well as the growing level of inflation and the difficulties in the supply chains, which is having a certain impact on the economic evolution and is being closely monitored, and which generates uncertainty in the Group's estimates. For this reason, the Management of the Group has carried out an evaluation of the current situation in accordance with the best information available to date, developing in the notes the main estimates made and the potential impacts of the Ukrainian war and the macroeconomic situation on them during the period ended December 31, 2022 (see note 13 and 49).

Although these estimates have been made on the basis of the best information available at the end of the year 2022, and considering information updated at the date of preparation of these annual accounts, it is possible that events that may take place in the future may make it necessary to modify them (upwards or downwards) in the coming years, which would be done, if appropriate, in a prospective manner, recognising the effects of the change in estimate in the corresponding income statement.

d) Comparative information

The information contained in the 2022 annual accounts for the 2021 financial year is presented, solely and exclusively, for comparison with the information relating to 2022.

e) Capital management

i. Regulatory and economic capital

Credit institutions must meet a number of minimum capital and liquidity requirements. These minimum requirements are governed by the European Capital Requirements Regulation (hereinafter CRR) and the Capital Requirements Directive (hereinafter CRD). In June 2019, these regulations were significantly amended.

As the Directives need to be transposed into the legal systems of the different Member States in order to be applicable, in the case of Spain, Royal Legislative Decree 7/2021 and Royal Decree 970/2021 were published for this purpose in 2021. In 2022, the transposition of the CRD into Spanish law has been completed with the publication of Bank of Spain Circular 3/2022, which amends Circular 2/2016, on supervision and solvency; Circular 2/2014, on the exercise of various regulatory options of the CRR and Circular 5/2012, addressed to credit institutions and payment service providers, on transparency of banking services and responsibility in the granting of loans.

The CRD introduced important modifications such as Pillar 2G regulation ('P2 Guidance' supervisory recommendation on Pillar 2 requirements). On 27 October 2021, the European Commission published the draft review of the European banking legislation: CRR and CRD.

This review completes the implementation of the Basel III reform, which was agreed at the end of 2017 and aims to reduce the variability of risk-weighted assets and improve comparability between banks.

Progress was made in 2022 on discussions about the new texts and the final proposal is expected to be approved in 2023.

The banking package consists of the following elements: 1) Implementation of the final Basel III reforms, 2) Contribution to sustainability and green transition and 3) Stronger supervision: ensuring sound management of EU banks and better protection of financial stability.

The first element is reflected in the Commission's proposal to amend the text of the CRR. This proposal contains changes concerning, among other things, key risk factors, standardised credit risk, internal models, the output floor and operational risk.

The second element, relating to the contribution to sustainability and green transition, is reflected in the fact that the legislative proposals continue to incorporate ESG (environmental, social and governance) factors into the various areas of prudential regulation: governance, supervision, risk management, reporting obligations to competent authorities and disclosure requirements, among other topics. In this regard, it is important to note the Commission's mandate to the European Banking Authority (EBA) to assess whether specific prudential treatment is required for environmental and social risks. In line with this mandate, in 2022, the EBA issued the first consultation on the role of environmental risks within the prudential framework. Based on the feedback received in said consultation, and depending on the final wording of the CRR/CRD, the EBA shall publish a report on the matter.

Finally, the third element, which refers to stronger supervision and protection of financial stability, is expressed in a series of provisions concerning: fit-and-proper requirements, the extension of the scope by revising certain definitions that would cover groups managed by fintechs, and the establishment of third-country branches in the EU in order to achieve greater harmonisation of rules and better supervision of this type of entity.

The European Council's proposal on CRR and CRD was published on 8 November 2022. During 2023, it is expected that the Parliament makes its position text public, which will be followed by the beginning of the trialogues process that will eventually result in the final versions of the regulations.

The new CRR/CRD regulations are expected to enter into force from 1 January 2025.

With regard to the resolution framework, institutions must have an adequate funding structure to ensure that, in the event of financial distress, the institution has sufficient liabilities to absorb losses in order to recover its position or be resolved, while ensuring the protection of depositors and financial stability. The entities must therefore meet several minimum loss-absorbing requirements, named Total Loss-Absorbing Capacity (TLAC) and Minimum Requirement for own funds and Eligible Liabilities (MREL), which are regulated by the CRR and by the Bank Recovery and Resolution Directive (BRRD).

In June 2019, the CRR introduced the minimum TLAC requirement, which only applies to global systemically important banks (G-SIBs). This requirement involves two metrics, the first is a minimum requirement for own funds and eligible liabilities in terms of a percentage of the total risk exposure amount (TREA), set at 18% from 1 January 2022 once the transition period ended. The second is a metric to set a minimum requirement for own funds and eligible liabilities in terms of a percentage of the average exposure to the Basel III Tier I leverage ratio of 6.75% from 1 January 2022 once the transition period ended.

For large banks (defined as banks with total assets of more than EUR 100 billion) or banks deemed to be systemically important by the resolution authority, the BRRD sets a minimum subordination requirement that will be higher between a 13.5% of risk-weighted assets and 5% of the leverage ratio. For the remaining institutions, the subordination requirement is set by the resolution authority on a case-by-case basis.

On 25 October 2022, the regulation on prudential treatment for global systemically important banks was published. This modifies both the CRR and the BRRD as regards prudential treatment of global systemically important banks (G-SIBs) with a multiple point of entry (MPE) resolution strategy, as well as methodologies for the indirect subscription of instruments (Daisy Chains) eligible for meeting the minimum requirement for own funds and eligible liabilities.

This Regulation, known as the 'Quick Fix', covers the following objectives:

- Inclusion in the BRRD and CRR of references to third countries that allow adjustment of the deduction applied for the TLAC holding instruments issued by subsidiaries in third countries based on excess TLAC/MREL at the said subsidiaries, as well as the adjustment where the sum of the requirements for own funds and eligible liabilities of G-SIBs under an MPE strategy exceed the theoretical requirements for the same group under a single point of entry (SPE) strategy. In other words, the latter adjustment is based on a comparison between the two possible resolution strategies.

For subsidiaries in jurisdictions without a resolution regime in place, the Regulation provides for a transitional period until 31 December 2024. During this transitional period the entities may adjust the deductions based on excess above capital requirements in subsidiaries in third countries, if they meet certain requirements.

- Inclusion of a deduction scheme for MREL instrument holdings through entities of the same resolution group other than the resolution entity. This Regulation sets a deduction for the intermediate entity (Daisy Chains) that buy instruments issued by another entity as a result of this the deduction. The intermediate entity is obligated to issue the same amount that is repurchasing to the Resolution Entity, transferring internal MREL needs to the Resolution Entity, which will finally cover the required amount with external MREL.

This Regulation is applicable since 14 November 2022, except for the provisions relating to Daisy Chains, which apply since 1 January 2024.

Finally, Deposit Guarantee Schemes (DGSs) are regulated by the Deposit Guarantee Schemes Directive (DSGD), which has not undergone any significant changes since its publication in 2014. It aims to harmonise the deposit guarantee schemes of the Member States, thus ensuring stability and balance in different countries. It creates an appropriate framework for depositors to have better access to DGSs than was the case before the publication of this Directive through clear coverage, shorter repayment periods, better information and robust funding requirements. This Directive is transposed into Spanish law by Royal Decree 2606/1996, with its amendments set forth in Royal Decree 1041/2021.

To ensure that depositors' funds are secured, the DGSs collect funds available through contributions that must be made by their members at least once a year; a target level of 0.8% of the guaranteed deposits total must be met by 3 July 2024. These annual collections are set depending on the guaranteed deposits total and the degree of risk faced by the entities involved in the DGS. The method for calculating contributions is stated in the EBA Guidelines (EBA/GL/2015/10). A review and evaluation process was opened for these Guidelines by the EBA in 2022 (EBA/CP/2022/10).

Additionally, recent market developments have caused substantial increases in energy prices, which have consequently generated increases in the margins required by central counterparty entities (CCPs) to cover exposures. In response to this issue, Delegated Regulation (EU) 2022/2311 was published in November this year, amending Delegated Regulation (EU) 153/2013, which sets forth regulatory technical standards on the requirements that CCPs must meet. The new Regulation broadens the catalogue of guarantees that CCPs can accept as eligible collateral until November 2023.

At 31 December 2022, the Bank met the minimum capital requirements established by current legislation (see note 49.d).

- ii. Plan for the roll-out of advanced approaches and authorisation from the supervisory authorities

Banco Santander following the Group's policies, remains committed to adopting the Basel II advanced internal ratings-based (AIRB) approach for its banks, increasing the amount of exposure managed using internal models. This approach will be applied progressively over the coming years. The commitment to the supervisory authority means adapting the advanced approaches in the Group's core markets.

This objective of covering IRB models in the group should be seen in the context of the current supervisory focus on the robustness and adequacy of existing models, as well as the simplification strategy recently agreed with ECB.

Grupo Santander has supervisory approval to use advanced approaches for calculating regulatory capital for credit risk for Banco Santander and the main subsidiaries in Spain, the United Kingdom and Portugal, and for some portfolios in Germany, Mexico, Brazil, Chile, Nordic countries (Sweden, Finland and Norway), France and the United States.

f) Environmental impact

In view of the business activities carried on by the Group entities, and therefore the Bank, do not have any environmental liability, expenses, assets, provisions or contingencies that might be material with respect to its financial position or results (see note 49.a.).

g) Customer Care Service Annual Report

As required by the Article 17 of Ministry of Economy Order ECO/734/2004, of 11 March, on the services and departments of Customer Service and the Customer Ombudsmen of Financial Institutions, the annual report presented by the Head of the department to the board meeting held on March 2023 is summarised in the directors' report.

h) Deposit Guarantee Fund and Resolution Fund

i. Deposit Guarantee Fund

Banco Santander participates in the Deposit Guarantee Fund (DGF). The annual contribution to be made by the entities to this fund, established by Royal Decree - Law 16/2011 of October 14, by which the DGF is created in accordance with the wording given by the Tenth Final Disposition of Law 11/2015 of June 18 on Recovery and Resolution of credit institutions and investment services companies (in force since June 20, 2015), is determined by the Management Committee of the DGF and is established based on the guaranteed deposits of each entity and their risk profile. The annual contribution to be made by the entities to this fund is determined by the Management Committee of the FGD, and consists of the contribution based on the guaranteed deposits of each entity corrected for their risk profile, which includes the

phase of the economic cycle and the impact of pro-cyclical contributions, according to section 3 of article 6 of the Royal Decree-Law 16/2011.

The purpose of the FGD is to guarantee deposits with credit institutions up to the limit established in the mentioned Royal Decree-Law. The expense incurred by the contributions accrued to this organism in the year 2022 has amounted to EUR 258 million (EUR 225 million in the year 2021), which are recorded under 'Other operating expenses' in the profit and loss account attached (see note 41).

ii. National Resolution Fund

Law 11/2015 regulates the creation of the National Resolution Fund, whose financial resources should reach, by 31 December 2024, at least 1% of the amount of secured deposits, through contributions from credit institutions and investment firms established in Spain. The details of the calculation of contributions to this Fund is regulated by Commission Delegated Regulation (EU) 2015/63 of 21 October 2014 and is calculated by the Orderly Banking Resolution Fund, on the basis of the information provided by each entity.

iii. Single Resolution Fund

On January 1, 2016, the Single Resolution Fund (SRF), which was implemented by Regulation (EU) No. 806/2014 of the European Parliament and of the Council, became operational. The rules governing the banking union provide that banks will pay contributions to the SRF over eight years.

The Single Resolution Board (SRB) is responsible for calculating the contributions to be made by credit institutions and investment firms to the SRF. These contributions are based, as of fiscal year 2016, on: (a) a flat-rate contribution (or base annual contribution), pro rata with respect to the total liabilities, excluding own funds, guaranteed deposits of all institutions authorized in the territory of the participating member states; and (b) a risk-adjusted contribution, which will be based on the criteria set out in Article 103(7) of Directive 2014/59/EU, taking into account the principle of proportionality, without creating distortions between structures of the banking sector of the member states. The amount of this contribution will accrue from the 2016 financial year, on an annual basis.

The expenditure incurred by the contribution made to the National Fund and the Single Resolution Fund amounted to EUR 314 million in 2022 (EUR 307 million in the year 2021), which are recognised under 'Other operating expenses' in the accompanying income statement (see note 41).

Likewise, in 2022 Banco Santander has recognized a contingent liability in favor of the Single Resolution Board (SRB) for EUR 54 million, in addition to the expense that appears in the income statement, as an Irrevocable Payment Commitment (IPC). This

commitment is guaranteed by constituting a cash deposit of the same amount, delivered as a guarantee that has been recorded in the Balance Sheet Assets.

i) Merger by absorption

Banco Santander has not entered into merger by absorption agreements during the financial year 2022. The mergers by absorption carried out during the financial year 2021 are detailed below:

i. Merger by absorption between Banco Santander, S.A. (as absorbing company) and Popular Spain Holding de Inversiones, S.L.U., Santander Investment I, S.A.U. and Administración de Bancos Latinoamericanos Santander, S.L. (as absorbed companies).

On June 29, 2021, the members of the respective boards of directors of Banco Santander, S.A. (as absorbing company) and Popular Spain Holding de Inversiones, S.L.U., Santander Investment I, S.A.U. and Administración de Latin American Banks Santander, S.L. (as absorbed companies) drafted and signed the common project for the merger by absorption.

Under Articles 49 and 51 of Law 3/2009, of April 3, on Structural Modifications of Commercial Companies ("LME"), it was not necessary for this merger to be approved by the general shareholders' meetings (or, as the case may be, by the sole shareholder) of the absorbed companies, since Banco Santander, S.A. had a direct holding in the case of Popular Spain Holding de Inversiones, S.L.U. and Santander Investment I, S.A.U., and in the case of Administración de Bancos Latinoamericanos Santander, S.L., partly directly and partly indirectly through another of the absorbed companies (Santander Investment I, S.A.U.); nor was approval by the shareholders' meeting of Banco Santander, S.A. necessary, since shareholders representing at least 1% of the share capital did not require it, in accordance with Article 51.1 of the LME. Consequently, the board of directors of Banco Santander, S.A. on June 29, 2021 approved both the common merger plan and the merger that is the object of the merger.

Once the mandatory authorization by the Minister of Economic Affairs and Digital Transformation was obtained (twelfth additional provision of Law 10/2014, of June 26, on the regulation, supervision and solvency of credit institutions), on 16 December 2021, the corresponding merger deed was executed and, having been registered in the Commercial Registry of Cantabria, the dissolution without liquidation of Popular Spain Holding de Inversiones, S.L.U. took place with effect from 20 December 2021, Santander Investment I, S.A.U. and Administración de Bancos Latinoamericanos Santander, S.L. and the transfer mass, on a universal basis, of all their respective assets and liabilities to Banco Santander, S.A., which acquired them by universal succession and without solution of continuity. It should be noted that the merger, for accounting purposes, was recorded by Banco Santander, S.A. in 2021.

Since the absorbed companies were fully owned by Banco Santander, S.A., in the case of Popular Spain Holding de Inversiones, S.L.U. and Santander Investment I, S.A.U. and directly and indirectly in the case of Administración de Bancos Latinoamericanos Santander, S.L., in accordance with article 49.1, in relation to article 26, of the LME, the Bank did not increase capital. Once the merger became effective on December 20, 2021, all the shares and participations of the absorbed companies were fully amortized, extinguished and cancelled.

The merger balance sheets were considered to be those included in the financial statements for the year ended December 31, 2020, prepared by the administrative bodies of each of the companies participating in the merger. The merger balance sheets of Banco Santander, S.A., Popular Spain Holding de Inversiones, S.L.U., Santander Investment I, S.A.U. and Administración de Bancos Latinoamericanos Santander, S.L. were duly verified by their respective auditors.

In accordance with the provisions of the applicable accounting regulations, for accounting purposes, 1 January 2021 was set as the date from which the transactions of the absorbed companies were to be considered as carried out by Banco Santander, S.A. for the merger.

Likewise, the transaction constitutes a merger of those regulated in article 76.1.c) of Law 27/2014, of November 27, on Corporate Income Tax ("LIS"). Pursuant to Article 89.1 of the LIS, the merger was subject to the tax regime established in Chapter VII of Title VII and in the second additional provision of the LIS, as well as in Article 45, paragraph I.B.10 of the Consolidated Text of the Law on Transfer Tax and Stamp Duty, approved by Royal Legislative Decree 1/1993, of September 24.

The following are the balance sheets of companies absorbed as of 31 December 2020:

POPULAR SPAIN HOLDING DE INVERSIONES, S.L.U.

Balance as of December 31, 2020			
EUR thousands			
ASSETS	2020	EQUITY AND LIABILITIES	2020
NON-CURRENT ASSETS	90,882	EQUITY	500,854
Deferred tax asset	90,882	SHAREHOLDERS EQUITY	500,854
		Capital	100
		Share premium	726,127
		Reserves	40
		Loss for the period	(225,413)
CURRENT ASSETS	410,154	CURRENT LIABILITIES	182
Clients, Group companies and Associates	60,095	Commercial creditors and other accounts payable	182
Other credits with public administrations	44		
Cash and other equivalent liquid assets	350,015		
TOTAL ASSETS	501,036	TOTAL EQUITY AND LIABILITIES	501,036

SANTANDER INVESTMENT I, S.A.U.

Balance as of December 31, 2020			
EUR thousands			
ASSETS	2020	EQUITY AND LIABILITIES	2020
NON-CURRENT ASSETS	1,857,418	EQUITY	217,897
Long term investments in Group companies and Associates	1,857,417	SHAREHOLDERS EQUITY	217,897
Other long term financial assets	1	Capital	601
		Reserves	228,318
		Loss from previous periods	(11,022)
		NON-CURRENT LIABILITIES	1,640,630
		Long term debts to Group companies and Associates	1,629,500
		Deferred tax liabilities	11,130
CURRENT ASSETS	2,682	CURRENT LIABILITIES	1,573
Long-term investments in Group companies and Associates. Loans to companies	4	Short term debts to Group companies and Associates	1,548
Cash and other equivalent liquid assets	2,678	Commercial creditors and other accounts payable	25
TOTAL ASSETS	1,860,100	TOTAL EQUITY AND LIABILITIES	1,860,100

ADMINISTRACIÓN DE BANCOS LATINOAMERICANOS SANTANDER, S.L.

Balance as of December 31, 2020

EUR thousands

ASSETS	2020	EQUITY AND LIABILITIES	2020
NON-CURRENT ASSETS	2,513,961	EQUITY	2,537,251
Long-term equity investments in Group companies and Associates	569,949	SHAREHOLDERS EQUITY	2,537,251
Long-term debt investments in Group companies and Associates	1,944,003	Capital	394,685
Other long-term financial assets	8	Reserves	2,176,029
Long-term debt investments in third parties	1	Negative results from previous exercises	(24,034)
		Loss of the period	(9,429)
		NON-CURRENT LIABILITIES	22,931
		Deferred tax liabilities	22,931
CURRENT ASSETS	46,671	CURRENT LIABILITIES	450
Commercial debts receivable and others accounts bills	2	Short term debts	19
Short-term debt investments in Group companies and Associates	843	Debts with Group companies and Associates in the short term	408
Cash and cash equivalents	45,826	Commercial debts and other accounts payable	23
TOTAL ASSETS	2,560,632	TOTAL EQUITY AND LIABILITIES	2,560,632

In accordance with the provisions of the applicable regulations, because of the accounting record of the merger by absorption carried out by the Bank in 2021, an increase of EUR 1,037 million in the Bank's voluntary reserves in that year was recorded as a result of the decrease on the participation of the absorbed companies (see note 29).

j) Events after the reporting period

On 28 December 2022 the Law establishing a new temporary levy on credit institutions and financial credit institutions was published in Spain (see note 24 for additional information). On 1 January 2023, the tax group in Spain, whose parent entity is Banco Santander, has recorded an estimated amount of EUR 225 million in accordance with IFRIC 21 due to this new levy.

In accordance with the agreement reached by the April 2022 general shareholders' meeting, on 1 February 2023 the board of directors approved a capital reduction, subject to corresponding regulatory authorization from the ECB, of EUR 170,203,286 through the redemption of 340,406,572 shares, representing 2.03% of the capital, acquired in the first share buyback program.

2. Accounting policies

The following accounting principles, policies and measurement criteria have been applied in the preparation of the financial statements:

a) Foreign currency transactions

The functional currency of Banco Santander is the euro. Therefore, all balances and transactions denominated in currencies other than the euro are deemed to be denominated in foreign currency.

The balances in the financial statements whose functional currency is not the euro are translated to euros as follows:

- Assets and liabilities, at the closing rates.
- Income and expenses, at the average exchange rates for the year.
- Equity items, at the historical exchange rates.

In general, balances denominated in foreign currencies, including those branches in countries outside the Monetary Union, have been converted to euros using the official average exchange rates of the Spanish spot currency market (through the US dollar's quotation on local markets, for non-monetary currencies listed on the Spanish market) at the end of each fiscal year.

The exchange differences arising on the translation of foreign currency balances to the functional currency are generally recognised at their net amount under 'Exchange differences, net' in the income statement, except for exchange differences arising on financial instruments at fair value through profit or loss, which are recognised in the income statement without distinguishing them from other changes in fair value, and for exchange differences arising on non-monetary items measured at fair value through equity, which are recognised under 'Other comprehensive income-Items that may be reclassified to profit or loss-Exchange differences' except for exchange differences on equity instruments, where the option to irrevocably elect to be measured at fair value through changes in accumulated other comprehensive income, which are recognised in accumulated 'Other Comprehensive Income - Items not to be reclassified to profit or loss - Changes in fair value of equity instruments measured at fair value' through other comprehensive income (see note 25).

b) Investments in group entities, joint ventures and associates

Group entities are those over which the Bank has the capacity to exercise control; capacity which is generally but not exclusively manifested by the direct or indirect ownership of at least 50% of the voting rights of the investees or, even if this percentage is lower or zero, if, as in the case of agreements with their shareholders, the Bank is granted such control.

Control is understood to be the power to direct the financial and operating policies, by law, by statute or by agreement, of an entity in order to obtain benefits from its activities.

Joint ventures are deemed to be entities that are not subsidiaries but which are jointly controlled by two or more unrelated entities. This is evidenced by contractual arrangements whereby two or more parties have interests in entities so that decisions about the relevant activities require the unanimous consent of all the parties sharing control.

Associates are entities over which Banco Santander is in a position to exercise significant influence, but not control or joint control. It is presumed that Banco Santander exercises significant influence if it holds 20% or more of the voting power of the investee.

The shareholdings in group, multi-group and associated entities, are presented on the balance sheet at their net acquisition cost of any impairments that, where relevant, those shares may have suffered.

Where there is evidence of impairment of these shares, the amount of such deterioration is equivalent to the difference between their recoverable amount and their book value. Impairment losses are recorded under the heading 'Impairment or reversal of impairment of investments in joint ventures or associates' in the profit and loss account.

Appendices I and II contain significant information on these companies. In addition, note 13 provides information on the most significant acquisitions and disposals in 2022 and 2021.

c) Definitions and classification of financial instruments

i. Definitions

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

An equity instrument is a contract that evidences a residual interest in the assets of the issuing entity after deducting all of its liabilities.

A financial derivative is a financial instrument whose value changes in response to the change in an observable market variable (such as an interest rate, foreign exchange rate, financial instrument price, market index or credit rating), whose initial investment is very small compared with other financial instruments with a similar response to changes in market factors, and which is generally settled at a future date.

Hybrid financial instruments are contracts that simultaneously include a non-derivative host contract together with a derivative, known as an embedded derivative, that is not separately transferable and has the effect that some of the cash flows of the hybrid contract vary in a way similar to a stand-alone derivative.

Compound financial instruments are contracts that simultaneously create for their issuer a financial liability and an own equity instrument (such as convertible bonds, which entitle their holders to convert them into equity instruments of the issuer).

The preference shares contingently convertible into ordinary shares eligible as Additional Tier 1 capital (CCPSs) -perpetual shares, which may be repurchased by the issuer in certain circumstances, the interest on which is discretionary, and would convert into variable number of newly issued ordinary shares if the capital ratio of the Bank or its consolidated group falls below a given percentage (trigger event), as those two terms are defined in the related issue prospectuses are recognised for accounting purposes by the Bank as compound instruments. The liability component reflects the issuer's obligation to deliver a variable number of shares and the equity component reflects the issuer's discretion in relation to the payment of the related coupons. In order to effect the initial allocation, Banco Santander estimates the fair value of the liability as the amount that would have to be delivered if the trigger event were to occur immediately and, accordingly, the equity component, calculated as the residual amount, is zero. In view of the aforementioned discretionary nature of the payment of the coupons, they are deducted directly from equity.

Capital perpetual preference shares (CPPS), with the possibility of purchase by the issuer in certain circumstances, whose remuneration is discretionary, and which will be amortised permanently, totally or partially, in the event that the Bank or its consolidated group submits a capital ratio lesser than a certain percentage (trigger event), as defined in the corresponding prospectuses, are accounted for by Banco Santander as equity instruments.

The following transactions are not treated for accounting purposes as financial instruments:

- Investments in associates and joint ventures (see note 13).
- Rights and obligations under employee benefit plans (see note 23).
- Contracts and obligations relating to employee remuneration based on own equity instruments (see note 30).

ii. Classification of financial assets for measurement purposes

Financial assets are initially classified into the various categories used for management and measurement purposes, unless they have to be presented as 'Non-current assets held for sale' or they relate to 'Cash, cash balances at central banks and other deposits on demand', 'Changes in the fair value of hedged items in portfolio hedges of interest rate risk (asset side)', 'Hedging derivatives and Investments', which are reported separately.

Classification of financial instruments: the classification criteria for financial assets depends on the business model for their management and the characteristics of their contractual flows.

Banco Santander's business models refer to the way in which it manages its financial assets to generate cash flows. In defining these models, the Bank takes into account the following factors:

- How key management staff are assessed and reported on the performance of the business model and the financial assets held in the business model.
- The risks that affect the performance of the business model (and the financial assets held in the business model) and, specifically, the way in which these risks are managed.
- How business managers are remunerated.
- The frequency and volume of sales in previous years, as well as expectations of future sales.

The analysis of the characteristics of the contractual flows of financial assets requires an assessment of the congruence of these flows with a basic loan agreement. Banco Santander determines if the contractual cash flows of its financial assets that are only principal and interest payments on the outstanding principal amount at the beginning of the transaction. This analysis takes into consideration four factors (performance, clauses, contractually linked products and currencies). Furthermore, among the most significant judgements used by Banco Santander in carrying out this analysis, the following ones are included:

- The return on the financial asset, in particular in cases of periodic interest rate adjustments where the term of the reference rate does not coincide with the frequency of the adjustment. In these cases, an assessment is made to determine whether or not the contractual cash flows differ significantly from the flows without this change in the time value of money, establishing a tolerance level of 5%.

- The contractual clauses that may modify the cash flows of the financial asset, for which the structure of the cash flows before and after the activation of such clauses is analysed.
- Financial assets whose cash flows have different priority for payment due to a contractual link to underlying assets (e.g. securitisations) require a look-through analysis by the Bank so as to review that both the financial asset and the underlying assets are only principal and interest payments and that the exposure to credit risk of the set of underlying assets belonging to the tranche analysed is less than or equal to the exposure to credit risk of the set of underlying assets of the instrument.

Depending on these factors, the asset can be measured at amortised cost, at fair value with changes in other comprehensive income, or at fair value with changes through profit and loss. Bank of Spain Circular 4/2017 also establishes an option to designate an instrument at fair value with changes in profit or loss, when doing so eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'accounting asymmetry') that would otherwise arise from measuring assets or liabilities or recognising gains and losses on different bases.

Banco Santander uses the following criteria for the classification of financial debt instruments:

- Amortised cost: financial instruments under a business model whose objective is to collect principal and interest flows, over which there is no significant unjustified sales and fair value is not a key element in the management of these assets and contractual conditions they give rise to cash flows on specific dates, which are only payments of principal and interest on the outstanding principal amount. In this sense, unjustified sales are considered to be those other than those related to an increase in the credit risk of the asset, unanticipated funding needs (stress case scenarios). Additionally, the characteristics of its contractual flows represent substantially a 'basic financing agreement'.
- Fair value with changes in other comprehensive income: financial instruments held in a business model whose objective is to collect principal and interest cash flows and the sale of these assets, where fair value is a key factor in their management. Additionally, the contractual cash flow characteristics substantially represent a 'basic financing agreement'.

- Fair value with changes in profit or loss: financial instruments included in a business model whose objective is not obtained through the above mentioned models, where fair value is a key factor in managing of these assets, and financial instruments whose contractual cash flow characteristics do not substantially represent a 'basic financing agreement'. In this section it can be enclosed the portfolios classified under 'Financial assets held for trading', 'Non-trading financial assets mandatorily at fair value through profit or loss' and 'Financial assets at fair value through profit or loss'. In this regard, most of the financial assets presented in the category of 'Financial assets designated at value reasonable with change in results' are instruments financial services that, not being part of the portfolio of negotiation, are contracted jointly with other financial instruments that are recorded in the category of 'held for trading', and that by both are recorded at fair value with changes in results, so your record in any other category would produce accounting asymmetries.

Equity instruments will be classified at fair value under Bank of Spain Circular 4/2017 with changes in profit or loss, unless the Bank, decides, for non-trading assets, to classify them at fair value with changes in other comprehensive income (irrevocably) at initial recognition.

iii. Classification of financial assets for presentation purposes

Financial assets are classified by nature into the following items in the balance sheet:

- Cash, cash balances at Central Banks and other deposits on demand: cash balances and balances receivable on demand relating to deposits with central banks and credit institutions.
- Loans and advances: includes the debit balances of all credit and loans granted by the Bank, other than those represented by securities, as well as finance lease receivables and other debit balances of a financial nature in favour of the Bank, such as cheques drawn on credit institutions, balances receivable from clearing houses and settlement agencies for transactions on the stock exchange and organised markets, bonds given in cash, capital calls, fees and commissions receivable for financial guarantees and debit balances arising from transactions not originating in banking transactions and services, such as the collection of rentals and similar items. They are classified, on the basis of the institutional sector to which the debtor belongs, into:
 - Central banks: credit of any nature, including deposits and money market transactions received from the Bank of Spain or other central banks.

- Credit institutions: credit of any nature, including deposits and money market transactions, in the name of credit institutions.
- Customers: includes the remaining credit, including money market transactions through central counterparties.
- Debt securities: bonds and other securities that represent a debt for their issuer, that generate an interest return, and that are in the form of certificates or book entries.
- Equity instruments: financial instruments issued by other entities, such as shares, which have the nature of equity instruments for the issuer, other than investments in subsidiaries, joint ventures or associates. Investment fund units are included in this item.
- Derivatives: includes the fair value in favour of the Bank of derivatives which do not form part of hedge accounting, including embedded derivatives separated from hybrid financial instruments.
- Changes in the fair value of hedged items in portfolio hedges of interest rate risk: this item is the balancing entry for the amounts credited to the income statement in respect of the measurement of the portfolios of financial instruments which are effectively hedged against interest rate risk through fair value hedging derivatives.
- Hedging derivatives: Includes the fair value in favour of the Bank derivatives, including embedded derivatives separated from hybrid financial instruments, designated as hedging instruments in hedge accounting.

iv. Classification of financial liabilities for measurement purposes

Financial liabilities are initially classified into the various categories used for management and measurement purposes, unless they have to be presented as 'Liabilities associated with non-current assets held for sale' or they relate to 'Hedging derivatives' or changes in the fair value of hedged items in portfolio hedges of interest rate risk (liability side), which are reported separately.

In most cases, changes in the fair value of financial liabilities designated at fair value through profit or loss, caused by the entity's credit risk, are recognized in other comprehensive income.

Financial liabilities are included for measurement purposes in one of the following categories:

- Financial liabilities held for trading (at fair value through profit or loss): this category includes financial liabilities incurred for the purpose of generating a profit in the near term from fluctuations in their prices, financial derivatives not designated as hedging instruments, and financial liabilities arising from the outright sale of financial assets acquired under reverse repurchase agreements ("reverse repos") or borrowed (short positions).
- Financial liabilities designated at fair value through profit or loss: financial liabilities are included in this category when they provide more relevant information, either because this eliminates or significantly reduces recognition or measurement inconsistencies (accounting mismatches) that would otherwise arise from measuring assets or liabilities or recognising the gains or losses on them on different bases, or because a group of financial liabilities or financial assets and liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided on that basis to the Bank's key management personnel.

Liabilities may only be included in this category on the date when they are incurred or originated.

- Financial liabilities at amortised cost: financial liabilities, irrespective of their instrumentation and maturity, not included in any of the above-mentioned categories which arise from the ordinary borrowing activities carried on by financial institutions.

v. Classification of financial liabilities for presentation purposes

Financial liabilities are classified by nature into the following items in the consolidated balance sheet:

- Deposits: includes all repayable balances received in cash by the Bank, other than those instrumented as marketable securities and those having the substance of subordinated liabilities (amount of the loans received, which for credit priority purposes are after common creditors), except for the debt instruments. This item also includes cash bonds and cash consignments received the amount of which may be invested without restriction. Deposits are classified on the basis of the creditor's institutional sector into:
 - Central banks: deposits of any nature, including credit received and money market transactions received from the Bank of Spain or other central banks.

- Credit institutions: deposits of any nature, including credit received and money market transactions in the name of credit institutions.
- Customer: includes the remaining deposits, including money market transactions through central counterparties.

During the 2019 financial year, the European Central Bank announced a new program of longer-term financing operations with a specific objective (TLTRO III), which included special conditions, including a reduction in the interest rate applicable between June 2020 and June 2022 subject to compliance with a certain volume of eligible loans.

Banco Santander chose to accrue interest in accordance with the specific periods of adjustment to market rates, so that the interest corresponding to said period (-1%) has been recorded in the income statement from June 2020 to June 2022, having met the computable loan threshold that gave rise to the extra rate on that date.

Subsequently, and as a result of the modifications introduced by the European Central Bank in the conditions of the program, which include changes in its interest rates, the Bank has updated the effective interest rate at which interest accrues on said financial liability, maintaining the criterion adopted in previous years, and considering said modifications a change in the variable interest rate (which affects the EIR) and is applied prospectively.

- Marketable debt securities: includes the amount of bonds and other debt represented by marketable securities, other than those having the substance of subordinated liabilities (amount of the loans received, which for credit priority purposes are after common creditors, and includes the amount of the financial instruments issued by the Bank which, having the legal nature of capital, do not meet the requirements to qualify as equity, such as certain preferred shares issued). This item includes the component that has the consideration of financial liability of the securities issued that are compound financial instruments.
- Derivatives: includes the fair value, with a negative balance for Banco Santander, separated from the host contract, which do not form part of hedge accounting.
- Short positions: includes the amount of financial liabilities arising from the outright sale of financial assets acquired under reverse repurchase agreements or borrowed.
- Other financial liabilities: includes the amount of payment obligations having the nature of financial liabilities not included in other items (includes, among others, the balance of lease liabilities) and liabilities under financial guarantee contracts, unless they have been classified as non-performing.

- Changes in the fair value of hedged items in portfolio hedges of interest rate risk: this item is the balancing entry for the amounts charged to the income statement in respect of the measurement of the portfolios of financial instruments which are effectively hedged against interest rate risk through fair value hedging derivatives.
- Hedging derivatives: includes the fair value of the Bank liability in respect of derivatives, including embedded derivatives separated from hybrid financial instruments, designated as hedging instruments in hedge accounting.

d) Measurement of financial assets and liabilities and recognition of fair value changes

In general, financial assets and liabilities are initially recognised at fair value which, in the absence of evidence to the contrary, is deemed to be the transaction price.

In this regard, Bank of Spain Circular 4/2017 states that regular way purchases or sales of financial assets shall be recognised and derecognised on the trade date or on the settlement date. Banco Santander has opted to make such recognition on the trading date or settlement date, depending on the convention of each of the markets in which the transactions are carried out. For example, in relation to the purchase or sale of debt securities or equity instruments traded in the Spanish market, securities market regulations stipulate their effective transfer at the time of settlement and, therefore, the same time has been established for the accounting record to be made.

The fair value of instruments not measured at fair value through profit and loss is adjusted by transaction costs. Subsequently, and on the occasion of each accounting close, they are valued in accordance with the following criteria:

i. Measurement of financial assets

Financial assets measured at fair value are valued mainly at their fair value without deducting any transaction cost for their sale.

The fair value of a financial instrument on a given date is taken to be the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The most objective and common reference for the fair value of a financial instrument is the price that would be paid for it on an active, transparent and deep market (quoted price or market price). At 31 December 2022, there were no significant investments in quoted financial instruments that had ceased to be recognised at their quoted price because their market could not be deemed to be active.

If there is no market price for a given financial instrument, its fair value is estimated on the basis of the price established in recent transactions involving similar instruments and, in the absence thereof, of valuation techniques commonly used by the international financial community, taking into account the specific features of the instrument to be measured and, particularly, the various types of risk associated with it.

All derivatives are recognised in the balance sheet at fair value from the trade date. If the fair value is positive, they are recognised as an asset and if the fair value is negative, they are recognised as a liability. The fair value on the trade date is deemed, in the absence of evidence to the contrary, to be the transaction price. The changes in the fair value of derivatives from the trade date are recorded in the income statement. Specifically, the fair value of financial derivatives traded in organised markets included in the portfolios of financial assets or liabilities held for trading is deemed to be their daily quoted price and if, for exceptional reasons, the quoted price cannot be determined on a given date, these financial derivatives are measured using methods similar to those used to measure derivatives.

The fair value of derivatives is taken to be the sum of the future cash flows arising from the instrument, discounted to present value at the date of measurement (present value or theoretical close) using valuation techniques commonly used by the financial markets: net present value, option pricing models and other methods.

The amount of debt securities and loans and advances under a business model whose objective is to collect the principal and interest flows are valued at their amortised cost, as long as they comply with the 'SPPI' (Solely Payments of Principal and Interest) test, using the effective interest rate method in their determination. Amortised cost refers to the acquisition cost of a corrected financial asset or liability (more or less, as the case may be) for repayments of principal and the part systematically charged to the income statement of the difference between the initial cost and the corresponding reimbursement value at expiration. In the case of financial assets, the amortised cost includes, in addition, the corrections to their value due to the impairment. In the loans and advances covered in fair value hedging transactions, the changes that occur in their fair value related to the risk or the risks covered in these hedging transactions are recorded.

The effective interest rate is the discount rate that exactly matches the carrying amount of a financial instrument to all its estimated cash flows of all kinds over its remaining life. For fixed rate financial instruments, the effective interest rate coincides with the contractual interest rate established on the acquisition date plus, where applicable, the fees and transaction costs that, because of their nature, form part of their financial return. In the case of floating rate financial instruments, the effective interest rate coincides with the rate of return prevailing in all connections until the next benchmark interest reset date.

Equity instruments and contracts related with these instruments are measured at fair value. However, in certain circumstances the Bank estimates cost value as a suitable estimate of the fair value. This can happen if the recent event available information is not enough to measure the fair value or if there is a broad range of possible measures and the cost value represents the best estimates of fair value within this range.

The amounts at which the financial assets are recognised represent, in all material respects, the Bank's maximum exposure to credit risk at each reporting date. Also Banco Santander has received collateral and other credit enhancements to mitigate its exposure to credit risk, which consist mainly of mortgage guarantees, cash collateral, equity instruments and personal security, assets leased out under finance lease and full-service lease agreements, assets acquired under repurchase agreements, securities loans and credit derivatives.

ii. Measurement of financial liabilities

In general, financial liabilities are measured at amortised cost, as defined above, except for those included under 'Financial liabilities held for trading' and 'Financial liabilities designated at fair value through profit or loss' and financial liabilities designated as hedged items (or hedging instruments) in fair value hedges, which are measured at fair value. The changes in credit risk arising from financial liabilities designated at fair value through profit or loss are recognised in accumulated other comprehensive income, unless they generate or increase an accounting mismatch, in which case changes in the fair value of the financial liability in all respects are recognised in the income statement.

iii. Valuation techniques

The following table summarises the fair values, at the end of each of the years indicated, of the financial assets and liabilities listed below, classified according to the different valuation methodologies used by the Bank to determine their fair value:

EUR million

	2022			2021		
	Published price quotations in active Markets (Level 1)	Internal Models (Level 2 and 3)	Total	Published price quotations in active Markets (Level 1)	Internal Models (Level 2 and 3)	Total
Financial assets held for trading	27,024	76,844	103,868	28,995	57,090	86,085
Non-trading financial assets mandatorily at fair value through profit or loss	514	2,654	3,168	454	1,901	2,355
Financial assets designated at fair value through profit or loss	—	6,641	6,641	—	13,403	13,403
Financial assets at fair value through other comprehensive income	4,615	5,992	10,607	9,857	5,178	15,035
Hedging derivatives (assets)	—	1,450	1,450	—	1,648	1,648
Financial liabilities held for trading	14,762	71,611	86,373	9,404	47,565	56,969
Financial liabilities designated at fair value through profit or loss	—	38,568	38,568	—	12,743	12,743
Hedging derivatives (liabilities)	—	3,955	3,955	—	2,076	2,076

The financial instruments at fair value determined on the basis of published price quotations in active markets (level 1) include government debt securities, private-sector debt securities, derivatives traded in organised markets, securitised assets, shares, short positions and fixed-income securities issued.

In cases where price quotations cannot be observed, management makes its best estimate of the price that the market would set, using its own internal models. In most cases, these internal models use data based on observable market parameters as significant inputs (level 2) and, in cases, they use significant inputs not observable in market data (level 3). In order to make these estimates, various techniques are employed, including the extrapolation of observable market data. The best evidence of the fair value of a financial instrument on initial recognition is the transaction price, unless the fair value of the instrument can be obtained from other market transactions performed with the same or similar instruments or can be measured by using a valuation technique in which the variables used include only observable market data, mainly interest rates.

Grupo Santander has developed a formal process for the systematic valuation and management of financial instruments, which has been implemented worldwide across all the Group's units. The governance scheme for this process, applicable to the Bank, distributes responsibilities between two independent divisions: Treasury (development, marketing and daily management of financial products and market data) and Risk (on a periodic basis, validation of pricing models and market data, computation of risk metrics, new transaction approval policies, management of market risk and implementation of fair value adjustment policies).

The approval of new products follows a sequence of steps (request, development, validation, integration in corporate systems and quality assurance) before the product is brought into production. This process ensures that pricing systems have been properly reviewed and are stable before they are used.

The following subsections set forth the most important products and families of derivatives, and the related valuation techniques and inputs, by asset class:

Fixed income and inflation

The fixed income asset class includes basic instruments such as interest rate forwards, interest rate swaps and cross currency swaps, which are valued using the net present value of the estimated future cash flows discounted taking into account basis (swap and cross currency spreads) determined on the basis of the payment frequency and currency of each leg of the derivative. Vanilla options, including caps, floors and swaptions, are priced using the Black-Scholes model, which is one of the benchmark industry models. More exotic derivatives are priced using more complex models which are generally accepted as standard across institutions.

These pricing models are fed with observable market data such as deposit interest rates, futures rates, cross currency swap and constant maturity swap rates, and basis spreads, on the basis of which different yield curves, depending on the payment frequency, and discounting curves are calculated for each currency. In the case of options, implied volatilities are also used as model inputs. These volatilities are observable in the market for cap and floor options and swaptions, and interpolation and extrapolation of volatilities from the quoted ranges are carried out using generally accepted industry models. The pricing of more exotic derivatives may require the use of non-observable data or parameters, such as correlation (among interest rates and cross-asset), mean reversion rates and prepayment rates, which are usually defined from historical data or through calibration.

Inflation-related assets include zero-coupon or year-on-year inflation-linked bonds and swaps, valued with the present value method using forward estimation and discounting. Derivatives on inflation indices are priced using standard or more complex bespoke models, as appropriate. Valuation inputs of these models consider inflation-linked swap spreads observable in the market and estimations of inflation seasonality, on the basis of which a forward inflation curve is calculated. Also, implied volatilities taken from zero-coupon and year-on-year inflation options are also inputs for the pricing of more complex derivatives.

Equity and foreign exchange

The most important products in these asset classes are forward and futures contracts; they also include vanilla, listed and OTC (Over-The-Counter) derivatives on single underlying assets and baskets of assets. Vanilla options are priced using the standard Black-Scholes model and more exotic derivatives involving forward returns, average performance, or digital, barrier or callable features are priced using generally accepted industry models or bespoke models, as appropriate. For derivatives on illiquid stocks, hedging takes into account the liquidity constraints in models.

The inputs of equity models consider yield curves, spot prices, dividends, asset funding costs (repo margin spreads), implied volatilities, correlation among equity stocks and indices, and cross-asset correlation. Implied volatilities are obtained from market quotes of European and American-style vanilla call and put options. Various interpolation and extrapolation techniques are used to obtain continuous volatility for illiquid stocks. Dividends are usually estimated for the mid and long term. Correlations are implied, when possible, from market quotes of correlation-dependent products. In all other cases, proxies are used for correlations between benchmark underlyings or correlations are obtained from historical data.

The inputs of foreign exchange models include the yield curve for each currency, the spot foreign exchange rate, the implied volatilities and the correlation among assets of this class. Volatilities are obtained from European call and put options which are quoted in markets as of-the-money, risk reversal or butterfly options. Illiquid currency pairs are usually handled by using the data of the liquid pairs from which the illiquid currency can be derived. For more exotic products, unobservable model parameters may be estimated by fitting to reference prices provided by other non-quoted market sources.

Credit

The most common instrument in this asset class is the credit default swap (CDS), which is used to hedge credit exposure to third parties. In addition, models for first-to-default (FTD), n-to-default (NTD) and single-tranche collateralised debt obligation (CDO) products are also available. These products are valued with standard industry models, which estimate the probability of default of a single issuer (for CDS) or the joint probability of default of more than one issuer for FTD, NTD and CDO.

Valuation inputs are the yield curve, the CDS spread curve and the recovery rate. For indices and important individual issuers, the CDS spread curve is obtained in the market. For less liquid issuers, this spread curve is estimated using proxies or other credit-dependent instruments. Recovery rates are usually set to standard values. For listed single-tranche CDO, the correlation of joint default of several issuers is implied from the market. For FTD, NTD and bespoke CDO, the correlation is estimated from proxies or historical data when no other option is available.

Valuation adjustment for counterparty risk or default risk

The Credit valuation adjustment (CVA) is a valuation adjustment to over the counter (OTC) derivatives as a result of the risk associated with the credit exposure assumed to each counterparty.

The CVA is calculated taking into account potential exposure to each counterparty in each future period. The CVA for a specific counterparty is equal to the sum of the CVA for all the periods. The following inputs are used to calculate the CVA:

- Expected exposure: including for each transaction the mark-to-market (MtM) value plus an add-on for the potential future exposure for each period. Mitigating factors such as collateral and netting agreements are taken into account, as well as a temporary impairment factor for derivatives with interim payments.
- Severity: percentage of final loss assumed in a counterparty credit event/default.
- Probability of default: for cases where there is no market information (the CDS quoted spread curve, etc.), proxies based on companies holding exchange-listed CDS, in the same industry and with the same external rating as the counterparty, are used.
- Discount factor curve.

The Debit Valuation Adjustment (DVA) is a valuation adjustment similar to the CVA but, in this case, it arises as a result of the Bank's own risk assumed by its counterparties in OTC derivatives.

The CVA at 31 December 2022, at a consolidated level, amounted to EUR 330 million (resulting in an increase of 39.2% compared to 31 December 2021) and DVA amounted to EUR 309 million (resulting in an increase of 90.7% compared to 31 December 2021). The increase is mainly due to movements in the credit markets, whose spread levels have increased substantially compared to those at the end of 2021.

The CVA at 31 December 2021 amounted to EUR 237 million (decrease of 41.9% compared to 31 December 2020) and DVA amounted EUR 162 million (decrease of 30.4% compared to 31 December 2020). These impacts were mainly due to the continuous improvement in credit markets, the creation of particular credit curves for certain counterparties and the introduction of methodological improvements in the calculation of exposures.

At the end of December 2022, CVA adjustment of EUR 218 million (an increase of 22.48% compared to 31 December 2021) and DVA adjustment of EUR 149 million (an increase of 136.51% compared to 31 December 2021) were recorded. The increase is mainly due to movements in the credit markets, whose spread levels have increased substantially with respect to those at the end of 2021.

The CVA at 31 December 2021 amounted to EUR 178 million (resulting in a decrease of 29.36% compared to 31 December 2020) and DVA amounted to EUR 63 million (resulting in a decrease of 8.69% compared to 31 December 2020). The variations were due to a decrease in credit spreads in percentages greater than 40% in the most liquid terms.

In addition, the Group amounts the funding fair value adjustment (FFVA) is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. This includes the uncollateralised component of collateralised derivatives in addition to derivatives that are fully uncollateralised. The expected future funding exposure is calculated by a simulation methodology, where available. The FFVA impact is not material for the consolidated financial statements as of 31 December 2022 and 2021.

Grupo Santander and Banco Santander have not carried out significant reclassifications of financial instruments between levels other than those disclosed in level 3 movement table during 2022 continuing the trend observed in 2021. The main variations over the last few years in the Level 3 volume have been due to purchases/sales of these instruments. There have been no significant variations in the market observability conditions, nor relevant changes in the criteria used for the classification of instruments within the fair value hierarchy.

In 2022, the amount reclassified to Level 3 by Banco Santander is EUR 337 million (EUR 626 million in 2021). They are mainly due to reclassifications to level 3 of loan positions for which there has been less access to price contributors and actual market transactions with which to demonstrate their observability, and to a lesser extent to certain debt instruments which, based on the Bank's criteria, do not qualify as observable instruments.

Valuation adjustments due to model risk

The valuation models described above do not involve a significant level of subjectivity, since they can be adjusted and recalibrated, where appropriate, through internal calculation of the fair value and subsequent comparison with the related actively traded price. However, valuation adjustments may be necessary when market quoted prices are not available for comparison purposes.

The sources of risk are associated with uncertain model parameters, illiquid underlying issuers, and poor quality market data or missing risk factors (sometimes the best available option is to use limited models with controllable risk). In these situations, the Group and the Bank calculate and apply valuation adjustments in accordance with common industry practice. The main sources of model risk are described below:

- In the fixed income markets, the sources of model risk include bond index correlations, basis spread modelling, the risk of calibrating model parameters and the treatment of near-zero or negative interest rates. Other sources of risk arise from the estimation of market data, such as volatilities or yield curves, whether used for estimation or cash flow discounting purposes.
- In the stock markets, the sources of model risk include forward skew modelling, the impact of stochastic interest rates, correlation and multi-curve modelling. Other sources of risk arise from managing hedges of digital callable and barrier option payments. Also worthy of consideration as sources of risk are the estimation of market data such as dividends and correlation for quanto and composite basket options.
- For specific financial instruments relating to home mortgage loans secured by financial institutions in the UK (which are regulated and partially financed by the Government) and property asset derivatives, the main input is the Halifax House Price Index (HPI). In these cases, risk assumptions include estimations of the future growth and the volatility of the HPI, the mortality rate and the implied credit spreads.
- Inflation markets are exposed to model risk resulting from uncertainty around modelling the correlation structure among various Consumer Price Index (CPI) rates. Another source of risk may arise from the bid-offer spread of inflation-linked swaps.
- The currency markets are exposed to model risk resulting from forward skew modelling and the impact of stochastic interest rate and correlation modelling for multi-asset instruments. Risk may also arise from market data, due to the existence of specific illiquid foreign exchange pairs.

- The most important source of model risk for credit derivatives relates to the estimation of the correlation between the probabilities of default of different underlying issuers. For illiquid underlying issuers, the CDS spread may not be well defined.

Set forth below are the financial instruments of Grupo Santander at fair value whose measurement was based on internal models (levels 2 and 3) at 31 December 2022 and 2021 :

EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
ASSETS	142,832	8,290		
Financial assets held for trading	110,721	383		
Central banks ^B	11,595	—	Present value method	Yield curves, FX market prices
Credit institutions ^B	16,502	—	Present value method	Yield curves, FX market prices
Customers ^B	9,550	—	Present value method	Yield curves, FX market prices
Debt and equity instruments	6,537	43	Present value method	Yield curves, FX market prices
Derivatives	66,537	340		
<i>Swaps</i>	54,367	139	Present value method, Gaussian Copula	Yield curves, FX market prices, HPI, Basis, Liquidity
<i>Exchange rate options</i>	916	4	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Interest rate options</i>	2,681	39	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Interest rate futures</i>	113	—	Present value method	Yield curves, FX market prices
<i>Index and securities options</i>	354	48	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
<i>Other</i>	8,106	170	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX and EQ market prices, Dividends, Correlation, HPI, Credit, Others
Hedging derivatives	8,069	—		
<i>Swaps</i>	6,687	—	Present value method	Yield curves, FX market prices, Basis
<i>Interest rate options</i>	2	—	Black's Model	Yield curves, FX market prices, Volatility surfaces
<i>Other</i>	1,380	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Others
Non-trading financial assets mandatorily at fair value through profit or loss	2,080	1,833		
Equity instruments	643	1,269	Present value method	Market price, Interest rates curves, Dividends and Others
Debt securities	809	325	Present value method	Yield curves
Loans and receivables	628	239	Present value method, swap asset model & CDS	Yield curves and Credit curves
Financial assets designated at fair value through profit or loss	6,586	427		
Credit institutions	673	—	Present value method	Yield curves, FX market prices
Customers ^C	5,769	5	Present value method	Yield curves, FX market prices, HPI
Debt securities	144	422	Present value method	Yield curves, FX market prices
Financial assets at fair value through other comprehensive income	15,376	5,647		
Equity instruments	9	700	Present value method	Market price, Yield curves, Dividends and Others
Debt securities	11,869	229	Present value method	Yield curves, FX market prices
Loans and receivables	3,498	4,718	Present value method	Yield curves, FX market prices and Credit curves

EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
LIABILITIES	163,733	925		
Financial liabilities held for trading	98,533	415		
Central banks ^B	5,759	—	Present value method	FX market prices, Yield curves
Credit institutions ^B	9,796	—	Present value method	FX market prices, Yield curves
Customers	12,226	—	Present value method	FX market prices, Yield curves
Derivatives	64,147	415		
<i>Swaps</i>	51,191	235	Present value method, Gaussian Copula	Yield curves, FX market prices, Basis, Liquidity, HPI
<i>Interest rate options</i>	3,268	19	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Exchange rate options</i>	769	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Index and securities options</i>	591	42	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
<i>Futures on interest rate and variable income</i>	807	—	Present value method	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI
<i>Other</i>	7,521	119	Present value method, Advanced stochastic volatility models	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI, Credit, Others
Short positions	6,605	—	Present value method	Yield curves, FX & EQ market prices, Equity
Hedging derivatives	9,214	14		
<i>Swaps</i>	8,142	14	Present value method	Yield curves, FX & EQ market prices, Basis
<i>Other</i>	1,072	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Other
Financial liabilities designated at fair value through profit or loss^C	55,239	496	Present value method	Yield curves, FX market prices
Liabilities under insurance contracts	747	—	Present Value Method with actuarial techniques	Mortality tables and interest rate curves

A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.

B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase with corporate customers (mainly brokerage and investment companies).

C. Includes, mainly, structured loans to corporate clients.

D. Includes, mainly, short-term deposits that are managed based on their fair value.

EUR million

	Fair values calculated using internal models at 2021 ^A		Valuation techniques
	Level 2	Level 3	
ASSETS	121,640	7,667	
Financial assets held for trading	76,738	537	
Central banks ^B	3,608	—	Present value method
Credit institutions ^B	10,397	—	Present Value method
Customers ^B	6,829	—	Present Value method
Debt and equity instruments	2,312	24	Present Value method
Derivatives	53,592	513	
Swaps	43,700	224	Present Value method, Gaussian Copula
Exchange rate options	539	12	Black-Scholes Model
Interest rate options	2,112	182	Black's Model, advanced multifactor interest rate models
Interest rate futures	409	—	Present Value method
Index and securities options	439	41	Black's Model, advanced multifactor interest rate models
Other	6,393	54	Present Value method, Advanced stochastic volatility models and other
Hedging derivatives	4,761	—	
Swaps	4,204	—	Present Value method
Interest rate options	9	—	Black's Model
Other	548	—	Present Value method, Advanced stochastic volatility models and other
Non-trading financial assets mandatorily at fair value through profit or loss	1,273	1,865	
Equity instruments	415	1,231	Present Value method
Debt securities issued	589	366	Present Value method
Loans and receivables	269	268	Present Value method, swap asset model & CDS
Financial assets designated at fair value through profit or loss	13,426	418	
Central banks	—	—	Present Value method
Credit institutions	3,152	—	Present Value method
Customers ^C	10,270	18	Present Value method
Debt securities	4	400	Present Value method
Financial assets at fair value through other comprehensive income	25,442	4,847	
Equity instruments	74	821	Present Value method
Debt securities	21,585	146	Present Value method
Loans and receivables	3,783	3,880	Present Value method

EUR million

	Fair values calculated using internal models at		Valuation techniques
	2021 ^A		
	Level 2	Level 3	
LIABILITIES	103,807	629	
Financial liabilities held for trading	68,930	160	
Central banks ^B	1,038	—	Present Value method
Credit institutions ^B	6,488	—	Present Value method
Customers	6,141	—	Present Value method
Derivatives	53,234	160	
Swaps	42,438	44	Present Value method, Gaussian Copula
Interest rate options	2,720	26	Black's Model, advanced multifactor interest rate models
Exchange rate options	658	7	Black-Scholes Model
Index and securities options	446	67	Black's Model, advanced multifactor interest rate models
Interest rate and equity futures	184	—	Present Value method
Other	6,788	16	Present Value method, Advanced stochastic volatility models and other
Short positions	2,029	—	Present Value method
Hedging derivatives	5,463	—	
Swaps	4,149	—	Present Value method
Interest rate options	—	—	Black's Model
Other	1,314	—	Present Value method, Advanced stochastic volatility models and other
Financial liabilities designated at fair value through profit or loss^C	28,644	469	Present Value method
Liabilities under insurance contracts	770	—	Present Value method with actuarial techniques

- A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.
 B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase with corporate customers (mainly brokerage and investment companies).
 C. Includes, mainly, structured loans to corporate clients.
 D. Includes, mainly, short-term deposits that are managed based on their fair value.

The same information from the previous table, but referred to Banco Santander, S.A., is presented below:
EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
ASSETS	87,911	5,670		
Financial assets held for trading	76,360	484		
Central banks ^B	1,933	—	Present value method	Yield curves, FX market prices
Credit institutions ^B	9,807	—	Present value method	Yield curves, FX market prices
Customers ^B	10,377	—	Present value method	Yield curves, FX market prices
Debt and equity instruments	397	2	Present value method	Yield curves, FX market prices
Derivatives	53,846	482		
Swaps	43,841	420	Present value method, Gaussian Copula	Yield curves, FX market prices, HPI, Basis, Liquidity
Exchange rate options	6,519	3	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	2,942	39	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate futures	160	—	Present value method	Yield curves, FX market prices
Index and securities options	341	8	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
Other	43	12	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX and EQ market prices, Dividends, Correlation, HPI, Credit, Others
Hedging derivatives	1,450	—		
Swaps	1,250	—	Present value method	Yield curves, FX market prices, Basis
Exchange rate options	198	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	2	—	Black's Model	Yield curves, FX market prices, Volatility surfaces
Non-trading financial assets mandatorily at fair value through profit or loss	2,005	649		
Equity instruments	87	440	Present value method	Market price, Interest rates curves, Dividends and Others
Debt securities	760	190	Present value method	Yield curves
Loans and receivables	1,158	19	Present value method	Yield and credit curves
Financial assets designated at fair value through profit or loss	6,641	—		
Credit institutions	934	—	Present value method	Interest rates curves, FX market prices
Customers ^C	5,707	—	Present value method	Interest rates curves, FX market prices, HPI
Financial assets at fair value through other comprehensive income	1,455	4,537		
Equity instruments	—	499	Present value method	Market price, Interest rates curves, Dividends and Others
Debt securities	274	—	Present value method	Interest rates curves, FX market prices
Loans and receivables	1,181	4,038	Present value method	Interest and credit curves, FX market prices

EUR million

	Fair values calculated using internal models at 2022 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
LIABILITIES	113,295	839		
Financial liabilities held for trading	70,933	678		
Central banks ^B	4,265	—	Present value method	Interest rates curves, FX market prices
Credit institutions ^B	8,949	—	Present value method	Interest rates curves, FX market prices
Customers	6,578	—	Present value method	Interest rates curves, FX market prices
Derivatives	51,141	678	Present value method, Gaussian Copula, Black-Scholes Model, multifactorial advanced models interest rate, advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX and EQ market prices, Dividends, Correlation, HPI, Credit, Others
<i>Swaps</i>	41,030	516	Present value method, Gaussian Copula	Yield curves, FX market prices, Basis, Liquidity, HPI
<i>Exchange rate options</i>	5,798	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Index and securities options</i>	3,435	20	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Interest rate options</i>	140	27	Black-Scholes Model	Yield curves, FX market prices, Volatility surfaces, Liquidity
<i>Futures on interest rate and variable income</i>	675	—	Present value method	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI
<i>Other</i>	63	115	Present value method, Advanced stochastic volatility models	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI, Credit, Others
Hedging derivatives	3,941	14		
<i>Swaps</i>	3,111	14	Present value method	Yield curves, FX & EQ market prices, Basis
<i>Exchange rate options</i>	829	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Interest rate options</i>	1	—	Black's Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
<i>Other</i>	—	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Other
Financial liabilities designated at fair value through profit or loss	38,421	147	Present value method	Yield curves, FX market prices
Central banks	1,740	—	Present value method	Yield curves, FX market prices
Credit institutions	2,160	—	Present value method	Yield curves, FX market prices
Customers	34,521	147	Present value method	Yield curves, FX market prices
Liabilities under insurance contracts	—	—	Present Value Method with actuarial techniques	Mortality tables and interest rate curves

- A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.
 B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase with corporate customers (mainly brokerage and investment companies).
 C. Includes, mainly, structured loans to corporate clients.
 D. Includes, mainly, short-term deposits that are managed based on their fair value.

EUR million

	Fair values calculated using internal models at 2021 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
ASSETS	74,210	5,010		
Financial assets held for trading	56,612	478		
Central banks ^B	1,118	—	Present value method	Yield curves, FX market prices
Credit institutions ^B	6,980	—	Present value method	Yield curves, FX market prices
Customers ^B	7,025	—	Present value method	Yield curves, FX market prices
Debt and equity instruments	120	—	Present value method	Yield curves, FX market prices
Derivatives	41,369	478		
Swaps	33,316	281	Present value method, Gaussian Copula	Yield curves, FX market prices, HPI, Basis, Liquidity
Exchange rate options	5,554	9	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	2,186	183	Black's Model, multifactorial advanced models interest rate	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate futures	10	—	Present value method	Yield curves, FX market prices
Index and securities options	210	5	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
Other	93	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX and EQ market prices, Dividends, Correlation, HPI, Credit, Others
Hedging derivatives	1,648	—		
Swaps	1,447	—	Present value method	Yield curves, FX market prices, Basis
Exchange rate options	195	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	6	—	Black's Model	Yield curves, FX market prices, Volatility surfaces
Non-trading financial assets mandatorily at fair value through profit or loss	1,360	541		
Equity instruments	87	369	Present value method	Market price, Interest rates curves, Dividends and Others
Debt securities	585	148	Present value method	Yield curves
Loans and receivables	688	24	Present value method, swap asset model & CDS	Yield curves and Credit curves
Financial assets designated at fair value through profit or loss	13,403	—		
Credit institutions	3,445	—	Present value method	Yield curves, FX market prices
Customers ^C	9,958	—	Present value method	Yield curves, FX market prices, HPI
Financial assets at fair value through other comprehensive income	1,187	3,991		
Equity instruments	—	753	Present value method	Market price, Yield curves, Dividends and Others
Debt securities	489	—	Present value method	Yield curves, FX market prices
Loans and receivables	698	3,238	Present value method	Yield curves, FX market prices and Credit curves

EUR million

	Fair values calculated using internal models at 2021 ^A		Valuation techniques	Main assumptions
	Level 2	Level 3		
LIABILITIES	62,058	326		
Financial liabilities held for trading	47,382	183		
Central banks ^B	44	—	Present value method	Interest rates curves, FX market prices
Credit institutions ^B	5,718	—	Present value method	Interest rates curves, FX market prices
Customers	1,291	—	Present value method	Interest rates curves, FX market prices
Derivatives	40,329	183		
Swaps	31,529	114	Present value method, Gaussian Copula	Yield curves, FX market prices, Basis, Liquidity, HPI
Exchange rate options	5,368	7	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	2,686	33	Black's Model, advanced multifactor interest rate models	Yield curves, Volatility surfaces, FX market prices, Liquidity
Index and securities options	10	18	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Liquidity
Interest rate and equity futures	494	—	Present value method	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI
Other	242	11	Present value method, Advanced stochastic volatility models	Yield curves, Volatility surfaces, FX & EQ market prices, Dividends, Correlation, Liquidity, HPI, Credit, Others
Hedging derivatives	2,076	—		
Swaps	1,244	—	Present value method	Yield curves, FX & EQ market prices, Basis
Exchange rate options	608	—	Black-Scholes Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Interest rate options	1	—	Black's Model	Yield curves, Volatility surfaces, FX market prices, Liquidity
Other	223	—	Present value method, Advanced stochastic volatility models and other	Yield curves, Volatility surfaces, FX market prices, Credit, Liquidity, Other
Financial liabilities designated at fair value through profit or loss^C	12,600	143		
Central banks	607	—	Present value method	Yield curves, FX market prices
Credit institutions	1,067	—	Present value method	Yield curves, FX market prices
Customers	10,926	143	Present value method	Yield curves, FX market prices
Liabilities under insurance contracts	—	—	Present Value Method with actuarial techniques	Mortality tables and interest rate curves

A. Level 2 internal models use data based on observable market parameters, while level 3 internal models use significant non-observable inputs in market data.

B. Includes mainly short-term loans/deposits and repurchase/reverse repurchase agreements with corporate customers (mainly brokerage and investment companies).

C. Includes, mainly, structured loans to corporate clients.

D. Includes, mainly, short-term deposits that are managed based on their fair value

Financial Instruments (level 3)

Set forth below are the Group and the Bank's main financial instruments measured using unobservable market data as significant inputs of the internal models (level 3):

- HTC&S (Held to collect and sale) syndicated loans classified in the fair value category with changes in other comprehensive income, where the cost of liquidity is not directly observable in the market, as well as the prepayment option in favour of the borrower.
- Illiquid equity in non-trading portfolios, classified at fair value through profit or loss and at fair value through equity.
- Instruments in Santander UK's portfolio (loans, debt securities and derivatives) linked to the House Price Index (HPI). Even if the valuation techniques used for these instruments may be the same as those used to value similar products (present value in the case of loans and debt securities, and the Black-Scholes model for derivatives), the main factors used in the valuation of these instruments are the HPI spot rate, the growth and volatility thereof, and the mortality rates, which are not always observable in the market and, accordingly, these instruments are considered illiquid.
- Callable interest rate derivatives (Bermudan-style options) where the main unobservable input is mean reversion of interest rates.
- Trading derivatives on interest rates, taking as an underlying asset titling and with the amortization rate (CPR, Conditional prepayment rate) as unobservable main entry.
- Derivatives from trading on inflation in Spain, where volatility is not observable in the market.
- Equity volatility derivatives, specifically indices and equities, where volatility is not observable in the long term.
- Derivatives on long-term interest rate and FX in some units (mainly South America) where for certain underlyings it is not possible to demonstrate observability to these terms.
- Debt instruments referenced to certain illiquid interest rates, for which there is no reasonable market observability.

The measurements obtained using the internal models might have been different if other methods or assumptions had been used with respect to interest rate risk, to credit risk, market risk and foreign currency risk spreads, or to their related correlations and volatilities. Nevertheless, the Banco Santander directors consider that the fair value of the financial assets and liabilities recognised in the balance sheet and the gains and losses arising from these financial instruments are reasonable.

The net amount recorded in the results of the 2022 financial year derived from valuation models whose significant inputs are unobservable market data (Level 3) amounts to a loss of EUR 235 million (of which EUR 64 million are benefits already realized and EUR 299 million correspond to losses from the valuation of operations in force at the end of the year). In 2021 the net amount recorded in the results was a profit of EUR 28 million.

The table below shows the effect, at 31 December 2022 and 2021 on the fair value of the main financial instruments classified as level 3 of a reasonable change in the assumptions used in the valuation. This effect was determined by applying the probable valuation ranges of the main unobservable inputs detailed in the following table:

2022

Portfolio/Instrument (Level 3)	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
Financial assets held for trading						
Debt securities						
Corporate debt	Discounted Cash Flows	Credit spread	0%-20%	10.07%	(1.38)	1.40
Corporate debt	Price based	Market price	85%-115%	100.00%	—	—
Government debt	Discounted Cash Flows	Discount curve	0%-10%	4.92%	(8.34)	8.07
Derivatives						
CCS	Discounted Cash Flows	Interest rate	(0.7)% - 0.7%	0.00%	—	—
CCS	Forward estimation	Interest rate	(4)bps - 4bps	0.42bps	(0.06)	0.07
CDS	Discounted Cash flows	Credit Spread	14.9bps - 42.1bps	21.99bps	(0.05)	0.02
EQ Options	EQ option pricing model	Volatility	0% - 90%	61.30%	(0.23)	0.48
EQ Options	Local volatility	Volatility	10% - 90%	50.00%	(1.05)	1.05
FRAs	Asset Swap model	Interest rate	0% - 6%	2.71%	(1.16)	0.95
Fx Swap	Others	Others	n.a.	n.a	(1.37)	1.37
Inflation Derivatives	Asset Swap model	Inflation Swap Rate	0% - 10%	3.41%	(0.21)	0.11
Inflation Derivatives	Volatility option model	Volatility	0% - 40%	17.37%	(0.14)	0.11
IR Options	IR option pricing model	Volatility	0% - 60%	35.82%	(0.30)	0.44
IRS	Asset Swap model	Interest rate	0% - 15.00%	9.20%	(0.05)	0.08
IRS	Discounted Cash Flows	Credit spread	1.25% - 6.29%	3.89%	(2.25)	2.47
IRS	Discounted Cash Flows	Swap rate	8.6% - 9.1%	8.84%	(0.02)	0.03
IRS	Forward estimation	Interest rate	(6)bps - 6.1bps	0.13bps	(0.04)	0.04
IRS	Others	Others	5% - n.a.	n.a	(11.58)	—
IRS	Prepayment modelling	Prepayment rate	2.5% - 6.2%	4.17%	(0.06)	0.05
Others	Forward estimation	Price	0% - 2%	0.62%	(0.53)	0.24
Property derivatives	Option pricing model	Growth rate	(5)% - 5%	0.00%	(5.75)	5.75
Financial assets designated at fair value through profit or loss						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spreads	0.1% - 2%	1.05%	(0.18)	0.18
Mortgage portfolio	Black Scholes model	Growth rate	(5)% - 5%	0.00%	(0.79)	0.79
Debt securities						
Other debt securities	Others	Inflation Swap Rate	0% - 10%	4.74%	(4.25)	3.83

2022

Portfolio/Instrument (Level 3)	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
Non-trading financial assets mandatorily at fair value through profit or loss						
Debt securities						
Corporate debt	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	0.01bps	(0.33)	0.33
Property securities	Probability weighting	Growth rate	(5)% - 5%	0.00%	(0.68)	0.68
Equity instruments						
Equities	Price Based	Price	90% - 110%	100.00%	(126.87)	126.87
Financial assets at fair value through other comprehensive income						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spread	n.a.	n.a	(24.10)	—
Loans	Discounted Cash Flows	Interest rate curve	0.8% - 1.0%	0.88%	(0.08)	0.08
Loans	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	0bp	(17.51)	17.51
Loans	Forward estimation	Credit spread	2.56% - 3.4%	2.56%	(0.49)	—
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	(0.4)% - 1.6%	0.63%	(0.01)	0.01
Equity instruments						
Equities	Price Based	Price	90% - 110%	100.00%	(70.04)	70.04
Financial liabilities held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	40.73%	(0.29)	0.18
Financial liabilities designated at fair value through profit or loss						
Loans and advances to customers						
Repos/Reverse repos	Others	Long-term repo spread	n.a.	n.a.	(0.13)	—

2021

Portfolio/ Instrument	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					(Level 3)	Unfavourable scenario
Financial assets held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	36.30%	(0.50)	0.43
CCS	Discounted Cash Flows	Interest rate	(0.7)% - 0.7%	0.73%	(0.11)	0.11
CCS	Forward estimation	Interest rate	4bps - (4)bps	(0.09)bps	(0.03)	0.03
Convertibility curve - inputs: NDFs Offshore	Forward estimation	Price	0% - 2%	0.61%	(0.65)	0.28
EQ Options	EQ option pricing model	Volatility	0% - 90%	61.20%	(0.24)	0.52
EQ Options	Local volatility	Volatility	10% - 90%	40.00%	(6.82)	6.82
FRAs	Asset Swap model	Interest rate	0% - 4%	1.78%	(0.91)	0.73
FX Options	FX option pricing model	Volatility	0% - 50%	32.14%	(0.28)	0.50
Inflation Derivatives	Asset Swap model	Inflation Swap Rate	(50)% - 50%	50.00%	(0.56)	0.28
Inflation Derivatives	Volatility option model	Volatility	0% - 40%	13.29%	(0.47)	0.24
IR Futures	Asset Swap model	Interest rate	0% - 15%	5.91%	(1.09)	0.71
IR Options	IR option pricing model	Volatility	0% - 60%	36.28%	(0.20)	0.31
IRS	Asset Swap model	Interest rate	(6)% - 12.80%	10.36%	(0.07)	0.13
IRS	Discounted Cash Flows	Credit spread	1.03% - 3.75%	2.02%	(7.21)	4.16
IRS	Discounted Cash Flows	Inflation Swap Rate	(0.8)% - 6.5%	1.81%	(0.04)	0.01
IRS	Discounted Cash Flows	Swap Rate	7.7% - 8.2%	(2.87)%	(0.23)	0.10
IRS	Forward estimation	Interest rate	TIIE91 (8.98)bps - TIIE91 +11.12bps	n.a.	(0.27)	0.17
IRS	Forward estimation	Prepayment rate	6% - 12%	n.a.	—	—
IRS	Others	Others	0.05%	n.a.	(1.49)	—
IRS	Prepayment modelling	Prepayment rate	2.5% - 6.2%	0.44%	(0.09)	0.05
Property derivatives	Option pricing model	Growth rate	0% - 5%	2.50%	(2.62)	2.62
Swaptions	IR option pricing model	Volatility	0% - 40%	26.67%	(0.13)	0.27
Debt securities						
Corporate debt	Price based	Market price	85% - 115%	100.00%	—	—
Financial assets designated at fair value through profit or loss						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spreads	0.1% - 1.4%	0.66%	(0.26)	0.26
Mortgage portfolio	Black Scholes model	Growth rate	0% - 5%	2.50%	(1.90)	1.90

2021

Portfolio/ Instrument (Level 3)	Valuation technique	Main unobservable inputs	Range	Weighted average	Impacts (EUR million)	
					Unfavourable scenario	Favourable scenario
Debt securities						
Corporate debt	Discounted Cash Flows	Credit spread	0% - 20%	9.88%	(1.23)	1.20
Government debt	Discounted Cash Flows	Discount curve	0% - 10%	8.33%	(4.14)	20.69
Other debt securities	Others	Inflation Swap Rate	0% - 10%	4.74%	(5.47)	4.92
Non-trading financial assets mandatorily at fair value through profit or loss						
Debt securities						
Corporate debt	Discounted Cash Flows	Margin of a reference portfolio	(1)bp - 1bp	1bp	(0.56)	0.60
Property securities	Probability weighting	Growth rate	0% - 5%	2.50%	(1.19)	1.19
Equity instruments						
Equities	Price Based	Price	90% - 110%	10.00%	(123.10)	123.10
Financial assets at fair value through other comprehensive income						
Loans and advances to customers						
Loans	Discounted Cash Flows	Credit spread	n.a.	n.a.	(19.84)	—
Loans	Discounted Cash Flows	Interest rate curve	(0.1)% - 0.1%	0.12%	(0.07)	0.07
Loans	Discounted Cash Flows	Margin of a reference portfolio	(1)bps - 1bps	1bp	(13.12)	13.04
Loans	Forward estimation	Credit spread	0.77% - 2.42%	n.a.	—	—
Debt securities						
Government debt	Discounted Cash Flows	Interest rate	0.6% - 0.8%	0.09%	(0.01)	0.01
Equity instruments						
Equities	Price Based	Price	90% - 110%	10.00%	(82.13)	82.13
Financial liabilities held for trading						
Derivatives						
Cap&Floor	Volatility option model	Volatility	10% - 90%	36.30%	(0.50)	0.43
Financial liabilities designated at fair value through profit or loss						
Loans and advances to customers						
Repos/Reverse repos	Asset Swap Repo Model	Long-term repo spread	n.a.	n.a.	(0.36)	—

Lastly, the changes in the financial instruments classified as Level 3, at Grupo Santander, in 2022 and 2021:

EUR million	01/01/2022		Changes					31/12/2022	
	Fair value calculated using internal models (Level 3)	Purchases/ Issuances	Sales/ Settlements	Changes in fair value recognised in profit or loss	Changes in fair value recognised in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)	
Financial assets held for trading	537	91	(99)	(116)	—	(15)	(15)	383	
Debt securities	22	2	(2)	15	—	2	3	42	
Equity instruments	2	—	—	—	—	(1)	—	1	
Trading derivatives	513	89	(97)	(131)	—	(16)	(18)	340	
Swaps	224	1	(47)	(20)	—	4	(23)	139	
Exchange rate options	12	—	(9)	2	—	—	(1)	4	
Interest rate options	182	—	—	(142)	—	(1)	—	39	
Index and securities options	41	27	(28)	29	—	(26)	5	48	
Other	54	61	(13)	—	—	7	1	110	
Financial assets at fair value through profit or loss	418	—	(9)	(31)	—	—	49	427	
Loans and advances to customers	18	—	(9)	(5)	—	—	1	5	
Debt securities	400	—	—	(26)	—	—	48	422	
Non-trading financial assets mandatorily at fair value through profit or loss	1,865	521	(579)	98	—	(22)	(50)	1,833	
Customers	268	276	(280)	(25)	—	—	—	239	
Debt instruments	366	51	(33)	(31)	—	(27)	(1)	325	
Equity instruments	1,231	194	(266)	154	—	5	(49)	1,269	
Financial assets at fair value through other comprehensive income	4,847	8,564	(8,029)	—	(172)	417	20	5,647	
Loans and advances	3,880	8,471	(7,988)	—	1	349	5	4,718	
Debt securities	146	91	(23)	—	—	—	15	229	
Equity instruments	821	2	(18)	—	(173)	68	—	700	
TOTAL ASSETS	7,667	9,176	(8,716)	(49)	(172)	380	4	8,290	
Financial liabilities held for trading	160	328	(97)	35	—	(2)	(9)	415	
Trading derivatives	160	328	(97)	35	—	(2)	(9)	415	
Swaps	44	32	(16)	189	—	9	(23)	235	
Exchange rate options	7	6	(14)	1	—	—	—	—	
Interest rate options	26	56	(44)	(19)	—	—	—	19	
Index and securities options	67	23	(19)	(32)	—	(11)	14	42	
Securities and interest rate futures	—	—	—	—	—	—	—	—	
Others	16	211	(4)	(104)	—	—	—	119	
Hedging derivatives (Liabilities)	—	—	—	14	—	—	—	14	
Swaps	—	—	—	14	—	—	—	14	
Financial liabilities designated at fair value through profit or loss	469	—	(3)	(8)	—	—	38	496	
TOTAL LIABILITIES	629	328	(100)	41	—	(2)	29	925	

EUR million	01/01/21		Changes					31/12/2020	
	Fair value calculated using internal models (level 3)	Purchases /Issuances	Sales/ Settlements	Changes in fair value recognized in profit or loss	Changes in fair value recognized in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)	
Financial assets held for trading	740	136	(124)	(181)	—	(15)	(19)	537	
Debt securities	7	20	(2)	(2)	—	—	(1)	22	
Equity instruments	3	—	(1)	—	—	—	—	2	
<i>Trading derivatives</i>	730	116	(121)	(179)	—	(15)	(18)	513	
Swaps	272	5	(33)	(35)	—	33	(18)	224	
<i>Exchange rate options</i>	22	14	(27)	3	—	—	—	12	
<i>Interest rate options</i>	241	7	(39)	(27)	—	—	—	182	
<i>Index and securities options</i>	94	18	(12)	(51)	—	(8)	—	41	
<i>Other</i>	101	72	(10)	(69)	—	(40)	—	54	
Financial assets at fair value through profit or loss	649	59	(120)	(11)	—	(163)	4	418	
Credit entities	163	—	—	—	—	(163)	—	—	
Loans and advances to customers	19	—	(2)	—	—	—	1	18	
Debt securities	467	59	(118)	(11)	—	—	3	400	
Non-trading financial assets mandatorily at fair value through profit or loss	934	534	(251)	127	—	485	36	1,865	
Customers	295	122	(149)	—	—	(3)	3	268	
Debt securities	134	206	(28)	28	—	17	9	366	
Equity instruments	505	206	(74)	99	—	471	24	1,231	
Financial assets at fair value through other comprehensive income	6,220	5,681	(6,588)	—	(228)	(241)	3	4,847	
Loans and advances	4,791	5,597	(6,298)	—	(37)	(173)	—	3,880	
Debt securities	206	75	(25)	—	(43)	(68)	1	146	
Equity instruments	1,223	9	(265)	—	(148)	—	2	821	
TOTAL ASSETS	8,543	6,410	(7,083)	(65)	(228)	66	24	7,667	
Financial liabilities held for trading	295	85	(42)	(138)	—	(21)	(19)	160	
Trading derivatives	295	85	(42)	(138)	—	(21)	(19)	160	
Swaps	81	4	(10)	(36)	—	3	2	44	
<i>Exchange rate options</i>	1	2	—	4	—	—	—	7	
<i>Interest rate options</i>	49	26	(19)	(8)	—	—	(22)	26	
<i>Index and securities options</i>	97	23	(5)	(27)	—	(22)	1	67	
<i>Securities and interest rate futures</i>	2	—	(2)	—	—	—	—	—	
<i>Others</i>	65	30	(6)	(71)	—	(2)	—	16	
Financial liabilities designated at fair value through profit or loss	610	143	—	—	—	(289)	5	469	
TOTAL LIABILITIES	905	228	(42)	(138)	—	(310)	(14)	629	

The same information on the movement of financial instruments classified in Level 3, but referred to Banco Santander, S.A., in 2022 and 2021, is presented below:

EUR million	01/01/2022		Changes				31/12/2022	
	Fair value calculated using internal models (Level 3)	Purchases/ Issuances	Sales/ Settlements	Changes in fair value recognised in profit or loss	Changes in fair value recognised in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)
Financial assets held for trading	478	3	(58)	109	—	(10)	(38)	484
Debt instruments and equity instrument	—	—	—	—	—	2	—	2
Trading derivatives	478	3	(58)	109	—	(12)	(38)	482
Swaps	281	1	(47)	232	—	(9)	(38)	420
Exchange rate options	9	—	(9)	3	—	—	—	3
Interest rate options	183	—	—	(143)	—	(1)	—	39
Index and securities options	5	2	(2)	5	—	(2)	—	8
Other	—	—	—	12	—	—	—	12
Hedging derivatives (Assets)	—	—	—	—	—	—	—	—
Swaps	—	—	—	—	—	—	—	—
Financial assets at fair value through profit or loss	—	—	—	—	—	—	—	—
Credit entities	—	—	—	—	—	—	—	—
Loans and advances to customers	—	—	—	—	—	—	—	—
Debt securities	—	—	—	—	—	—	—	—
Non-trading financial assets mandatorily at fair value through profit or loss	541	134	(41)	14	—	6	(5)	649
Customers	24	—	(3)	(2)	—	—	—	19
Debt securities	148	66	(30)	—	—	6	—	190
Equity instruments	369	68	(8)	16	—	—	(5)	440
Financial assets at fair value through other comprehensive income	3,991	8,090	(7,625)	—	(267)	348	—	4,537
Loans and advances	3,238	8,090	(7,617)	—	(21)	348	—	4,038
Debt securities	—	—	—	—	—	—	—	—
Equity instruments	753	—	(8)	—	(246)	—	—	499
TOTAL ASSETS	5,010	8,227	(7,724)	123	(267)	344	(43)	5,670
Financial liabilities held for trading	183	307	(105)	340	—	(7)	(40)	678
Trading derivatives	183	307	(105)	340	—	(7)	(40)	678
Swaps	114	32	(41)	451	—	—	(40)	516
Exchange rate options	7	6	(14)	1	—	—	—	—
Interest rate options	33	57	(44)	(20)	—	(6)	—	20
Index and securities options	18	—	(2)	12	—	(1)	—	27
Securities and interest rate futures	—	—	—	—	—	—	—	—
Others	11	212	(4)	(104)	—	—	—	115
Hedging derivatives (Liabilities)	—	—	—	14	—	—	—	14
Swaps	—	—	—	14	—	—	—	14
Financial liabilities designated at fair value through profit or loss	143	—	—	4	—	—	—	147
TOTAL LIABILITIES	326	307	(105)	358	—	(7)	(40)	839

EUR million	01/01/2021	Changes					31/12/2021	
	Fair value calculated using internal models (level 3)	Purchases /Issuances	Sales/ Settlements	Changes in fair value recognized in profit or loss	Changes in fair value recognized in equity	Level reclassifications	Other	Fair value calculated using internal models (level 3)
Financial assets held for trading	592	27	(86)	(65)	—	30	(20)	478
Debt instruments and equity instrument	—	2	—	—	—	—	(2)	—
Trading derivatives	592	25	(86)	(65)	—	30	(18)	478
<i>Swaps</i>	326	6	(21)	(45)	—	33	(18)	281
<i>Exchange rate options</i>	19	13	(27)	4	—	—	—	9
<i>Interest rate options</i>	241	6	(38)	(26)	—	—	—	183
<i>Index and securities options</i>	6	—	—	2	—	(3)	—	5
<i>Other</i>	—	—	—	—	—	—	—	—
Hedging derivatives (Assets)	—	—	—	—	—	—	—	—
<i>Swaps</i>	—	—	—	—	—	—	—	—
Financial assets at fair value through profit or loss	163	—	—	—	—	(163)	—	—
Credit entities	163	—	—	—	—	(163)	—	—
Loans and advances to customers	—	—	—	—	—	—	—	—
Debt securities	—	—	—	—	—	—	—	—
Non-trading financial assets mandatorily at fair value through profit or loss	342	208	(17)	2	—	5	1	541
Customers	26	4	(4)	(2)	—	—	—	24
Debt securities	131	18	(6)	—	—	5	—	148
Equity instruments	185	186	(7)	4	—	—	1	369
Financial assets at fair value through other comprehensive income	5,407	5,046	(5,959)	—	(263)	(240)	—	3,991
Loans and advances	4,405	4,972	(5,951)	—	(14)	(174)	—	3,238
Debt securities	—	74	(8)	—	—	(66)	—	—
Equity instruments	1,002	—	—	—	(249)	—	—	753
TOTAL ASSETS	6,504	5,281	(6,062)	(63)	(263)	(368.00)	-19	5,010
Financial liabilities held for trading	195	55	(39)	(35)	—	29	(22)	183
Trading derivatives	195	55	(39)	(35)	—	29	(22)	183
<i>Swaps</i>	128	6	(8)	(45)	—	33	—	114
<i>Exchange rate options</i>	1	2	—	4	—	—	—	7
<i>Interest rate options</i>	50	26	(19)	(2)	—	—	(22)	33
<i>Index and securities options</i>	14	—	(9)	17	—	(4)	—	18
<i>Securities and interest rate futures</i>	—	—	—	—	—	—	—	—
<i>Others</i>	2	21	(3)	(9)	—	—	—	11
Hedging derivatives (Liabilities)	—	—	—	—	—	—	—	—
<i>Swaps</i>	—	—	—	—	—	—	—	—
Financial liabilities designated at fair value through profit or loss	289	143	—	—	—	(289)	—	143
TOTAL LIABILITIES	484	198	(39)	(35)	—	(260)	(22)	326

iv. Recognition of fair value changes

As a general rule, changes in the carrying amount of financial assets and liabilities are recognised in the consolidated income statement. A distinction is made between the changes resulting from the accrual of interest and similar items, (which are recognised under Interest income or Interest expense, as appropriate), and those arising for other reasons, which are recognised at their net amount under 'Gains/losses on financial assets and liabilities'.

Adjustments due to changes in fair value arising from:

- 'Financial assets at fair value with changes in other comprehensive income' are recorded temporarily, in the case of debt instruments in 'Other comprehensive income - Elements that can be reclassified to profit or loss - Financial assets at fair value with changes in other comprehensive income', while in the case of equity instruments are recorded in 'other comprehensive income - Elements that will not be reclassified to line item - Changes in the fair value of equity instruments valued at fair value with changes in other comprehensive income'.

Exchange differences on debt instruments measured at fair value with changes in other comprehensive income are recognised under 'Exchange Differences, net' of the income statement. Exchange differences on equity instruments, in which the irrevocable option of being measured at fair value with changes in other comprehensive income has been chosen, are recognised in 'Other comprehensive income - Items that will not be reclassified to profit or loss - Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income'.

- Items charged or credited to 'Items that may be reclassified to profit or loss - Financial assets at fair value through other comprehensive income' and 'Other comprehensive income - Items that may be reclassified to profit or loss - Exchange differences in equity' remain in the Bank's equity until the asset giving rise to them is impaired or derecognised, at which time they are recognised in the income statement.
- Unrealized capital gains on financial assets at fair value through other comprehensive income classified as 'Non-current assets held for sale' because they form part of a disposal group or a discontinued operation that are recorded in the equity balancing entry 'Other accumulated comprehensive income - Items that can be reclassified in income - Non-current assets as held for sale'.

v. Hedging transactions

Banco Santander uses financial derivatives for the following purposes: i) to facilitate these instruments to customers who request them in the management of their market and credit risks; ii) to use these derivatives in the management of the risks of the Group entities' own positions and assets and liabilities (hedging derivatives); and iii) to obtain gains from changes in the prices of these derivatives (derivatives).

Financial derivatives that do not qualify for hedge accounting are treated for accounting purposes as trading derivatives.

A derivative qualifies for hedge accounting if all the following conditions are met:

1. The derivative hedges one of the following three types of exposure:
 - a. Changes in the fair value of assets and liabilities due to fluctuations, among others, in the interest rate and/or exchange rate to which the position or balance to be hedged is subject (fair value hedge).
 - b. Changes in the estimated cash flows arising from financial assets and liabilities, commitments and highly probable forecast transactions (cash flow hedge).
 - c. The net investment in a foreign operation (hedge of a net investment in a foreign operation).
2. It is effective in offsetting exposure inherent in the hedged item or position throughout the expected term of the hedge, which means that:
 - a. At the date of arrangement the hedge is expected, under normal conditions, to be highly effective (prospective effectiveness).
 - b. There is sufficient evidence that the hedge was actually effective during the whole life of the hedged item or position (retrospective effectiveness). To this end, the Bank checks that the results of the hedge were within a range of 80% to 125% of the results of the hedged item.
3. There must be adequate documentation evidencing the specific designation of the financial derivative to hedge certain balances or transactions and how this hedge was expected to be achieved and measured, provided that this is consistent with the Bank's management of own risks.

The changes in value of financial instruments qualifying for hedge accounting are recognised as follows:

- a. In fair value hedges, the gains or losses arising on both the hedging instruments and the hedged items attributable to the type of risk being hedged are recognised directly in the income statement.

In fair value hedges of interest rate risk on a portfolio of financial instruments, the gains or losses that arise on measuring the hedging instruments are recognised directly in income statement, whereas the gains or losses due to changes in the fair value of the hedged amount (attributable to the hedged risk) are recognised in income statement with a balancing entry under Changes in the fair value of hedged items in portfolio hedges of interest rate risk on the asset or liability side of the balance sheet, as appropriate.

- b. In cash flow hedges, the effective portion of the change in value of the hedging instrument is recognised temporarily in Other comprehensive income – under Items that may be reclassified to profit or loss – Hedging derivatives – Cash flow hedges (effective portion) until the forecast transactions occur, when it is recognised in the income statement, unless, if the forecast transactions result in the recognition of non-financial assets or liabilities, it is included in the cost of the non-financial asset or liability.
- c. In hedges of a net investment in a foreign operation, the gains or losses attributable to the portion of the hedging instruments qualifying as an effective hedge are recognised temporarily in Other comprehensive income under Items that may be reclassified to profit or loss – Hedges of net investments in foreign operations until the gains or losses – on the hedged item are recognised in profit or loss.
- d. The ineffective portion of the gains or losses on the hedging instruments of cash flow hedges and hedges of a net investment in a foreign operation is recognised directly under 'Gains/losses on financial assets and liabilities (net)' in the consolidated income statement, in Gains or losses from hedge accounting, net.

If a derivative designated as a hedge no longer meets the requirements described above due to expiration, ineffectiveness or for any other reason, the derivative is classified for accounting purposes as a trading derivative.

When fair value hedge accounting is discontinued, the adjustments previously recognised on the hedged item are amortised to profit or loss at the effective interest rate recalculated at the date of hedge discontinuation. The adjustments must be fully amortised at maturity.

When cash flow hedge accounting is discontinued, any cumulative gain or loss on the hedging instrument recognised in equity under other comprehensive income 'Items that may be reclassified to profit or loss' (from the period when the hedge was effective) remains in this equity item until the forecast transaction occurs, at which time it is recognised in profit or loss, unless the transaction is no longer expected to occur, in which case the cumulative gain or loss is recognised immediately in profit or loss.

vi. Derivatives embedded in hybrid financial instruments

Derivatives embedded in other financial instruments or in other host contracts are accounted for separately as derivatives if their risks and characteristics are not closely related to those of the host contracts, provided that the host contracts are not classified as financial assets/liabilities designated at fair value through profit or loss or as 'Financial assets/liabilities held for trading'.

e) Derecognition of financial assets and liabilities

The accounting treatment of transfers of financial assets depends on the extent to which the risks and rewards associated with the transferred assets are transferred to third parties:

1. If the Bank transfers substantially all the risks and rewards to third parties unconditional -sale of financial assets, sale of financial assets under an agreement to repurchase them at their fair value at the date of repurchase, sale of financial assets with a purchased call option or written put option that is deeply out of the money, securitisation of assets in which the transferor does not retain a subordinated debt or grant any credit enhancement to the new holders, and other similar cases-, the transferred financial asset is derecognised and any rights or obligations retained or created in the transfer are recognised simultaneously.
2. If the Bank retains substantially all the risks and rewards associated with the transferred financial asset -sale of financial assets under an agreement to repurchase them at a fixed price or at the sale price plus interest, a securities lending agreement in which the borrower undertakes to return the same or similar assets, and other similar cases-, the transferred financial asset is not derecognised and continues to be measured by the same criteria as those used before the transfer. However, the following items are recognised:

- a. An associated financial liability, which is recognised for an amount equal to the consideration received and is subsequently measured at amortised cost, unless it meets the requirements for classification under 'Financial liabilities designated at fair value through profit or loss'.
 - b. The income from the transferred financial asset not derecognised and any expense incurred on the new financial liability, without offsetting.
3. If the Bank neither transfers nor retains substantially all the risks and rewards associated with the transferred financial asset -sale of financial assets with a purchased call option or written put option that is not deeply in or out of the money, securitisation of assets in which the transferor retains a subordinated debt or other type of credit enhancement for a portion of the transferred asset, and other similar cases- the following distinction is made:
- a. If the transferor does not retain control of the transferred financial asset, the asset is derecognised and any rights or obligations retained or created in the transfer are recognised.
 - b. If the transferor retains control of the transferred financial asset, it continues to recognise it for an amount equal to its exposure to changes in value and recognises a financial liability associated with the transferred financial asset. The net carrying amount of the transferred asset and the associated liability is the amortised cost of the rights and obligations retained, if the transferred asset is measured at amortised cost, or the fair value of the rights and obligations retained, if the transferred asset is measured at fair value.

Accordingly, financial assets are only derecognised when the rights to the cash flows they generate have expired or when substantially all the inherent risks and rewards have been transferred to third parties. Similarly, financial liabilities are only derecognised when the obligations they generate have been extinguished or when they are acquired with the intention either to cancel them or to resell them.

Regarding contractual modifications of financial assets, the Bank has differentiated them into two main categories in relation to the conditions under which a modification leads to a derecognition or disposal of the financial asset (and the recognition of a new financial asset) and those under which the accounting of the original financial instrument with the modified terms is maintained:

- Contractual modifications for commercial or market reasons, which are generally carried out at the request of the debtor to apply current market conditions to the debt. The new contract is considered a new transaction and, consequently, it is necessary to derecognize the original financial asset and recognize a new financial asset subject to the classification and measurement requirements established by Bank of Spain Circular 4/2017. Also, the new financial asset will be recorded at fair value and, if applicable, the difference between the carrying amount of the asset derecognized and the fair value of the new asset will be recognized in profit or loss.
- Modifications due to refinancing or restructuring, in which the payment conditions are modified to allow a customer that is experiencing financial difficulties (current or foreseeable) to meet its payment obligations and that, if such modification had not been made, it would be reasonably certain that it would not be able to meet such payment obligations. In this case, the modification does not result in the derecognition of the financial asset, but rather the original financial asset is maintained and does not require a new assessment of its classification and measurement. When assessing credit impairment, the current credit risk (considering the modified cash flows) should be compared with the credit risk at initial recognition. Finally, the gross carrying amount of the financial asset (the present value of the renegotiated or modified contractual cash flows that are discounted at the original effective interest rate of the financial asset) should be recalculated, with a gain or loss recognized in profit or loss for the difference.

f) Offsetting of financial instruments

Financial asset and liability balances are offset, i.e. reported in the balance sheet at their net amount, only if Banco Santander currently has a legally enforceable right to off set the recognised amounts and intends to either settle on a net basis, or to realise the asset and settle the liability simultaneously.

On the table below is the detail of financial assets and liabilities that were offset on the balance sheet as of 31 December 2022 and 2021:

EUR million			
2022			
Assets	Gross amount of financial assets	Gross amount of financial assets offset on the balance sheet	Net amount of financial assets presented on the balance sheet
Derivatives	152,830	(96,924)	55,906
Repos	61,580	(22,379)	39,201
Total	214,410	(119,303)	95,107

EUR million			
2021			
Assets	Gross amount of financial assets	Gross amount of financial assets offset on the balance sheet	Net amount of financial assets presented on the balance sheet
Derivatives	83,426	(39,755)	43,671
Repos	39,517	(11,298)	28,219
Total	122,943	(51,053)	71,890

EUR million			
2022			
Liabilities	Gross amount of financial liabilities	Gross amount of financial liabilities offset on the balance sheet	Net amount of financial liabilities presented on the balance sheet
Derivatives	153,005	(96,924)	56,081
Repos	65,023	(22,379)	42,644
Total	218,028	(119,303)	98,725

EUR million			
2021			
Liabilities	Gross amount of financial liabilities	Gross amount of financial liabilities offset on the balance sheet	Net amount of financial liabilities presented on the balance sheet
Derivatives	82,503	(39,755)	42,748
Repos	26,036	(11,298)	14,738
Total	108,539	(51,053)	57,486

At December 31, 2022 the balance sheet amounts EUR 101,488 million on derivatives and temporary acquisition of assets and EUR 105,378 million on derivatives and repos as liabilities that are subject to netting and collateral arrangements (EUR 69,151 million and EUR 54,875 million in 2021, respectively).

g) Impairment of financial assets

i. Definition

Banco Santander associates an impairment in the value to financial assets measured at amortised cost, debt instruments measured at fair value with changes in other comprehensive income, lease receivables and commitments and guarantees granted that are not measured at fair value.

The impairment for expected credit losses is recorded with a charge to the income statement for the period in which the impairment arises. In the event of occurrence, the recoveries of previously recognised impairment losses are recorded in the income statement for the period in which the impairment no longer exists or is reduced.

In the case of purchased or originated credit-impaired assets, the Bank only recognizes at the reporting date the changes in the expected credit losses during the life of the asset since the initial recognition as a credit loss. In the case of assets measured at fair value with changes in other comprehensive income, the changes in the fair value due to expected credit losses are charged in the consolidated income statement of the year where the change happened, reflecting the rest of the valuation in other comprehensive income.

As a rule, the expected credit loss is estimated as the difference between the contractual cash flows to be recovered and the expected cash flows discounted using the original effective interest rate. In the case of purchased or originated credit-impaired assets, this difference is discounted using the effective interest rate adjusted by credit rating.

Depending on the classification of financial instruments, which is mentioned in the following sections, the expected credit losses may be along 12 months or during the life of the financial instrument:

- 12-month expected credit losses: arising from the potential default events, as defined in the following sections that are estimated to be likely to occur within the 12 months following the reporting date. These losses will be associated with financial assets classified as 'normal risk' as defined in the following sections.

- Expected credit losses over the life of the financial instrument: arising from the potential default events that are estimated to be likely to occur throughout the life of the financial instruments. These losses are associated with financial assets classified as 'normal risk under watchlist' or 'doubtful risk'.

With the purpose of estimating the expected life of the financial instrument all the contractual terms have been taken into account (e.g. prepayments, duration, purchase options, etc.), being the contractual period (including extension options) the maximum period considered to measure the expected credit losses. In the case of financial instruments with an uncertain maturity period and a component of undrawn commitment (e.g.: credit cards), the expected life is estimated through quantitative analyses to determine the period during which the entity is exposed to credit risk, also considering the effectiveness of management procedures that mitigate such exposure (e.g. the ability to unilaterally cancel such financial instruments, etc.).

The following constitute effective guarantees:

- Mortgage guarantees on housing as long as they are first duly constituted and registered in favour of the entity. The properties include:
 - Buildings and building elements, distinguishing among:
 - Houses.
 - Offices, stores and multi-purpose premises.
 - Rest of buildings such as non-multi-purpose premises and hotels.
 - Urban and developable ordered land.
 - Rest of properties that classify as: buildings and building elements under construction, such as property development in progress and halted development, and the rest of land types, such as rustic lands.
- Collateral guarantees on financial instruments in the form of cash deposits and debt securities issued by creditworthy issuers.
- Other types of real guarantees, including properties received in guarantee and second and subsequent mortgages on properties, as long as the entity demonstrates its effectiveness. When assessing the effectiveness of the second and subsequent mortgages on properties the entity will implement particularly restrictive criteria. It will take into account, among others, whether the previous charges are in favour of the entity itself or not and the relationship between the risk guaranteed by them and the property value.

- Personal guarantees, as well as the incorporation of new owners, covering the entire amount of the financial instruments and implying direct and joint liability to the entity of persons or other entities whose solvency is sufficiently proven to ensure the repayment of the loan on the agreed terms.

The different aspects that the Bank considers for the evaluation of effective guarantees are set out below in relation to the individual analysis.

ii. Financial instruments presentation

For the purposes of estimating the impairment amount, and in accordance with its internal policies, the Bank classifies its financial instruments (financial assets, commitments and guarantees) measured at amortised cost or fair value through other comprehensive income in one of the following categories:

- Normal Risk ('stage 1'): includes all instruments that do not meet the requirements to be classified in the rest of the categories.
- Normal risk under watchlist ('stage 2'): includes all instruments that, without meeting the criteria for classification as doubtful or default risk, have experienced significant increases in credit risk since initial recognition.

In order to determine whether a financial instrument has increased its credit risk since initial recognition and is to be classified in stage 2, the Group and the Bank consider the following criteria:

Quantitative criteria	<p>Changes in the risk of a default occurring through the expected life of the financial instrument are analysed and quantified with respect to its credit level in its initial recognition.</p> <p>With the purpose of determining if such changes are considered as significant, with the consequent classification into stage 2, each Group, and therefore the Bank, unit has defined the quantitative thresholds to consider in each of its portfolios taking into account corporate guidelines ensuring a consistent interpretation in all units.</p> <p>Within the quantitative thresholds, two types are considered: A relative threshold is those that compare current credit quality with credit quality at the time of origination in percentage terms of change. In addition, an absolute threshold compares both references in total terms, calculating the difference between the two. These absolute/relative concepts are used homogeneously (with different values) in all geographies. The use of one type of threshold or another (or both) is determined in accordance with the process described in note 49, below, and is marked by the type of portfolio and characteristics such as the starting point of the average credit quality of the portfolio.</p>
Qualitative criteria	<p>In addition to the quantitative criteria indicated, various indicators are used that are aligned with those used by the Bank in the normal management of credit risk. Irregular positions of more than 30 days and renewals are common criteria applied by the Bank and common to all the Group's units. Also, each unit can define other qualitative indicators, for each of its portfolios, according to the particularities and normal management practices in line with the policies currently in force (i.e. use of management alerts, etc.). The use of these qualitative criteria is complemented with the use of an expert judgement, under the corresponding governance.</p>

In the case of forbearances, instruments classified as 'normal risk under watchlist' may be generally reclassified to 'normal risk' in the following circumstances: at least two years have elapsed from the date of reclassification to that category or from its forbearance date, the client has paid the accrued principal and interest balance, and the client has no other instruments with more than 30 days past due balances.

- Doubtful Risk ('stage 3'): includes financial instruments, overdue or not, in which, without meeting the circumstances to classify them in the category of default risk, there are reasonable doubts about their total repayment (principal and interests) by the client in the terms contractually agreed. Likewise, off-balance-sheet exposures whose payment is probable and their recovery doubtful are considered in stage 3. Within this category, two situations are differentiated:

- Doubtful risk for non-performing loans: financial instruments, irrespective of the client and guarantee, with balances more than 90 consecutive days on material arrears for principal, interest or expenses contractually agreed.

This category also includes all loan balances for a client when the operations with more than 90 consecutive days on material arrears are greater than 20% of the amounts pending collection.

These instruments may be reclassified to other categories if, as a result of the collection of part of the past due balances, the reasons for their classification in this category do not remain and the client does not have balances more than 90 consecutive days on material arrears in other loans.

- Doubtful risk for reasons other than non-performing loans: this category includes doubtful recovery financial instruments that are not more than 90 consecutive days on material arrears.

Banco Santander considers that a financial instrument to be doubtful for reasons other than delinquency when one or more combined events have occurred with a negative impact on the estimated future cash flows of the financial instrument. To this end, the following indicators, among others, are considered:

- a) Negative net equity or decrease because of losses of the client's net equity by at least 50% during the last financial year.
- b) Continued losses or significant decrease in revenue or, in general, in the client's recurring cash flows.
- c) Generalised delay in payments or insufficient cash flows to service debts.

- d) Significantly inadequate economic or financial structure or inability to obtain additional financing by the client.
- e) Existence of an internal or external credit rating showing that the client is in default.
- f) Existence of overdue customer commitments with a significant amount to public institutions or employees.

These financial instruments may be reclassified to other categories if, as a result of an individualised study, reasonable doubts do not remain about the total repayment under the contractually agreed terms and the client does not have balances of 90 consecutive days on material arrears.

In the case of forbearances, instruments classified as doubtful risk may be reclassified to the category of 'normal risk under watchlist' when the following circumstances are present: a minimum period of one year has elapsed from the forbearance date, the client has paid the accrued principal and interest amounts, and the client has no other loan balances of 90 consecutive days on material arrears.

- Default Risk: includes all financial assets, or part of them, for which, after an individualised analysis, their recovery is considered remote due to a notorious and irrecoverable deterioration of their solvency.

In any case, except in the case of operations with real guarantees that cover more than 10% of the amount of the operation, in general the Bank considers as remote recovery: the operations of holders that are in the liquidation phase of the insolvency creditors, doubtful operations due to delinquency that have been in this category for more than 4 years and doubtful operations due to delinquency whose part not covered by real guarantees has been maintained with 100% credit risk coverage. for more than two years.

A financial asset amount is maintained in the balance sheet until they are considered as a "default risk", either all or a part of it, and the write-off is registered against the balance sheet.

In the case of operations that have only been partially derecognised, for forgiveness reasons or because part of the total balance is considered unrecoverable, the remaining amount shall be fully classified in the category of 'doubtful risk', except where duly justified.

The classification of a financial asset, or part of it, as a 'default risk' does not involve the disruption of negotiations and legal proceedings to recover the amount.

iii. Impairment valuation assessment

Banco Santander has policies, methods and procedures in place to hedge its credit risk, both due to the insolvency attributable to counterparties and its residence in a specific country.

These policies, methods and procedures are applied in the concession, study and documentation of financial assets, commitments and guarantees, as well as in the identification of their impairment and in the calculation of the amounts needed to cover their credit risk.

The asset impairment model in Bank of Spain Circular 4/2017 and subsequent modifications applies to financial assets measured at amortised cost, debt instruments at fair value with changes in other comprehensive income, lease receivables and commitments and guarantees granted that are not measured at fair value.

The impairment represents the best estimation of the financial assets expected credit losses at the balance sheet date, assessed both individually and collectively.

- Individually: for the purposes of estimating the provisions for credit risk arising from the insolvency of a financial instrument, the Bank individually assesses impairment by estimating the expected credit losses on those financial instruments that are considered to be significant and with sufficient information to make such an estimate.

Therefore, this classification mostly includes wholesale banking customers —Corporations, specialised financing— as well as some of the largest companies —Chartered and real estate developers— from retail banking. The determination of the perimeter in which the individualised estimate is applied is detailed in a later section.

The individually assessed impairment estimate is equal to the difference between the gross carrying amount of the financial instrument and the estimated value of the expected cash flows receivable discounted using the original effective interest rate of the transaction. The estimate of these cash flows takes into account all available information on the financial asset and the effective guarantees associated with that asset. This estimation process is detailed below.

- Collectively: the Bank also assesses impairment by estimating the expected credit losses collectively in cases where they are not assessed on an individual basis. This includes, for example, loans with individuals, sole proprietors or businesses in retail banking subject to a standardised risk management.

For the purposes of the collective assessment of expected credit losses, the Bank has consistent and reliable internal models. For the development of these models, instruments with similar credit risk characteristics that are indicative of the debtors' capacity to pay are considered.

The credit risk characteristics used to group the instruments are, among others: type of instrument, debtor's sector of activity, geographical area of activity, type of guarantee, aging of past due balances and any other factor relevant to estimating the future cash flows.

Banco Santander performs retrospective and monitoring tests to evaluate the reasonableness of the collective estimate.

On the other hand, the methodology required to estimate the expected credit loss due to credit events is based on an unbiased and weighted consideration by the probability of occurrence of a series of scenarios, considering a range of three to five possible future scenarios, depending on the characteristics of each unit, which could have an impact on the collection of contractual cash flows, always taking into account the time value of money, as well as all available and relevant information on past events, current conditions and forecasts of the evolution of macroeconomic scenarios that are shown to be relevant for the estimation of this amount (for example: GDP (Gross Domestic Product), housing price, unemployment rate, etc.)

The estimation of expected losses requires expert judgment and the support of historical, current and future information. The probability of loss is measured considering past events, the present situation and future trends of macroeconomic scenarios.

Banco Santander uses forward-looking information in both internal risk management and prudential regulation processes, so that for the calculation of the impairment loss allowance, various scenarios are incorporated that take advantage of the experience with such information, thus ensuring consistency in obtaining the expected loss.

The complexity of the estimation in this exercise has been derived from the current macroeconomic scenario as a consequence of the war in Ukraine, as well as the increasing level of inflation and interest rates, and the difficulties in the supply chains, which has generated some uncertainty in the evolution of the economy.

Banco Santander has internally ensured the criteria to be followed for guarantees received from government bodies, both through credit lines and other public guarantees, so that when they are adequately reflected in each of the contracts, they are recognised as mitigating factors of the potential expected losses, and therefore of the provisions to be recognised, based on the provisions of the applicable standard. Furthermore, where applicable, these guarantees are appropriately reflected in the mitigation of the significant increase in risk, considering their nature as personal guarantees.

For the estimation of the parameters used in the estimation of impairment provisions -EAD (exposure at default), PD (probability of default), LGD (loss given default)-, the Bank based their experience in developing internal models for the estimation of parameters both in the regulatory area and for management purposes, adapting the development of the impairment provision models under Bank of Spain Circular 4/2017 and subsequent modifications.

- Exposure at default: is the amount of estimated risk incurred at the time of the counterparty's analysis.
- Probability of default: is the estimated probability that the counterparty will default on its principal and/or interest payment obligations.
- Loss given default: is the estimate of the severity of the loss incurred in the event of non-compliance. It depends mainly on the updating of the guarantees associated with the operation and the future cash flows that are expected to be recovered.

In any case, when estimating the flows expected to be recovered, portfolio sales are included. It should be noted that due to the Bank's recovery policy and the experience observed in relation to the prices of past sales of assets classified as stage 3 and/or default risk, there is no substantial divergence between the flows obtained from recoveries after performing recovery management of the assets with those obtained from the sale of portfolios of assets discounting structural expenses and other costs incurred.

The definition of default implemented by the Bank for the purpose of calculating the impairment provision models is based on the definition in Article 178 of Regulation 575/2013 of the European Union (CRR), which is fully aligned with the requirements of IFRS9, which considers that a 'default' exists in relation to a specific customer/contract when at least one of the following circumstances exists: the entity considers that there are reasonable doubts about the payment of all its credit obligations or that the customer/contract is in an irregular situation for more than 90 consecutive days past due material balances with respect to any significant credit obligation.

Banco Santander has partially and voluntarily aligned during 2022 the accounting definition of Stage 3, as well as the calculation of impairment provision models, to the New Definition of Default, incorporating the criteria defined by the EBA in its implementation guide of the definition of default, capturing the economic deterioration of the operations (days in default - on a daily basis - and materiality thresholds - minimum amount in arrears). The alignment of criteria has been done taking into account the criteria of IFRS 9 as well as the accounting principles of unbiased presentation of financial information. Grupo Santander has registered an increase in the default rate at around 19 basis points, with no material impact on the provision figures for credit risk.

In addition, the Bank considers the risk generated in all cross-border transactions due to circumstances other than the usual commercial risk of insolvency (sovereign risk, transfer risk or risks arising from international financial activity, such as wars, natural catastrophes, balance of payments crisis, etc.).

Bank of Spain Circular 4/2017 includes a series of practical solutions that can be implemented by entities, with the aim of facilitating its implementation. However, in order to achieve a complete and high-level implementation of the standard, and following the best practices of the industry, the Bank does not apply these practical solutions in a generalised manner:

- Rebuttable presumption that the credit risk has increased significantly, when payments are more than 30 days past due: this threshold is used as an additional, but not primary, indicator of significant risk increase. Additionally, there may be cases in Grupo Santander where its use has been rebutted as a result of studies that show a low correlation of the significant risk increase with this past due threshold. The volume rebutted does not exceed 0.1% of the Group's total exposure.
- Assets with low credit risk at the reporting date: the Bank assesses the existence of significant risk increase in all its financial instruments.

This information is provided in more detail in note 49.b.

iv. Detail of individual estimate of impairment

For the individual estimate of the assessment for impairment of the financial asset, the Bank has a specific methodology to estimate the value of the cash flows expected to be collected:

- Recovery through the debtor's ordinary activities (going approach).
- Recovery through the execution and sale of the collateral guaranteeing the operations (gone approach).

Gone approach:

a. Evaluation of the effectiveness of guarantees

Banco Santander the effectiveness of all the guarantees associated considering the following:

- The time required to execute these guarantees.
- Banco Santander's ability to enforce or assert these guarantees in its favour.
- The existence of limitations imposed by each local unit's regulation on the foreclosure of collateral.

Under no circumstances the Bank considers that a guarantee is effective if its effectiveness depends substantially on the solvency of the debtor, as could be the case:

- Promises of shares or other securities of the debtor himself when their valuation may be significantly affected by a debtor's default.
- Personal cross-collateralisation: when the guarantor of a transaction is, at the same time, guaranteed by the holder of that transaction.

On the basis of the foregoing, the following types of guarantees are considered to be effective:

- Mortgage guarantees on properties, which are first charge, duly constituted and registered. Real estate includes:
 - Buildings and finished building elements.
 - Urban and developable land in order.
 - Other real estate, including buildings under construction, developments in progress or at a standstill, and other land, such as rural properties.
- Pledges on financial instruments such as cash deposits, debt securities of reputable issuers or equity instruments.
- Other types of security interests, including movable property received as security and second and subsequent mortgages on real state, provided that they are proven to be effective under particularly restrictive criteria.

- Personal guarantees, including new holders, covering the entire amount and involving direct and joint liability to the entity, from persons or entities whose equity solvency ensures repayment of the transaction under the agreed terms.

b. Valuation of guarantees

Banco Santander assesses the guarantees on the basis of their nature in accordance with the following:

- Mortgage guarantees on properties associated with financial instruments, using a complete individual valuations carried out by independent valuation experts and under generally accepted valuation standards. If this is not possible, alternative valuations are used with duly documented and approved internal valuation models.
- Personal guarantees are valued individually on the basis of the guarantor's updated information.
- The rest of the guarantees are valued based on current market values.

c. Adjustments to the value of guarantees and estimation of future cash flow inflows and outflows.

Banco Santander applies a series of adjustments to the value of the guarantees in order to improve the reference values:

- Adjustments based on the historical sales experience for certain types of assets.
- Individual expert adjustments based on additional management information.

Likewise, to adjust the value of the guarantees, the time value of money is taken into account based on the historical experience, estimating:

- Period of adjudication.
- Estimated time of sale of the asset.

In addition, the Bank takes into account all those cash inflows and outflows linked to that guarantee until it is sold:

- Possible future income commitments in favour of the borrower which will be available after the asset is awarded.
- Estimated foreclosure costs.
- Asset maintenance costs, taxes and community costs.
- Estimated marketing or sales costs.

Finally, since it is considered that the guarantee will be sold in the future, the Bank applies an additional adjustment ('index forward') in order to adjust the value of the guarantees to future valuation expectations.

v. Impairment individual assessment scope

Banco Santander determines the perimeter over which it makes an estimate of the assessment for impairment on an individual basis based on a relevance threshold and the stage in which the operations are located. In general, the Group applies the individualised calculation of expected losses to the significant exposures classified in stage 3, although Banco Santander, S.A. has also extended its analyses to some of the exposures classified in stage 2.

It should be noted that, in any case and irrespective of the stage in which their transactions are carried out, for customers who do not receive standardised treatment, a relational risk management model is applied, with individualised treatment and monitoring by the assigned risk analyst. In addition to wholesale customers (Santander Corporate & Investment Banking or SCIB) and large companies, this relational management model also includes other segments of smaller companies for which there is information and capacity for more personalised and expert analysis and monitoring. As indicated in the Bank's wholesale credit model, the individual treatment of the client facilitates the continuous updating of information. The risk assumed must be followed and monitored throughout its life cycle, enabling anticipation and action to be taken in the event of possible impairments. In this way, the customer's credit quality is analysed individually, taking into account specific aspects such as his competitive position, financial performance, management, etc. In the wholesale risk management model, every customer with a credit risk position is assigned a rating, which has an associated probability of customer default. Thus, individual analysis of the debtor triggers a specific rating for each customer, which determines the appropriate parameters for calculating the expected loss, so that it is the rating itself that initially modulates the necessary coverage, adjusting the severity of the possible loss to the guarantees and other mitigating factors that the customer may have available. In addition, if as a result of this individualised monitoring of the customer, the analyst finally considers that his coverage is not sufficient, he has the necessary mechanisms to adjust it under his expert judgement, always under the appropriate governance.

h) Repurchase agreements and reverse repurchase agreements

Purchases (sales) of financial instruments under a non-optional resale (repurchase) agreement at a fixed price (repos) are recognised in the balance sheet as financing granted (received), based on the nature of the debtor (creditor), under 'Loans and advances with central banks', 'Loans and advances to credit institutions' or 'Loans and advances to customers' (Deposits from central banks, Deposits from credit institutions or Customer deposits).

Differences between the purchase and sale prices are recognised as interest over the contract term.

i) 'Non-current assets' and 'liabilities associated with non-current assets held for sale'

'Non-current assets held for sale' includes the carrying amount of individual items, disposal groups or items forming part of a business unit earmarked for disposal (discontinued operations), whose sale in their present condition is highly likely to be completed within one year from the reporting date. Therefore, the recovery of the carrying amount of these items -which can be of a financial nature or otherwise- will foreseeably be effected through the proceeds from their disposal.

Specifically, property or other non-current assets received by Banco Santander as total or partial settlement of their debtors' payment obligations to them are deemed to be 'Non-current assets held for sale', unless the Bank has decided to make continuing use of these assets. In this connection, for the purpose of its consideration in the initial recognition of these assets, the Bank obtains, at the foreclosure date, the fair value of the related asset through a request for appraisal by external appraisal agencies.

Banco Santander has in place a corporate policy that ensures the professional competence and the independence and objectivity of the external appraisal agencies, in accordance with the regulations, which require appraisal agencies to meet independence, neutrality and credibility requirements, so that the use of their estimates does not reduce the reliability of its valuations. This policy establishes that all the appraisal companies and agencies with which the Bank works in Spain should be registered in the Official Register of the Bank of Spain and that the appraisals performed by them should follow the methodology established in Ministry of Economy Order ECO/805/2003, of 27 March. The main appraisal companies and agencies with which the Group worked in 2022 are as follows: Gloval Valuation, S.A.U., Tinsa Tasaciones Inmobiliarias, S.A.U., CBRE Valuation Advisory, S.A., Valoraciones Mediterráneo, S.A. y Sociedad de tasación, S.A.

'Liabilities associated with non-current assets held for sale' includes the balances payable arising from the assets held for sale or disposal groups and from discontinued operations.

'Non-current assets and disposal groups of items that have been classified as held for sale' are generally recognised at the date of their allocation to this category and are subsequently valued at the lower of their fair value less costs to sell or its book value. 'Non-current assets and disposal groups of items that are classified as held for sale' are not amortised as long as they remain in this category.

At 31 December 2022 the fair value minus the costs to sell of non-current assets held for sale exceeded their carrying amount by EUR 298 million (EUR 229 million in 2021); however, in accordance with the applicable legislation, this unrealised gain could not be recognised.

The valuation of the portfolio of non-current assets held for sale has been made in compliance with the requirements of Bank of Spain Circular 4/2017 and subsequent modifications in relation to the estimate of the fair value of tangible assets and the value-in-use of financial assets.

The value of the portfolio is determined as the sum of the values of the individual elements that compose the portfolio, without considering any total or batch grouping in order to correct the individual values.

Banco Santander, in compliance with Bank of Spain Circular 4/2017, and subsequent amendments, on public and private financial reporting standards and financial statement models, has developed a methodology that enables it to estimate the fair value and costs of sale of assets foreclosed or received in payment of debts. This methodology is based on the classification of the portfolio of foreclosed assets into different segments. Segmentation enables the intrinsic characteristics of Banco Santander's portfolio of foreclosed assets to be differentiated, so that assets with homogeneous characteristics are grouped by segment. Thus, the portfolio is segmented into (i) finished assets of a residential and tertiary nature, (ii) developments in progress and (iii) land¹.

In determining the critical segments in the overall portfolio, assets are classified on the basis of the nature of the asset and its stage of development. This segmentation is made in order to seek the liquidation of the asset (which should be carried out in the shortest possible time).

When making decisions, the situation and/or characteristics of the asset are fundamentally taken into account, as well as the evaluation of all the determining factors that favour the recovery of the debt. For them, the following aspects are analyzed, among others:

- The time that has elapsed since the adjudication.
- The transferability and contingencies of the foreclosed asset.
- The economic viability from the real estate point of view with the necessary investment estimate.
- The expenses that may arise from the marketing process.

In the case of real estate assets foreclosed in Spain, which represent 90% of the Group's total non-current assets held for sale, the valuation of the portfolio is carried out by applying the following models:

- Market Value Model used in the valuation of finished properties of a residential nature (mainly homes and car parks) and properties of a tertiary nature (offices, commercial premises and multipurpose buildings). For the valuation of finished assets whose availability for sale is immediate, a market sale value provided by a third party external to Banco Santander is considered, calculated under the AVM methodology by the comparable properties method adjusted by our experience in selling similar assets, given the term, price, volume, trend in the value of these assets and the time elapsing until their sale and discounting the estimated costs of sale.

The market value is determined on the basis of the definition established by the International Valuation Standards drawn up by the IVSC (International Valuation Standards Council), understood as the estimated amount for which an asset or a liability should be exchanged on the measurement date between a willing buyer and a willing seller, in an arm's length transaction, after appropriate marketing, and in which the parties have acted with sufficient information, prudently and without coercion.

The current market value of the properties is estimated on the basis of automated valuations obtained by taking comparable properties as a reference; simulating the procedure carried out by an appraiser in a physical valuation according to Order ECO 805/2003: selection of properties and obtaining the unit value by applying homogenisation adjustments. The selection of the properties is carried out by location within the same real estate cluster and according to the characteristics of the properties, filtering by type², surface area range and age. The model enables a distinction to be made within the municipality under study as to which areas are similar

¹ The assets in a situation of 'stopped development' are included under 'land

² Assets qualified as protected housing are taken into account. The maximum legal value of these assets is determined by the VPO module, obtained from the result of multiplying the State Basic Module (MBE) by a zone coefficient determined by each autonomous community. To carry out the valuation of a protected property, the useful surface area is used in accordance with current regulations.

and comparable and therefore have a similar value in the property market, discriminating between which properties are good comparators and which are not.

Adjustments to homogenize the properties are made according to: (i) the age of the property according to the age of the property to be valued, (ii) the deviation of the built area from the common area with respect to the property to be valued and (iii) by age of the date of capture of the property according to the price evolution index of the real estate market.

In addition, for individually significant assets, complete individual valuations are carried out, including a visit to the asset, market analysis (data relating to supply, demand, current sale or rental price ranges and supply-demand and revaluation expectations) and an estimate of expected income and costs.

For this segmentation of assets, when they are completed, the real costs are known and the actual expenses for the marketing and sale of the asset must be taken into account. Therefore, Banco Santander uses the actual costs in its calculation engine or, failing that, those estimated on the basis of its observed experience.

- Market Value Model according to Evolution of Market Values used to update the valuation of developments in progress. The valuation model estimates the current market value of the properties based on complete individual valuations by third parties, calculated from the values of the feasibility studies and development costs of the promotion, as well as the selling costs, distinguishing by location, size and type of property. The inputs used in the valuation model for residential assets under construction are actual revenues and costs.

For this purpose, in order to calculate the investment flows, Banco Santander considers, on the basis of the feasibility studies, the expenditure required for construction, the professional fees relating to the project and to project management, the premiums for mandatory building insurance, the developer's administrative expenses, licenses, taxes on new construction and fees, and urban development charges.

With respect to the calculation of income flows, Banco Santander takes into account the square metres built, the number of homes under construction and the estimated selling price over 1.5 years.

The market value will be the result of the difference between the income flows and the investment flows estimated at each moment.

- Land Valuation model. The methodology followed by the Bank regarding land valuation consists of updating the individual reference valuation of each of the land on an annual basis, through updated

valuation valuations carried out by independent professionals and following the methodology established in the OM (Ministerial Order) ECO/805/2003, of 27 March, whose main verifications in the case of land valuation, regardless of the degree of urbanisation of the land, correspond to:

- Visual verification of the assessed property.
- Registry description.
- Urban planning.
- Visible easements.
- Visible state of occupation, possession, use and exploitation.
- Protection regime.
- Apparent state of preservation.
- Correspondence with cadastral property..
- Existence of expropriation procedure, expropriation plan or project, administrative resolution or file that may lead to expropriation.
- Expiry of the urbanization or building deadlines.
- Existence of a procedure for failure to comply with obligations.
- Verification of surfaces.

For the purposes of valuation, the land will be classified in the following levels:

- Level I: It will include all the lands that do not belong to level II.
- Level II: It shall include land classified as undeveloped where building is not allowed for uses other than agriculture, forestry, livestock or linked to an economic exploitation permitted by the regulations in force. Also included are lands classified as developable that are not included in a development area of urban planning or that, in such an area, the conditions for its development have not been defined.

In those cases where Banco Santander does not have an updated reference value through an ECO valuation for the current year, we use as a reference value the latest available ECO valuation reduced or corrected by the average annual coverage ratio of the land on which we have obtained an updated reference value, through an ECO valuation.

Banco Santander applies a discount to the aforementioned reference values that takes into account both the discount on the reference value in the sales process and the estimated costs of marketing or selling the land: Discount on reference value = % discount on sales + % marketing costs being:

- % discount on Sales: = $100 - (\text{sales price} / \text{updated appraisal value})$.
- marketing costs: calculated on the basis of our historical experience in sales and in accordance with the marketing management fees negotiated with our suppliers of this type of service.

In this way Banco Santander obtains the corrected market value, an amount that we compare with the net cost of each piece of land to determine its correct valuation and conclude with our valuation process.

In addition, in relation to the previously mentioned valuations, less costs to sell, are contrasted with the sales experience of each type of asset in order to confirm that there is no significant difference between the sale price and the valuation.

Impairment losses on an asset or disposal group arising from a reduction in its carrying amount to its fair value (less costs to sell) are recognised under 'Gains or (losses) on non-current assets held for sale not classified as discontinued operations' in the income statement.

The gains on a non-current asset held for sale resulting from subsequent increases in fair value (less costs to sell) increase its carrying amount and are recognised in the consolidated income statement up to an amount equal to the impairment losses previously recognised.

j) Insurance contracts linked to pensions

The item 'Insurance contracts linked to pensions', included within the heading 'Other assets' (see note 2.n), will include the fair value of the insurance policies to cover pension commitments that must be recorded as a Separate asset for not meeting the requirements established in regulation 35 of Bank of Spain Circular 4/2017 and subsequent modifications, to be considered plan assets.

k) Tangible assets

Tangible assets includes the amount of buildings, land, furniture, vehicles, computer hardware and other fixtures owned by Banco Santander or acquired under finance leases. Tangible assets are classified by use as follows:

i. Property, plant and equipment for own use

Property, plant and equipment for own use – including tangible assets received by the Bank in full or partial satisfaction of financial assets representing receivables from third parties which are intended to be held for continuing use and tangible assets acquired under finance leases– are presented at acquisition cost, less the related accumulated depreciation and any estimated impairment losses (carrying amount higher than recoverable amount).

Depreciation is calculated, using the straight-line method, on the basis of the acquisition cost of the assets less their residual value. The land on which the buildings and other structures stand has an indefinite life and, therefore, is not depreciated.

The annual tangible asset depreciation charge is recognised in the income statement and are essentially equivalent to the following amortization percentages (determined based on the years of estimated useful life, on average, of the different elements):

	Average annual rate
Buildings for own use	2.0 %
Furniture	10.0 %
Fixtures	5.0 %
IT equipment	25.0 %
Vehicles	16.0 %
Other	5.0 %
Lease use rights	Less than the lease term or the useful life of the underlying asset

At the end of each reporting period, Banco Santander assesses whether there is any indication that the carrying amount of an asset exceeds its recoverable amount, in which case they write down the carrying amount of the asset to its recoverable amount and adjust future depreciation charges in proportion to its adjusted carrying amount and to its new remaining useful life, if the useful life needs to be re-estimated.

Similarly, if there is an indication of a recovery in the value of a tangible asset, Banco Santander recognises the reversal of the impairment loss recognised in prior periods and adjust the future depreciation charges accordingly. In no circumstances may the reversal of an impairment loss on an asset raise its carrying amount above that which it would have if no impairment losses had been recognised in prior years.

The estimated useful lives of the items of property, plant and equipment for own use are reviewed at least at the end of the reporting period with a view to detecting significant changes therein. If changes are detected, the useful lives of the assets are adjusted by correcting the depreciation charge to be recognised in the income statement in future years on the basis of the new useful lives.

Upkeep and maintenance expenses relating to property, plant and equipment for own use are recognised as an expense in the period in which they are incurred, since they do not increase the useful lives of the assets.

ii. Investment property

'Investment property' reflects the net values of the land, buildings and other structures held either to earn rentals or for obtaining profits by sales due to future increase in market prices.

The criteria used to recognise the acquisition cost of investment property, to calculate its depreciation and its estimated useful life and to recognise any impairment losses thereon are consistent with those described in relation to property, plant and equipment for own use.

In order to evaluate the possible impairment Banco Santander determines periodically the fair value of its investment property so that, at the end of the reporting period, the fair value reflects the market conditions of the investment property at that date. This fair value is determined annually, taking as benchmarks the valuations performed by independent experts. The methodology used to determine the fair value of investment property is selected based on the status of the asset in question; thus, for properties earmarked for lease, the valuations are performed using the sales comparison approach, whereas for leased properties the valuations are made primarily using the income capitalisation approach and, exceptionally, the sales comparison approach.

In the sales comparison approach, the property market segment for comparable properties is analysed, inter alia, and, based on specific information on actual transactions and firm offers, current prices are obtained for cash sales of those properties. The valuations performed using this approach are considered as level 2 valuations.

In the income capitalisation approach, the cash flows estimated to be obtained over the useful life of the property are discounted taking into account factors that may influence the amount and actual obtainment thereof, such as: (i) the payments that are normally received on comparable properties; (ii) current and probable future occupancy; (iii) the current or foreseeable default rate on payments. The valuations performed using this approach are considered as Level 3 valuations, since significant unobservable inputs are used, such as current and probable future occupancy

and/or the current or foreseeable default rate on payments.

iii. Assets leased out under an operating lease

'Property, plant and equipment' - Leased out under an operating lease reflects the amount of the tangible assets, other than land and buildings, leased out by the Bank under an operating lease.

The criteria used to recognise the acquisition cost of assets leased out under operating leases, to calculate their depreciation and their respective estimated useful lives and to recognise the impairment losses thereon are consistent with those described in relation to property, plant and equipment for own use.

I) Accounting for leases

The main aspects contained in the regulation Bank of Spain Circular 2/2018 adopted by the Bank are included below:

When the Bank acts as lessee, it recognises a right-of-use asset representing its right to use the underlying leased asset with a corresponding lease liability on the date on which the leased asset is available for use by the Bank. Each lease payment is allocated between the liability and the finance charge. The finance charge is allocated to the income statement during the term of the lease in such a way as to produce a constant periodic interest rate on the remaining balance of the liability for each year. The right-of-use asset is depreciated over the useful life of the asset or the lease term, whichever is shorter, on a straight-line basis. If the Bank is reasonably certain to exercise a purchase option, the right-of-use asset is amortized over the useful life of the underlying asset.

Assets and liabilities arising from a lease are initially measured at present value. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including inflation-linked payments), less any lease incentive receivable.
- Variable lease payments that depend on an index or rate.
- The amounts expected to be paid by the lessee under residual value guarantees.
- The exercise price of a purchase option if the lessee is reasonably certain that it will exercise that option.
- Lease termination penalty payments, if the term of the lease reflects the lessee's exercise of that option.

Lease payments are discounted using the interest rate implicit in the lease. Given in certain situations this interest rate cannot be obtained, the discount rate used in this cases, is the lessee's incremental borrowing rate at the related date. For this purpose, the entity has calculated this incremental borrowing rate taking as reference the listed debt instruments issued by the Bank.

in this regard, the Bank has estimated different interest rate curves depending on the currency and economic environment in which the contracts are located.

In order to construct the incremental borrowing rate, a methodology has been developed at the corporate level. This methodology is based on the need for each entity to consider its economic and financial situation, for which the following factors must be considered:

- Economic and political situation (country risk).
- Credit risk of the company.
- Monetary policy.
- Volume and seniority of the company's debt instrument issues.

The incremental borrowing rate is defined as the interest rate that a lessee would have to pay for borrowing, given a similar period to the duration of the lease and with similar security, the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment. The Group entities have a wide stock and variety of financing instruments issued in different currencies to that of the euro (pound, dollar, etc.) that provide sufficient information to be able to determine an "all in rate" (reference rate plus adjustment for credit spread at different terms and in different currencies). In circumstances, where the Bank, has its own financing, this has been used as the starting point for determining the incremental borrowing rate.

Right-of-use assets are valued at cost which includes the following:

- The amount of the initial measurement of the lease liability.
- Any lease payment made at or before the commencement date less any lease incentive received.
- Any initial direct costs.
- Restoration costs.

Banco Santander recognises the payments associated with short-term leases and leases of low-value assets on a straight-line basis as an expense in the income statement. Short-term leases are leases with a lease term less than or equal to 12 months (a lease that contains a purchase option is not a short term lease).

m) Intangible assets

Intangible assets are identifiable non-monetary assets (separable from other assets) without physical substance which arise as a result of a legal transaction or which are developed internally by Banco Santander.

Only assets whose cost can be estimated reliably and from which the Bank considers it probable that future economic benefits will be generated are recognised.

Intangible assets are recognised initially at acquisition or production cost and are subsequently measured at cost less any accumulated amortisation and any accumulated impairment losses.

i. Goodwill

Any excess of the cost of the investments in the subsidiaries, joint ventures and associates accounted for using the equity method over the corresponding underlying carrying amounts acquired, adjusted at the date of first-time consolidation, is allocated as follows:

- If it is attributable to specific assets and liabilities of the companies acquired, by increasing the value of the assets (or reducing the value of the liabilities) whose fair values were higher (lower) than the carrying amounts at which they had been recognised in the acquired entities' balance sheets.
- If it is attributable to specific intangible assets, by recognising it explicitly in the balance sheet provided that the fair value of these assets within twelve months following the date of acquisition can be measured reliably.
- The remaining amount is recognised as goodwill, which is allocated to one or more cash-generating units (CGU) (a cash-generating unit is the smallest identifiable group of assets that, as a result of continuing operation, generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets). The cash-generating units represent the Banco Santander's geographical and/or business segments.

Goodwill (only recognised when it has been acquired by consideration) represents, therefore, a payment made by the acquirer in anticipation of future economic benefits from assets of the acquired entity that are not capable of being individually identified and separately recognised.

Goodwill, in accordance with Bank of Spain Circular 4/2017, is to be amortized over a 10-year period unless otherwise stated. The debits to the income statements for the amortisation of these assets are recorded under the section 'Amortisation' in the income statement.

At the end of each annual reporting period or whenever there is any indication of impairment goodwill is reviewed for impairment (i.e. a reduction in its recoverable amount to below its carrying amount) and, if there is any impairment, the goodwill is written down with a charge to 'Impairment or reversal of impairment on non-financial assets, net - Intangible assets' in the income statement.

An impairment loss recognised for goodwill is not reversed in a subsequent period.

In the event of sale or departure of an activity that is part of a CGU, the part of the goodwill that can be assigned to said activity would be written-off, taking as a reference the relative value of the same over the total of the CGU at the time of sale or abandonment. If applicable, the distribution by currency of the remaining goodwill will be performed based on the relative values of the remaining activities.

ii. Other intangible assets

Other intangible assets includes the amount of identifiable intangible assets, such as purchased customer lists and computer software.

In accordance with Rule Twenty Eight of Bank of Spain Circular 4/2017, for the financial statements (individual and consolidated) not subject to the framework of International Financial Reporting Standards, intangible assets will be considered assets with a limited useful life.

An intangible assets useful life may not exceed the period during which the entity is entitled to use the asset. If the right of use is for a limited period that can be renewed, the useful life will include the renewal period only when there is evidence that the renewal will be carried out without significant cost.

Intangible assets shall be amortized in accordance with their useful life. Banco Santander reviews, at least at the end of each year, the amortisation period and the amortisation method of each of its intangible assets and, if it considers that they are not appropriate, the impact will be treated as a change in its accounting estimates.

The intangible asset amortisation charge is recognised under 'Depreciation and amortisation' in the income statement.

In both cases Banco Santander recognises any impairment loss on the carrying amount of these assets with a charge to 'Impairment or reversal of impairment on non-financial assets, net - Intangible assets' in the income statement.

The criteria used to recognise the impairment losses on these assets and, where applicable, the reversal of impairment losses recognised in prior years are similar to those used for tangible assets (see note 2.k).

Internally developed computer software

Internally developed computer software is recognised as an intangible asset if, among other requisites (basically the Bank's ability to use or sell it), it can be identified and its ability to generate future economic benefits can be demonstrated.

Expenditure on research activities is recognised as an expense in the year in which it is incurred and cannot be subsequently capitalised into the carrying amount of the intangible asset.

n) Other assets

Other assets' in the balance sheet includes the amount of assets not recorded in other items, the breakdown being as follows:

- Inventories: this item includes the amount of assets, other than financial instruments, that are held for sale in the ordinary course of business, that are in the process of production, construction or development for such purpose, or that are to be consumed in the production process or in the provision of services. Inventories include land and other property held for sale in the property development business.

Inventories are measured at the lower of cost and net realisable value, which is the estimated selling price of the inventories in the ordinary course of business, less the estimated costs of completion and the estimated costs required to make the sale.

Any write-downs of inventories -such as those due to damage, obsolescence or reduction of selling price- to net realisable value and other impairment losses are recognised as expenses for the year in which the impairment or loss occurs. Subsequent reversals are recognised in the income statement for the year in which they occur.

The carrying amount of inventories is derecognised and recognised as an expense in the period in which the revenue from their sale is recognised.

- Other: this item includes the balance of all prepayments and accrued income (excluding accrued interest, fees and commissions), the net amount of the difference between pension plan obligations and the value of the plan assets with a balance in the entity's favour, when this net amount is to be reported in the balance sheet, and the amount of any other assets not included in other items.

o) Other liabilities

'Other liabilities' includes the balance of all accrued expenses and deferred income, excluding accrued interest, and the amount of any other liabilities not included in other categories.

p) Provisions and contingent liabilities (assets)

When preparing the financial statements of the Bank, Banco Santander's directors made a distinction between:

- Provisions: credit balances covering present obligations at the reporting date arising from past events which could give rise to a loss for the Banco Santander, which is considered to be likely to occur and certain as to its nature but uncertain as to its amount and/or timing.
- Contingent liabilities: possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the Bank. They include the present obligations of the Bank when it is not probable that an outflow of resources embodying economic benefits will be required to settle them. Banco Santander does not recognise the contingent liability. The Bank will disclose a contingent liability, unless the possibility of an outflow of resources embodying economic benefits is remote.
- Contingent assets: possible assets that arise from past events and whose existence is conditional on, and will be confirmed only by, the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Bank. Contingent assets are not recognised in the balance sheet or in the income statement, but rather are disclosed in the notes, provided that it is probable that these assets will give rise to an increase in resources embodying economic benefits.

Banco Santander's financial statements include all the material provisions with respect to which it is considered that it is more likely than not the obligation will have to be settled. In accordance with accounting standards, contingent liabilities must not be recognised in the consolidated financial statements, but must rather be disclosed in the Notes.

Provisions (which are quantified on the basis of the best information available on the consequences of the event giving rise to them and are reviewed and adjusted at the end of each year) are used to cater for the specific obligations for which they were originally recognised. Provisions are fully or partially reversed when such obligations cease to exist or are reduced.

Provisions are classified according to the obligations covered as follows (see note 23):

- Provision for pensions and similar obligations: includes the amount of all the provisions made to

cover post-employment benefits, including obligations to pre-retirees and similar obligations.

- Provisions for contingent liabilities and commitments: include the amount of the provisions made to cover contingent liabilities -defined as those transactions in which the Bank guarantees the obligations of a third party, arising as a result of financial guarantees granted or contracts of another kind- and contingent commitments -defined as irrevocable commitments that may give rise to the recognition of financial assets.
- Provisions for taxes and other legal contingencies and Other provisions: include the amount of the provisions recognised to cover tax and legal contingencies and litigation and the other provisions recognised by Banco Santander. Other provisions includes, inter alia, any provisions for restructuring costs and environmental measures.

q) Court proceedings and/or claims in process

At the end of 2022 certain court proceedings and claims were in process against Banco Santander arising from the ordinary course of their operations (see note 23).

r) Own equity instruments

Own equity instruments are those meeting both of the following conditions:

- The instruments do not include any contractual obligation for the issuer (i) to deliver cash or another financial asset to a third party; or (ii) to exchange financial assets or financial liabilities with a third party under conditions that are potentially unfavourable to the issuer.
- The instruments will or may be settled in the issuer's own equity instruments and are: (i) a non-derivative that includes no contractual obligation for the issuer to deliver a variable number of its own equity instruments; or (ii) a derivative that will be settled by the issuer through the exchange of a fixed amount of cash or another financial asset for a fixed number of its own equity instruments.

Transactions involving own equity instruments, including their issuance and cancellation, are charged directly to equity.

Changes in the value of instruments classified as own equity instruments are not recognised in the financial statements. Consideration received or paid in exchange for such instruments, including the coupons on preference shares contingently convertible into ordinary shares and the coupons associated with CCPP, is directly added to or deducted from equity.

s) Equity-instrument-based employee remuneration

Own equity instruments delivered to employees in consideration for their services, if the instruments are delivered once the specific period of service has ended, are recognised as an expense for services (with the corresponding increase in equity) as the services are rendered by employees during the service period. At the grant date the services received (and the related increase in equity) are measured at the fair value of the equity instruments granted. If the equity instruments granted are vested immediately, Banco Santander recognises in full, at the grant date, the expense for the services received.

When the requirements stipulated in the remuneration agreement include external market conditions (such as equity instruments reaching a certain quoted price), the amount ultimately to be recognised in equity will depend on the other conditions being met by the employees (normally length of service requirements), irrespective of whether the market conditions are satisfied. If the conditions of the agreement are met but the external market conditions are not satisfied, the amounts previously recognised in equity are not reversed, even if the employees do not exercise their right to receive the equity instruments.

t) Recognition of income and expenses

The most significant criteria used by Banco Santander to recognise its income and expenses are summarised as follows:

i. Interest income, interest expenses and similar items

Interest income, interest expenses and similar items are generally recognised on an accrual basis using the effective interest method. Dividends received from other companies are recognised as income when the Banco Santander right to receive them arises.

ii. Commissions, fees and similar items

Fee and commission income and expenses are recognised in the income statement using criteria that vary according to their nature. The main criteria are as follows:

- Fee and commission income and expenses relating to financial assets and financial liabilities measured at fair value through profit or loss are recognised when paid.
- Those arising from transactions or services that are performed over a period of time are recognised over the life of these transactions or services.
- Those relating to services provided in a single act are recognised when the single act is carried out.

iii. Non-finance income and expenses

They are recognised for accounting purposes when the good is delivered or the non-financial service is rendered. To determine the amount and timing of recognition, a five-step model is followed: identification of the contract with the customer, identification of the separate obligations of the contract, determination of the transaction price, distribution of the transaction price among the identified obligations and finally recording of income as the obligations are satisfied.

iv. Deferred collections and payments

These are recognised for accounting purposes at the amount resulting from discounting the expected cash flows at market rates.

v. Loan arrangement fees

Loan arrangement fees, mainly loan origination, application and information fees, are accrued and recognised in income over the term of the loan.

u) Financial guarantees

Financial guarantees are considered contracts that require the issuer to make specific payments to reimburse the creditor for the loss it incurs when a specific debtor defaults on its due date payment obligation in accordance with the original or modified conditions of debt instrument, regardless of its legal form, which may be, among others, a deposit, financial guarantee, insurance contract or credit derivative.

Banco Santander initially recognises the financial guarantees provided on the liability side of the balance sheet at fair value, which is generally the present value of the fees, commissions and interest receivable from these contracts over the term thereof, and simultaneously the Bank recognises the amount of the fees, commissions and similar interest received at the inception of the transactions and a credit on the asset side of the balance sheet for the present value of the fees, commissions and interest outstanding.

Financial guarantees, regardless of the guarantor, instrumentation or other circumstances, are reviewed periodically so as to determine the credit risk to which they are exposed and, if appropriate, to consider whether a provision is required. The credit risk is determined by application of criteria similar to those established for quantifying impairment losses on debt instruments carried at amortised cost (described in note 2.g above).

The provisions made for these transactions are recognised under 'Provisions - Provisions for commitments and guarantees given in the consolidated balance sheet' (see note 23). These provisions are recognised and reversed with a charge or credit, respectively, to 'Provisions or reversal of provisions', net, in the consolidated income statement.

If a specific provision is required for financial guarantees, the related unearned commissions recognised under 'Financial liabilities at amortised cost - Other financial liabilities in the balance sheet', are reclassified to the appropriate provision.

v) Post-employment benefits

Under the collective agreements currently in force and other arrangements, the Spanish banks included in the Group and certain other Spanish and foreign consolidated entities have undertaken to supplement the public social security system benefits accruing to certain employees, and to their beneficiary right holders, for retirement, permanent disability or death, and the post-employment welfare benefits.

Banco Santander's post-employment obligations to its employees are deemed to be defined contribution plans when the Bank makes pre-determined contributions (recognised under Personnel expenses in the income statement) to a separate entity and will have no legal or effective obligation to make further contributions if the separate entity cannot pay the employee benefits relating to the service rendered in the current and prior periods. Post-employment obligations that do not meet the aforementioned conditions are classified as defined benefit plans (see note 23).

Defined contribution plans

The contributions made in this connection in each year are recognised under 'Personnel expenses' in the income statement.

The amounts not yet contributed at each year-end are recognised, at their present value, under 'Provisions - Provision for pensions' and similar obligations on the liability side of the balance sheet.

Defined benefit plans

Banco Santander recognises under 'Provisions - Provision for pensions and similar obligations on the liability side of the balance sheet' (or under 'Other assets' on the asset side, as appropriate) the present value of its defined benefit post-employment obligations, net of the fair value of the plan assets.

Plan assets are defined as those that will be directly used to settle obligations and that meet the following conditions:

- They are not owned by Banco Santander, but by a legally separate third party that is not a party related to the Bank.
- They are only available to pay or fund post-employment benefits and they cannot be returned to the Bank unless the assets remaining in the plan are sufficient to meet all the benefit obligations of the plan and of the entity to current and former employees, or they are returned to reimburse employee benefits already paid by the Bank.

If Banco Santander can look to an insurer to pay part or all of the expenditure required to settle a defined benefit obligation, and it is practically certain that said insurer will reimburse some or all of the expenditure required to settle that obligation, but the insurance policy does not qualify as a plan asset, the Bank recognises its right to reimbursement -which, in all other respects, is treated as a plan asset- under 'Insurance contracts linked to pensions' on the asset side of the balance sheet.

Banco Santander will recognise the following items in the income statement:

- Current service cost, (the increase in the present value of the obligations resulting from employee service in the current period), is recognised under 'Staff costs'.
- The past service cost, which arises from changes to existing post-employment benefits or from the introduction of new benefits and includes the cost of reductions, is recognised under 'Provisions or reversal of provisions'.
- Any gain or loss arising from a liquidation of the plan is included in the Provisions or reversion of provisions.
- Net interest on the net defined benefit liability (asset), i.e. the change during the period in the net defined benefit liability (asset) that arises from the passage of time, is recognised under 'Interest expense' and similar charges ('Interest and similar income' if it constitutes income) in the income statement.

The remeasurement of the net defined benefit liability (asset) is recognised in 'Other comprehensive income' under Items not reclassified to profit or loss and includes:

- Actuarial gains and losses generated in the year, arising from the differences between the previous actuarial assumptions and what has actually occurred and from the effects of changes in actuarial assumptions.
- The return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).
- Any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset).

w) Other long-term employee benefits

Other long-term employee benefits, defined as obligations to pre-retirees -taken to be those who have ceased to render services at the entity but who, without being legally retired, continue to have economic rights vis-à-vis the entity until they acquire the legal status of retiree-, long-service bonuses, obligations for death of spouse or disability before retirement that depend on the employee's length of service at the entity and other similar items, are treated for accounting purposes, where applicable, as established above for defined benefit post-employment plans, except that actuarial gains and losses are recognised under 'Provisions or reversal of provisions', net, in the income statement (see note 23).

x) Termination benefits

Termination benefits are recognised when there is a detailed formal plan identifying the basic changes to be made, provided that implementation of the plan has begun, its main features have been publicly announced or objective facts concerning its implementation have been disclosed.

y) Income tax

The income tax expense is recognised in the income statement, except when they arise from a transaction whose results are recognised directly in equity.

The current income tax expense is calculated as the sum of the current tax resulting from application of the appropriate tax rate to the taxable profit for the year (net of any deductions allowable for tax purposes), and of the changes in deferred tax assets and liabilities recognised in the income statement.

'Deferred tax assets' and liabilities include temporary differences, which are identified as the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their related tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realised or the liability is settled.

'Tax assets' include the amount of all tax assets, which are broken down into current -amounts of tax to be recovered within the next twelve months- and deferred - amounts of tax to be recovered in future years, including those arising from tax loss or tax credit carryforwards.

Tax liabilities' includes the amount of all tax liabilities (except provisions for taxes), which are broken down into current -the amount payable in respect of the income tax on the taxable profit for the year and other taxes in the next twelve months- and deferred -the amount of income tax payable in future years.

Deferred tax liabilities are recognised in respect of taxable temporary differences associated with investments in subsidiaries, associates or joint ventures,

except when the Bank is able to control the timing of the reversal of the temporary difference and, in addition, it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets are only recognised for temporary differences to the extent that it is considered probable that the Bank will have sufficient future taxable profits against which the deferred tax assets can be utilised, and the deferred tax assets do not arise from the initial recognition (except in a business combination) of other assets and liabilities in a transaction that affects neither taxable profit nor accounting profit. Other deferred tax assets (tax loss and tax credit carryforwards) are only recognised if it is considered probable that the Bank entities will have sufficient future taxable profits against which they can be utilised.

Differences generated by the different accounting and tax treatment of any of the income and expenses recorded directly in equity to be paid or recovered in the future are accounted for as temporary differences.

The deferred tax assets and liabilities are reassessed at the reporting date in order to ascertain whether any adjustments need to be made on the basis of the findings of the analyses performed.

z) Residual maturity periods

In note 48 it is provided on analysis of the maturities of the balances of certain items in the balance sheet.

aa) Statement of recognised income and expenses

This statement presents the income and expenses generated by the Bank as a result of its business activity in the year, and a distinction is made between the income and expenses recognised in the income statement for the year and the other income and expenses recognised directly in equity.

Accordingly, this statement presents:

- a. The profit for the year.
- b. The net amount of the income and expenses recognised in 'Other comprehensive income' under items that will not be reclassified to profit or loss.
- c. The net amount of the income and expenses recognised in Other comprehensive income under items that may be reclassified subsequently to profit or loss.
- d. The income tax incurred in respect of the items indicated in b and c above, except for the valuation adjustments arising from investments in associates or joint ventures accounted for using the equity method, which are presented net.
- e. Total recognised income and expense, calculated as the sum of a) to d) above,

The statement presents the items separately by nature, grouping together items that, in accordance with the applicable accounting standards, will not be reclassified subsequently to profit and loss since the requirements established by the corresponding accounting standards are met.

ab) Statement of changes in total equity

This statement presents all the changes in equity, including those arising from changes in accounting policies and from the correction of errors. Accordingly, this statement presents a reconciliation of the carrying amount at the beginning and end of the year of all the equity items, and the changes are grouped together on the basis of their nature into the following items:

- a. Adjustments due to changes in accounting policies and to errors: include the changes in equity arising as a result of the retrospective restatement of the balances in the financial statements, distinguishing between those resulting from changes in accounting policies and those relating to the correction of errors.
- b. Income and expense recognised in the year: includes, in aggregate form, the total of the aforementioned items recognised in the statement of recognised 'Income and expense'.
- c. Other changes in equity: includes the remaining items recognised in equity, including, inter alia, increases and decreases in capital, distribution of profit, transactions involving own equity instruments, equity-instrument-based payments, transfers between equity items and any other increases or decreases in equity.

ac) Statement of cash flows

The following terms are used in the statements of cash flows with the meanings specified:

- Cash flows: inflows and outflows of cash and cash equivalents, which are short-term, highly liquid investments that are subject to an insignificant risk of changes in value, irrespective of the portfolio in which they are classified.

Banco Santander classifies as cash and cash equivalents the balances recognised under 'Cash, cash balances at central banks' and 'Other deposits on demand' in the balance sheet.
- Operating activities: the principal revenue-producing activities of credit institutions and other activities that are not investing or financing activities.
- Investing activities: the acquisition and disposal of long-term assets and other investments not included in cash and cash equivalents.
- Financing activities: activities that result in changes in the size and composition of the equity and liabilities that are not operating activities.

During 2022, Banco Santander received interest amounting to EUR 9,563 million and paid interest amount to EUR 5,205 million (EUR 6,242 and 3,424 million, respectively, in 2021).

Also, the dividends received and paid by Banco Santander are detailed in notes 4 and 36.

3. Grupo Santander

a) Banco Santander, S.A. and international Group structure

The growth of Grupo Santander in the last decades has led Banco Santander to also act, in practice, as a holding entity of the shares of the various companies in its Group, and its results are becoming progressively less representative of the performance and earnings of the Group. Therefore, each year the bank determines the amount of the dividends to be distributed to its shareholders on the basis of the consolidated net profit, while maintaining the Group's objectives of capitalisation and taking into account that the transactions of the Bank and of the rest of the Group are managed on a consolidated basis (notwithstanding the allocation to each company of the related net worth effect).

At the international level, the various banks and other subsidiaries, joint ventures and associates of the Group are integrated in a corporate structure comprising various holding companies which are the ultimate shareholders of the banks and subsidiaries abroad.

The purpose of this structure, all of which is controlled Banco Santander, is to optimise the international organisation from the strategic, economic, financial and tax standpoints, since it makes it possible to define the most appropriate units to be entrusted with acquiring, selling or holding stakes in other international entities, the most appropriate financing method for these transactions and the most appropriate means of remitting the profits obtained by the group's various operating units to Spain.

The Appendices provide relevant data on the consolidated group companies and on the companies accounted for using the equity method.

b) Acquisitions and disposals

Following is a summary of the main acquisitions and disposals of ownership interests in the share capital of other entities and other significant corporate transactions performed in the last two years or pending to be completed:

- i. Tender offer for shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México

On 21 October 2022, Banco Santander, S.A. ('Banco Santander') announced that it intends to make concurrent cash tender offers to acquire all of the shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México ('Santander Mexico') in Mexico (Series B shares) and United States (American Depositary Shares ('ADSs')) which are not owned by Grupo Santander, which amount to approximately 3.76% of Santander Mexico's share capital.

The offers were launched on 7 February 2023 and will be settled on 13 March, 2023. The shareholders who tender their shares in the offer will receive 24.52 Mexican pesos (approximately 1.20 euro) in cash per Santander Mexico share (and the US dollar equivalent of 122.6 Mexican pesos in cash per ADS based on the US dollar/Mexican peso exchange rate on the expiration date of 8 March, 2023), which corresponds to the book value of each Santander Mexico Share in accordance with Santander Mexico's quarterly report for the fourth quarter of 2022 according to applicable law.

Following the tender offers, Banco Santander intends to (a) cancel the registration of the Series B Shares in the National Securities Registry of the Mexican National Banking and Securities Commission ('CNBV') and delist such Series B Shares from the Mexican Stock Exchange ('BMV'), and (b) remove the ADSs from listing on the New York Stock Exchange and the Series B Shares from registration with the US Securities and Exchange Commission ('SEC') in the United States. Such cancellation has been approved by Santander Mexico's share capital at an extraordinary general shareholders' meeting held on 30 November 2022, with the favourable vote of the holders of the shares representing more than 95% of Santander Mexico's shares, as required by applicable law.

Consummation of the offers is subject to certain conditions, including the absence of any material adverse change in the financial condition, results of operations or prospects of Santander Mexico.

ii. Agreement to acquire a significant holding in Ebury Partners Limited

On 28 April 2020, the investment announced on 4 November 2019 in Ebury, a payments and foreign exchange platform for SMEs, was completed. The transaction involved a total disbursement of GBP 357 million (EUR 409 million) of which GBP 70 million (approximately EUR 80 million) was for new shares. By the end of 2019, the Group had already acquired 6.4% of the company for GBP 40 million (approximately EUR 45 million). Following the disbursement made in April 2020, which gave the Group 50.38% of the economic rights of the company, without the conditions to obtain control being met, this interest was recorded under 'Investments - Associated entities' in the consolidated balance sheet.

In April 2022 Grupo Santander acquired a new package of shares for GBP 113 million (EUR 135 million) and subscribed in full to a new capital increase, paying an additional GBP 60 million (EUR 72 million). Following these transactions, the Group holds 66.54% of the economic rights and control of the company.

The total value of the net assets identified in the business combination amounted to EUR 413 million, mainly intangible assets (IT developments, customer lists and brand) and resulted in the recognition of goodwill of EUR 316 million.

No gain or loss was recorded for the difference between the book value and the fair value of the previous holding as this difference was not significant.

The amount contributed by this business to the Group's net attributable profit since the date of acquisition is immaterial. Similarly, the result that this business would have contributed to the Group if the transaction had been carried out on 1 January 2022 would also have been immaterial.

iii. Purchase by SHUSA for shares of Santander Consumer USA

In August 2021 Santander Holdings USA, Inc. ('SHUSA') and Santander Consumer USA Holdings Inc. ('SC') entered into a definitive agreement pursuant to which SHUSA acquired all outstanding shares of common stock of SC not already owned by SHUSA via an all-cash tender offer (the 'Tender Offer') for USD 41.50 per SC common share (the 'Offer Price'), followed by a second-step consisting of a merge (together with the Offer, the 'Transaction') in which a wholly owned subsidiary of SHUSA was merged with and into SC, with SC surviving as a wholly owned subsidiary of SHUSA, and all outstanding shares of common stock of SC not tendered in the Tender Offer were converted into the right to receive the Offer Price in cash. The Offer Price represented a 14% premium to the closing price of SC common stock of USD 36.43 as of 1 July 2021, the last day prior to the announcement of SHUSA's initial offer to acquire the remaining outstanding shares of SC's common stock.

On 31 January 2022, after completion of the customary closing conditions, the Transaction was performed and SHUSA increased its share up to the 100% of SC's common stock. The transaction has meant a disbursement of USD 2,510 million (around EUR 2,239 million) for the Group, with a decrease of reserves of EUR 487 million and a decrease of EUR 1,752 million of minority interests.

iv. Acquisition of Amherst Pierpont Securities LLC, a US fixed-income broker dealer

On 15 July 2021, Santander Holdings USA, Inc. reached an agreement to acquire Amherst Pierpont Securities LLC, a market-leading independent fixed-income and structured products broker dealer, through the acquisition of its parent holding company, Pierpont Capital Holdings LLC, for a total consideration of approximately USD 450 million (around EUR 405 million). The operation was closed on 11 April 2022 once the pertinent regulatory approvals have been obtained. Immediately after the acquisition, SHUSA has lent financing to the company for an amount of USD 163 million (approximately EUR 147 million), which the company will use to cancel debt with third parties. Amherst Pierpont Securities LLC will become part of Santander Corporate & Investment Banking (Santander CIB) Global business line.

The business combination meant the recognition of a goodwill of EUR 158 million and EUR 24 million of intangible assets (mainly relationships with customers) identified in the purchase price allocation, without other relevant value adjustments to net assets of the business.

The amount contributed by this business to the group net attributable profit since the date of acquisition is not material. Similarly, the result that this business would have brought to the group if the transaction had been carried out on January 1, 2022 is also immaterial.

v. Tender offer for shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México

On 26 March 2021, Banco Santander, S.A. announced its intention to make a tender offer for all shares of Banco Santander Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México ('Santander México') that were not owned by Grupo Santander (8.3% of the share capital of Santander México at that time). The announcement was subsequently supplemented by other publications on 24 May, 8 June and 28 October 2021, in which amendments to some of the terms of the offer were announced.

The offer was finally launched on 3 November 2021 and was settled on 10 December. Banco Santander accepted all of the Santander Mexico Shares and Santander Mexico American Depositary Share (ADS) (securities listed on the New York Stock Exchange, each representing 5 shares of Santander Mexico) tendered and not withdrawn representing approximately 4.5% of the share capital of Santander México. After the transaction, Grupo Santander holds approximately 96.2% of Santander México share capital.

The shareholders who tendered their shares in the offer received MXN 26.5 (approximately EUR 1) per share of Santander México and USD 6.2486 in cash per each ADS (the USD equivalent of MXN 132.50 per ADS based on the USD/MXN exchange rate on the expiration date of 7 December 2021) which meant a disbursement of approximately EUR 335 million.

This transaction entailed a decrease of reserves of EUR 41 million and a decrease of EUR 294 million of minority interests.

c) Offshore entities

Spanish regulation

According to current Spanish regulation (Law 11/2021, of 9 July, Royal Decree 1080/1991, of 5 July and Order HFP/115/2023, of 9 February), Santander has one subsidiary and three branches in the non-cooperative jurisdictions of Jersey, the Isle of Man and the Cayman Islands (offshore entities). Santander also has two other subsidiaries incorporated in non-cooperative jurisdictions that are tax resident in the UK and subject to British tax law.

i. Offshore subsidiaries

At the reporting date, Grupo Santander has only one subsidiary resident in Jersey, Abbey National International Limited, with activity of services. In 2022, this subsidiary has contributed to Santander's consolidated profit with immaterial losses and has no employees.

ii. Offshore branches

Grupo Santander also has three offshore branches in the Cayman Islands, the Isle of Man and Jersey. They report to, and consolidate balance sheets and income statements with, their foreign headquarters. They are taxed either with their headquarters (the Cayman Islands branch in Brazil) or in the territories they are located in (Jersey and Isle of Man, pertain to the UK).

These three offshore branches have a total of 155 employees as of December 2022.

iii. Subsidiaries in non-cooperative jurisdictions that are tax resident in the United Kingdom

Grupo Santander also has two subsidiaries that were incorporated in offshore jurisdictions (one in Bermuda without activity and one in Guernsey with leasing activity) but are not deemed offshore entities because they only operate from and are tax resident in the UK and, thus, are subject to British tax law.

Additionally, a subsidiary incorporated in Guernsey but tax resident in the UK was liquidated in 2022.

iv. Other offshore holdings

From Brazil, Grupo Santander manages Santander Brazil Global Investment Fund SPC, a segregated portfolio company located in the Cayman Islands. Grupo Santander also has other non-controlling financial interest of a reduced amount in entities located in non-cooperative jurisdictions.

The European Union (EU)

As of February 2023, the EU blacklist comprises 16 jurisdictions where Santander is only present in The Bahamas. In this jurisdiction, Santander has two banks without third-party activity, Santander Bank & Trust Ltd. and Santander Investment Bank Limited, and one branch of the Swiss bank Banco Santander International SA.

These three entities have a total of 27 employees as of December 2022.

Additionally, the EU grey list comprises 18 jurisdictions which have sufficiently committed to adapt their legislation to international standards, subject to monitoring by the EU. Within these jurisdictions, Santander is mainly present in Hong Kong through a branch.

Organization for Economic Cooperation and Development (OECD)

Grupo Santander is not present in any jurisdictions non-compliant with both OECD standards on transparency and exchange of information for tax purposes (Automatic exchange of information standard -AEOI- and Exchange of information on request standard -EOIR-) according to the last annual report of the OECD Global forum on transparency and exchange of information for tax purposes released in November 2022.

However, the Group is present in The Bahamas and Chile. Although these territories have complete legal and regulatory frameworks in place for the application of the AEOI standard, they need to improve the effectiveness of this standard.

The Group's presence in offshore territories at the end of 2022 is as follows:

Presence of the Group in non-cooperative jurisdictions	Spanish legislation		Council of the EU blacklist		OECD ^A	
	Sub.	Branch	Sub.	Branch	Sub.	Branch
Jersey	1	1				
Isle of Man			1			
Guernsey ^B						
Bermuda ^B						
Cayman Islands		1				
The Bahamas			2	1		
2022	1	3	2	1	—	—
2021^C	1	3	3	1	—	—

A Jurisdictions non-compliant with both OECD standards on transparency and exchange of information for tax purposes (AEOI and EOIR). Jersey, the Isle of Man and the Cayman Islands continue to fully comply with both OECD standards.

B Additionally, there is one subsidiary constituted in Guernsey and one in Bermuda, but residents for tax purposes in the UK.

C In 2021 The Bahamas was not included in the EU blacklist. One subsidiary in The Bahamas was merged in 2022.

Grupo Santander has the right mechanisms (risk management, supervision, verification and review plans, and regular reporting) to prevent reputational, tax and legal risk in entities resident in non-cooperative jurisdictions. Grupo Santander also maintains its policy of reducing the number of these entities.

PwC (PricewaterhouseCoopers) member firms audited the financial statements of Grupo Santander's offshore entities in 2022 and 2021.

d) Consolidated balance sheet, income statement, statement of recognized income and expenses, statement of changes in total equity and cash-flow statement

PwC (PricewaterhouseCoopers) member firms audited the financial statements of Grupo Santander's offshore entities in 2022 and 2021:

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR million

ASSETS	2022	2021^A
CASH, CASH BALANCES AT CENTRAL BANKS AND OTHER DEPOSITS ON DEMAND	223,073	210,689
FINANCIAL ASSETS HELD FOR TRADING	156,118	116,953
Derivatives	67,002	54,292
Equity instruments	10,066	15,077
Debt securities	41,403	26,750
Loans and advances	37,647	20,834
Central banks	11,595	3,608
Credit institutions	16,502	10,397
Customers	9,550	6,829
NON-TRADING FINANCIAL ASSETS MANDATORILY AT FAIR VALUE THROUGH PROFIT OR LOSS	5,713	5,536
Equity instruments	3,711	4,042
Debt securities	1,134	957
Loans and advances	868	537
Central banks	—	—
Credit institutions	—	—
Customers	868	537
FINANCIAL ASSETS DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS	8,989	15,957
Debt securities	2,542	2,516
Loans and advances	6,447	13,441
Central banks	—	—
Credit institutions	673	3,152
Customers	5,774	10,289
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME	85,239	108,038
Equity instruments	1,941	2,453
Debt securities	75,083	97,922
Loans and advances	8,215	7,663
Central banks	—	—
Credit institutions	—	—
Customers	8,215	7,663
FINANCIAL ASSETS AT AMORTIZED COST	1,147,044	1,037,898
Debt securities	73,554	35,708
Loans and advances	1,073,490	1,002,190
Central banks	15,375	15,657
Credit institutions	46,518	39,169
Customers	1,011,597	947,364
HEDGING DERIVATIVES	8,069	4,761
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK	(3,749)	410
INVESTMENTS	7,615	7,525
Joint venture entities	1,981	1,692
Associated entities	5,634	5,833
ASSETS UNDER INSURANCE OR REINSURANCE CONTRACTS	308	283

ASSETS	2022	2021^A
TANGIBLE ASSETS	34,073	33,321
Property, plant and equipment	33,044	32,342
For own-use	13,489	13,259
Leased out under an operating lease	19,555	19,083
Investment properties	1,029	979
<i>Of which leased out under an operating lease</i>	804	839
INTANGIBLE ASSETS	18,645	16,584
Goodwill	13,741	12,713
Other intangible assets	4,904	3,871
TAX ASSETS	29,987	25,196
Current tax assets	9,200	5,756
Deferred tax assets	20,787	19,440
OTHER ASSETS	10,082	8,595
Insurance contracts linked to pensions	104	149
Inventories	11	6
Other	9,967	8,440
NON-CURRENT ASSETS HELD FOR SALE	3,453	4,089
TOTAL ASSETS	1,734,659	1,595,835

A. Presented for comparison purposes only.

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR million

LIABILITIES	2022	2021^A
FINANCIAL LIABILITIES HELD FOR TRADING	115,185	79,469
Derivatives	64,891	53,566
Short positions	22,515	12,236
Deposits	27,779	13,667
Central banks	5,757	1,038
Credit institutions	9,796	6,488
Customers	12,226	6,141
Marketable debt securities	—	—
Other financial liabilities	—	—
FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS	55,947	32,733
Deposits	50,520	27,279
Central banks	1,740	607
Credit institutions	1,958	1,064
Customers	46,822	25,608
Marketable debt securities	5,427	5,454
Other financial liabilities	—	—
<i>Memorandum items: subordinated liabilities</i>	—	—
FINANCIAL LIABILITIES AT AMORTIZED COST	1,423,858	1,349,169
Deposits	1,111,887	1,078,587
Central banks	76,952	139,757
Credit institutions	68,582	52,235
Customers	966,353	886,595
Marketable debt securities	274,912	240,709
Other financial liabilities	37,059	29,873
<i>Memorandum items: subordinated liabilities</i>	25,926	26,196
HEDGING DERIVATIVES	9,228	5,463
CHANGES IN THE FAIR VALUE OF HEDGED ITEMS IN PORTFOLIO HEDGES OF INTEREST RATE RISK	(117)	248
LIABILITIES UNDER INSURANCE OR REINSURANCE CONTRACTS	747	770
PROVISIONS	8,149	9,583
Pensions and other post-retirement obligations	2,392	3,185
Other long term employee benefits	950	1,242
Taxes and other legal contingencies	2,074	1,996
Contingent liabilities and commitments	734	733
Other provisions	1,999	2,427
TAX LIABILITIES	9,468	8,649
Current tax liabilities	3,040	2,187
Deferred tax liabilities	6,428	6,462
OTHER LIABILITIES	14,609	12,698
LIABILITIES ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	—	—
TOTAL LIABILITIES	1,637,074	1,498,782

A. Presented for comparison purposes only.

CONSOLIDATED BALANCE SHEETS AS OF 31 DECEMBER 2022 AND 2021

EUR million

EQUITY	2022	2021^A
SHAREHOLDERS' EQUITY	124,732	119,649
CAPITAL	8,397	8,670
Called up paid capital	8,397	8,670
Unpaid capital which has been called up	—	—
SHARE PREMIUM	46,273	47,979
EQUITY INSTRUMENTS ISSUED OTHER THAN CAPITAL	688	658
Equity component of the compound financial instrument	—	—
Other equity instruments issued	688	658
OTHER EQUITY	175	152
ACCUMULATED RETAINED EARNINGS	66,702	60,273
REVALUATION RESERVES	—	—
OTHER RESERVES	(5,454)	(4,477)
Reserves or accumulated losses in joint venture investments	1,553	1,572
Others	(7,007)	(6,049)
(-) OWN SHARES	(675)	(894)
PROFIT OR LOSS ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	9,605	8,124
(-) INTERIM DIVIDENDS	(979)	(836)
OTHER COMPREHENSIVE INCOME OR LOSS	(35,628)	(32,719)
Items that will not be reclassified to profit or loss	(4,635)	(4,241)
Items that may be reclassified to profit or loss	(30,993)	(28,478)
NON-CONTROLLING INTEREST	8,481	10,123
Other comprehensive income or loss	(1,856)	(2,104)
Other items	10,337	12,227
TOTAL EQUITY	97,585	97,053
TOTAL LIABILITIES AND EQUITY	1,734,659	1,595,835
MEMORANDUM ITEMS: OFF BALANCE SHEET AMOUNTS		
Loan commitments granted	274,075	262,737
Financial guarantees granted	12,856	10,758
Other commitments granted	92,672	75,733

CONSOLIDATED INCOME STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR million

	(Debit) Credit	
	2022	2021 ^A
Interest income	71,430	46,463
<i>Financial assets at fair value through other comprehensive income</i>	5,479	2,582
<i>Financial assets at amortized cost</i>	59,214	40,471
<i>Other interest income</i>	6,737	3,410
Interest expense	(32,811)	(13,093)
Interest income/(charges)	38,619	33,370
Dividend income	488	513
Income from companies accounted for using the equity method	702	432
Commission income	15,867	13,812
Commission expense	(4,077)	(3,310)
Gain or losses on financial assets and liabilities not measured at fair value through profit or loss, net	149	628
<i>Financial assets at amortized cost</i>	34	89
<i>Other financial assets and liabilities</i>	115	539
Gain or losses on financial assets and liabilities held for trading, net	842	1,141
<i>Reclassification of financial assets at fair value through other comprehensive income</i>	—	—
<i>Reclassification of financial assets at amortized cost</i>	—	—
<i>Other gains (losses)</i>	842	1,141
Gains or losses on non-trading financial assets and liabilities mandatorily at fair value through profit or loss	162	132
<i>Reclassification of financial assets at fair value through other comprehensive income</i>	—	—
<i>Reclassification of financial assets at amortized cost</i>	—	—
<i>Other gains (losses)</i>	162	132
Gain or losses on financial assets and liabilities measured at fair value through profit or loss, net	968	270
Gain or losses from hedge accounting, net	74	(46)
Exchange differences, net	(542)	(562)
Other operating income	1,510	2,255
Other operating expenses	(2,803)	(2,442)
Income from assets under insurance and reinsurance contracts	2,698	1,516
Expenses from liabilities under insurance and reinsurance contracts	(2,540)	(1,305)
Total income	52,117	46,404
Administrative expenses	(20,918)	(18,659)
<i>Staff costs</i>	(12,547)	(11,216)
<i>Other general administrative expenses</i>	(8,371)	(7,443)
Depreciation and amortisation cost	(2,985)	(2,756)
Provisions or reversal of provisions, net	(1,881)	(2,814)
Impairment or reversal of impairment at financial assets not measured at fair value through profit or loss and net gains and losses from changes	(10,863)	(7,407)
<i>Financial assets at fair value through other comprehensive income</i>	(7)	(19)
<i>Financial assets at amortized cost</i>	(10,856)	(7,388)
Impairment or reversal of impairment of investments in subsidiaries, joint ventures and associates, net	—	—
Impairment or reversal of impairment on non-financial assets, net	(239)	(231)
<i>Tangible assets</i>	(140)	(150)
<i>Intangible assets</i>	(75)	(71)
<i>Others</i>	(24)	(10)
Gain or losses on non-financial assets and investments, net	12	53
Negative goodwill recognized in results	—	—

	(Debit) Credit	
	2022	2021 ^A
Gains or losses on non-current assets held for sale not classified as discontinued operations	(4,486)	(43)
Operating profit/(loss) before tax	10,764	14,547
Tax expense or income from continuing operations	—	(4,894)
Profit/(loss) from continuing operations	10,764	9,653
Profit/(loss) after tax from discontinued operations	1,159	—
Profit/(loss) for the year	9,605	9,653
Profit/(loss) attributable to non-controlling interests	1,159	1,529
Profit/(loss) attributable to the parent	—	8,124
Earnings/(losses) per share		
Basic	0.54	0.44
Diluted	0.54	0.44

A. Presented for comparison purposes only).

CONSOLIDATED STATEMENTS OF RECOGNIZED INCOME AND EXPENSE FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR million

	2022	2021 ^A
CONSOLIDATED PROFIT/(LOSS) FOR THE YEAR	10,764	9,653
OTHER RECOGNISED INCOME AND EXPENSE	(2,660)	(220)
Items that will not be reclassified to profit or loss	(399)	754
Actuarial gains and losses on defined benefit pension plans	(56)	1,567
Non-current assets held for sale	—	—
Other recognised income and expense of investments in subsidiaries, joint ventures and associates	17	(1)
Changes in the fair value of equity instruments measured at fair value through other comprehensive income	(497)	(171)
Gains or losses resulting from the accounting for hedges of equity instruments measured at fair value through other comprehensive income, net	—	—
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedged item)</i>	18	117
<i>Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedging instrument)</i>	(18)	(117)
Changes in the fair value of financial liabilities at fair value through profit or loss attributable to changes in credit risk	88	(99)
Income tax relating to items that will not be reclassified	49	(542)
Items that may be reclassified to profit or loss	(2,261)	(974)
Hedges of net investments in foreign operations (effective portion)	(2,467)	(1,159)
<i>Revaluation gains (losses)</i>	<i>(2,467)</i>	<i>(1,159)</i>
<i>Amounts transferred to income statement</i>	—	—
<i>Other reclassifications</i>	—	—
Exchanges differences	3,658	3,082
<i>Revaluation gains (losses)</i>	<i>3,658</i>	<i>3,082</i>
<i>Amounts transferred to income statement</i>	—	—
<i>Other reclassifications</i>	—	—
Cash flow hedges (effective portion)	(3,016)	(938)
<i>Revaluation gains (losses)</i>	<i>(1,762)</i>	<i>(1,739)</i>
<i>Amounts transferred to income statement</i>	<i>(1,254)</i>	<i>801</i>
<i>Transferred to initial carrying amount of hedged items</i>	—	—
<i>Other reclassifications</i>	—	—
Hedging instruments (items not designated)	—	—
<i>Revaluation gains (losses)</i>	—	—
<i>Amounts transferred to income statement</i>	—	—
<i>Other reclassifications</i>	—	—
Debt instruments at fair value with changes in other comprehensive income	(2,086)	(3,250)
<i>Revaluation gains (losses)</i>	<i>(2,591)</i>	<i>(3,063)</i>
<i>Amounts transferred to income statement</i>	<i>(99)</i>	<i>(545)</i>
<i>Other reclassifications</i>	<i>604</i>	<i>358</i>
Non-current assets held for sale	—	—
<i>Revaluation gains (losses)</i>	—	—
<i>Amounts transferred to income statement</i>	—	—
<i>Other reclassifications</i>	—	—
Share of other recognised income and expense of investments	85	19
Income tax relating to items that may be reclassified to profit or loss	1,565	1,272
Total recognised income and expenses for the year	8,104	9,433
Attributable to non-controlling interests	1,410	1,255
Attributable to the parent	6,694	8,178

A. Presented for comparison purposes only.

CONSOLIDATED STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022 AND 2021

EUR million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings	Revaluation reserves	Other reserves	(-) Own shares	Profit attributable to shareholders of the parent	(-) Interim dividends	Other comprehensive income	Non-controlling interest		Total
												Other comprehensive income	Other items	
Balance at 31 December 2021^A	8,670	47,979	658	152	60,273	—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053
Adjustments due to errors	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Adjustments due to changes in accounting policies	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Opening balance at 1 January 2022^A	8,670	47,979	658	152	60,273	—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053
Total recognised income and expense	—	—	—	—	—	—	—	—	9,605	—	(2,911)	251	1,159	8,104
Other changes in equity	(273)	(1,706)	30	23	6,429	—	(977)	219	(8,124)	(143)	2	(3)	(3,049)	(7,572)
Issuance of ordinary shares	—	—	—	—	—	—	—	—	—	—	—	—	9	9
Issuance of preferred shares	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Maturity of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—	(756)	(756)
Conversion of financial liabilities into equity	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Capital reduction	(273)	(1,706)	—	—	—	—	273	1,706	—	—	—	—	—	—
Dividends	—	—	—	—	(869)	—	—	—	—	(979)	—	—	(500)	(2,348)
Purchase of equity instruments	—	—	—	—	—	—	—	(2,050)	—	—	—	—	—	(2,050)
Disposal of equity instruments	—	—	—	—	—	—	7	563	—	—	—	—	—	570
Transfer from equity to liabilities	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Transfer from liabilities to equity	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Transfers between equity items	—	—	—	—	7,298	—	(12)	—	(8,124)	836	2	(3)	3	—
Increases (decreases) due to business combinations	—	—	—	—	—	—	—	—	—	—	—	—	31	31
Share-based payment	—	—	—	(49)	—	—	—	—	—	—	—	—	—	(49)
Others increases or (-) decreases in equity	—	—	30	72	—	—	(1,245)	—	—	—	—	—	(1,836)	(2,979)
Balance at 31 December 2022	8,397	46,273	688	175	66,702	—	(5,454)	(675)	9,605	(979)	(35,628)	(1,856)	10,337	97,585

A. Presented for comparison purpose only.

CONSOLIDATED STATEMENTS OF CHANGES IN TOTAL EQUITY FOR THE YEARS ENDED 31 DECEMBER 2021 AND 2020

EUR million

	Capital	Share premium	Equity instruments issued (not capital)	Other equity instruments	Accumulated retained earnings	Revaluation reserves	Other reserves	(-) Own shares	Profit attributable to shareholders of the parent	(-) Interim dividends	Other comprehensive income	Non-controlling interest			Total
												Other comprehensive income	Other items		
Balance at 31 December 2020^A	8,670	52,013	627	163	65,583	—	(3,596)	(69)	(8,771)	—	(33,144)	(1,800)	11,646	91,322	
Adjustments due to errors	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Adjustments due to changes in accounting policies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Opening balance at 1 January 2021^A	8,670	52,013	627	163	65,583	—	(3,596)	(69)	(8,771)	—	(33,144)	(1,800)	11,646	91,322	
Total recognised income and expense	—	—	—	—	—	—	—	—	8,124	—	54	(274)	1,529	9,433	
Other changes in equity	—	(4,034)	31	(11)	(5,310)	—	(881)	(825)	8,771	(836)	371	(30)	(948)	(3,702)	
Issuance of ordinary shares	—	—	—	—	—	—	—	—	—	—	—	—	17	17	
Issuance of preferred shares	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Issuance of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Maturity of other financial instruments	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Conversion of financial liabilities into equity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Capital reduction	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Dividends	—	(477)	—	—	—	—	—	—	—	(836)	—	—	(648)	(1,961)	
Purchase of equity instruments	—	—	—	—	—	—	—	(1,645)	—	—	—	—	—	(1,645)	
Disposal of equity instruments	—	—	—	—	—	—	23	820	—	—	—	—	—	843	
Transfer from equity to liabilities	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Transfer from liabilities to equity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Transfers between equity items	—	(3,557)	—	—	(5,310)	—	(275)	—	8,771	—	371	(30)	30	—	
Increases (decreases) due to business combinations	—	—	—	—	—	—	—	—	—	—	—	—	(5)	(5)	
Share-based payment	—	—	—	(62)	—	—	—	—	—	—	—	—	—	(62)	
Others increases or (-) decreases in equity	—	—	31	51	—	—	(629)	—	—	—	—	—	(342)	(889)	
Balance at 31 December 2021^A	8,670	47,979	658	152	60,273	—	(4,477)	(894)	8,124	(836)	(32,719)	(2,104)	12,227	97,053	

A. Presented for comparison purposes only.

CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED 2022 AND 2021

EUR million

	2022	2021 ^A
A. CASH FLOWS FROM OPERATING ACTIVITIES	27,706	56,691
Profit or loss for the year	10,764	9,653
Adjustments made to obtain the cash flows from operating activities	23,970	21,363
Depreciation and amortisation cost	2,985	2,756
Other adjustments	20,985	18,607
Net increase/(decrease) in operating assets	108,774	27,258
Financial assets held-for-trading	30,837	2,064
Non-trading financial assets mandatorily at fair value through profit or loss	218	969
Financial assets at fair value through profit or loss	(7,083)	(32,746)
Financial assets at fair value through other comprehensive income	(22,358)	(9,152)
Financial assets at amortized cost	105,618	73,181
Other operating assets	1,542	(7,058)
Net increase/(decrease) in operating liabilities	107,244	56,945
Financial liabilities held-for-trading	29,533	(1,386)
Financial liabilities designated at fair value through profit or loss	25,595	(14,316)
Financial liabilities at amortized cost	55,595	79,114
Other operating liabilities	(3,479)	(6,467)
Income tax recovered/(paid)	(5,498)	(4,012)
B. CASH FLOWS FROM INVESTING ACTIVITIES	(3,898)	(3,715)
Payments	11,776	11,669
Tangible assets	9,066	10,015
Intangible assets	1,774	1,388
Investments	152	126
Subsidiaries and other business units	784	140
Non-current assets held for sale and associated liabilities	—	—
Other payments related to investing activities	—	—
Proceeds	7,878	7,954
Tangible assets	5,558	6,382
Intangible assets	—	—
Investments	533	672
Subsidiaries and other business units	734	6
Non-current assets held for sale and associated liabilities	1,053	894
Other proceeds related to investing activities	—	—
C. CASH FLOW FROM FINANCING ACTIVITIES	(9,964)	(1,322)
Payments	10,665	7,741
Dividends	1,848	1,313
Subordinated liabilities	2,291	2,684
Redemption of own equity instruments	—	—
Acquisition of own equity instruments	2,050	1,645
Other payments related to financing activities	4,476	2,099
Proceeds	701	6,419
Subordinated liabilities	119	5,340
Issuance of own equity instruments	—	—
Disposal of own equity instruments	573	854
Other proceeds related to financing activities	9	225
D. EFFECT OF FOREIGN EXCHANGE RATE DIFFERENCES	(1,460)	5,196
E. NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	12,384	56,850

	2022	2021 ^A
F. CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	210,689	153,839
G. CASH AND CASH EQUIVALENTS AT END OF THE YEAR	223,073	210,689
COMPONENTS OF CASH AND CASH EQUIVALENTS AT END OF THE YEAR		
<i>Cash</i>	8,929	8,142
<i>Cash equivalents at central banks</i>	200,830	193,102
<i>Other financial assets</i>	13,314	9,445
<i>Less, bank overdrafts refundable on demand</i>	—	—
TOTAL CASH AND CASH EQUIVALENTS AT END OF THE YEAR	223,073	210,689
<i>In which, restricted cash</i>	—	—

A. Presented for comparison purposes only .

4. Distribution of Banco Santander's profit, shareholder remuneration scheme and earnings per share

a) Distribution of Banco Santander's profit and shareholder remuneration scheme

The distribution of the Bank's current annual results that the board of directors will propose for approval by the shareholders at the annual general meeting is as follows:

EUR million	
To dividends	1,942
<i>Dividend paid at 31 December 2022^A</i>	979
<i>Complementary dividend^B</i>	963
To voluntary reserves ^C	5,979
Net profit for the year	7,921

A. Total amount paid as interim dividend, at the rate of EUR 5.83 fixed cents per eligible share (recorded in 'Shareholders' equity - Interim dividends').

B. Fixed dividend of EUR 5.95 gross cents per eligible share, payable in cash as from 2 May 2023. The total amount has been estimated on the assumption that, after the implementation of the second buyback program charged to the results of 2022, the number of the Bank's outstanding shares eligible for the dividend will be 16,190,866,119. Therefore, the total dividend may be higher if fewer shares are acquired in the buyback program than expected, and it will be lower in the opposite case.

C. Estimated amount corresponding to a final dividend of EUR 963,356,534. To be increased or reduced by the same amount by which the final dividend is lower or higher, respectively, than that amount.

The transcribed proposal comprises the part of the 2022 shareholder remuneration policy that is implemented through cash dividends (the interim dividend paid in November 2022 of EUR 5.83 cents per share with dividend entitlement, approved by the board of directors on 27 September 2022, and the complementary dividend expected to be paid as of 2 May 2023, of EUR 5.95 cents per share with the dividend entitlement, proposed by the board of directors on 27 February 2023, and therefore subject to approval by the General Meeting of Shareholders.

In addition, the 2022 remuneration policy also includes expected shareholder remuneration through the implementation of share buyback programs, which are not reflected in the above-transcribed proposal for the appropriation of earnings. The first of these programs charged to the results of 2022, amounting to approximately EUR 979 million, was completed between November 2022 and January 2023. A second share buyback program charged to 2022 results amounting to approximately EUR 921 million is planned to be deployed. A capital reduction resolution has been also submitted to the General Meeting of Shareholders to redeem the shares acquired in the buyback program, subject to the relevant regulatory authorization.

The provisional accounting statement, prepared by the Bank pursuant to legal requirements, evidencing the existence of sufficient liquidity for the payment of the interim dividend on the date and for the amount mentioned above, is as follows:

EUR million	
31 August 2022	
Profit before taxes	3,829
Tax expense	(69)
Dividends paid in cash	—
Distributable maximum amount	3,760
Available liquidity	130,519

Finally, and although it is not part of the remuneration charged to the 2022 financial year, it should be noted that pursuant to the resolution of the Bank's General Meeting of Shareholders held on 1 April 2022, on 2 May 2022 the Bank paid a complementary cash dividend of EUR 5.15 cents per share charged to the results of the 2021 financial year for an amount of EUR 869 million (see Statement of Changes in total Equity). Finally, also charged to the results of 2021, the Bank implemented a repurchase program for an approximate amount of EUR 865 million, which ended on 18 May 2022.

b) Earnings/loss per share from continuing and discontinued operations

i. Basic earnings / loss per share

Basic earnings/loss per share are calculated by dividing the net profit attributable to the Group, adjusted by the after-tax amount of the remuneration of contingently convertible preference shares (PPCC) recognised in equity and the capital perpetual preference shares (PPCA) (see note 21), if applicable, by the weighted average number of ordinary shares outstanding during that period, excluding the average number of own shares held through that period.

Accordingly:

	2022	2021
Profit (Loss) attributable to the Parent (EUR million)	9,605	8,124
Remuneration of PPCC and PPCA (EUR million) (note 21)	(529)	(566)
	9,076	7,558
<i>Of which:</i>		
<i>Profit (Loss) from discontinued operations (non controlling interest net) (EUR million)</i>	—	—
<i>Profit (Loss) from continuing operations (non-controlling interest and PPCC and PPCA net) (EUR million)</i>	9,076	7,558
Weighted average number of shares outstanding	16,848,344,667	17,272,055,430
Adjusted number of shares	16,848,344,667	17,272,055,430
Basic earnings (Loss) per share (euros)	0.539	0.438
Of which, from discounted operations (euros)	—	—
Basic earnings (Loss) per share from continuing operations (euros)	0.539	0.438

ii. Diluted earnings / loss per share

Diluted earnings/loss per share are calculated by dividing the net profit attributable to the Group, adjusted by the after-tax amount of the remuneration of contingently convertible preference shares recognised in equity (PPCC) recognised in equity and the capital perpetual preference shares (PPCA) (see note 21), by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares and adjusted for all the dilutive effects inherent to potential ordinary shares (share options, and convertible debt securities).

Accordingly, diluted earnings/loss per share were determined as follows:

	2022	2021
Profit (Loss) attributable to the Parent (EUR million)	9,605	8,124
Remuneration of PPCC and PPCA (EUR million) (note 21)	(529)	(566)
Dilutive effect of changes in profit for the period arising from potential conversion of ordinary shares	—	—
	9,076	7,558
<i>Of which:</i>		
<i>Profit (Loss) from discontinued operations (net of non-controlling interests) (EUR million)</i>	—	—
<i>Profit (Loss) from continuing operations (net of non-controlling interests and PPCC and PPCA) (EUR million)</i>	9,076	7,558
Weighted average number of shares outstanding	16,848,344,667	17,272,055,430
Dilutive effect of options/rights on shares	55,316,206	48,972,459
Adjusted number of shares	16,903,660,873	17,321,027,889
Diluted earnings (Loss) per share (euros)	0.537	0.436
Of which, from discounted operations (euros)	—	—
Diluted earnings (Loss) per share from continuing operations (euros)	0.537	0.436

5. Remuneration and other benefits paid to the Bank's directors and senior managers

The following section contains qualitative and quantitative disclosures on the remuneration paid to the members of the board of directors —both executive and non-executive directors— and senior managers for 2022 and 2021:

a) Remuneration of Directors

i. Bylaw-stipulated emoluments

The annual general meeting held on 22 March 2013 approved an amendment to the Bylaws, whereby the remuneration of directors in their capacity as board members became an annual fixed amount determined by the annual general meeting. This amount shall remain in effect unless the shareholders resolve to change it at a general meeting. However, the board of directors may elect to reduce the amount in any years in which it deems such action justified.

The maximum remuneration established by the annual general meeting was EUR 6 million in 2022 (EUR 6 million in 2021), with two components: (a) an annual emolument and (b) attendance fees.

The specific amount payable for the above-mentioned items to each of the directors is determined by the board of directors. For such purpose, it takes into consideration the positions held by each director on the board, their membership of the board and the board committees and their attendance to the meetings thereof, and any other objective circumstances considered by the board.

The total Bylaw-stipulated emoluments earned by the directors in 2022 amounted to EUR 4.7 million (EUR 4.8 million in 2021).

Annual allotment

In accordance with the remuneration policy approved at the general shareholders' meeting on 1 April 2022, the amounts for serving and holding roles on the board and committees was the same amount as initially approved for 2021, with the exception of the yearly amount for serving on the board of directors, which was modified from EUR 90,000 to EUR 95,000. The annual amounts received individually by the directors in 2022 and 2021 based on the positions held by them on the board and their membership of the board committees were as follows:

Amount per director in euros	2022	2021
Members of the board of directors	95,000	90,000
Members of the executive committee	170,000	170,000
Members of the audit committee	40,000	40,000
Members of the appointments committee	25,000	25,000
Members of the remuneration committee	25,000	25,000
Members of the risk supervision, regulation and compliance committee	40,000	40,000
Members of the responsible banking, sustainability and culture committee	15,000	15,000
Members of the innovation and technology committee	25,000	25,000
Chair of the audit committee	70,000	70,000
Chair of the appointments committee	50,000	50,000
Chair of the remuneration committee	50,000	50,000
Chair of the risk supervision, regulation and compliance committee	70,000	70,000
Chair of the responsible banking, sustainability and culture committee	50,000	50,000
Chair of the innovation and technology committee	70,000	70,000
Lead independent director ^A	110,000	110,000
Non-executive Vice Chair	30,000	30,000

A. Bruce Carnegie-Brown, in view of the positions held on the board and its committees, in particular as Chair of the appointments and remuneration committees and as lead independent director, and the time and dedication required to properly perform such positions, has been assigned a minimum total annual remuneration of EUR 700,000 since 2015, including the annual allowance for the items corresponding to him of those indicated above and attendance fees.

Attendance fees

The directors receive fees for attending board and committee meetings, excluding executive committee meetings, where no attendance fees are received.

For 2022 the board voted to keep the same amounts set out in the 2021 policy.

The fees for 2022 and 2021 are as follows:

Attendance fees per director per meeting in euros	2022	2021
Board of directors	2,600	2,600
Audit committee and risk supervision, regulation and compliance committee	1,700	1,700
Other committees (excluding executive committee)	1,500	1,500

ii. Salaries

The executive directors receive salaries. In accordance with the policy approved by the annual general meeting, salaries are composed of a fixed annual remuneration and a variable one, which consists in a unique incentive, which is a deferred variable remuneration plan linked to multi-year objectives, which establishes the following payment scheme:

- 40% of the variable remuneration amount, determined at year-end on the basis of the achievement of the established objectives, is paid immediately.
- The remaining 60% is deferred over five years, to be paid in five portions, provided that the conditions of permanence in the Group and non-concurrence of the malus clauses are met, and subject to long term metrics, taking into account the following accrual scheme:
 - The accrual of the first and second portion (payment in 2024 and 2025) will be conditional on none of the malus clauses being triggered.
 - The accrual of the third, fourth, and fifth portion (payment in 2026, 2027 and 2028), is linked to objectives related to the period 2022–2024 and the metrics and scales associated with these objectives. The fulfilment of the objectives determines the percentage to be paid of the deferred amount in these three annuities, and these targets can reduce these amounts and the number of deferred instruments, or increase them up to a maximum achievement ratio of 125%, so executives have the incentive to exceed their targets.
- In accordance with current remuneration policies, the amounts already paid will be subject to a possible recovery (clawback) by the Bank during the period set out in the policy in force at each moment.

The immediate payment (or short-term), as well as each deferred payment (linked to long term metrics and not linked to long-term metrics) will be settled 50% in cash and the remaining 50% in instruments, consisting of Banco Santander, S.A. shares, Banco Santander, S.A. share options and restricted stock units (RSUs) of PagoNxt, split as:

- the amount of PagoNxt RSUs set for each year; and
- the rest, shares and share options in equal parts, unless the director chooses to receive options only.

Comparative of executive remuneration (Chair and CEO)

The board voted to maintain the same benchmark incentive for Ana Botín and José Antonio Álvarez in 2022 as in 2021. Variable contributions to pensions were not modified in 2022, so the amounts are the 22% of the 30% of the last three assigned bonus' average.

In 2022, the good business performance (which enabled Banco Santander to reach a 13.37% underlying RoTE, above the end of 2021), the excellent execution of our strategy (with the highest attributable profit ever), and the efficient capital management, boosted the bonus pool once again and thus the variable remuneration of corporate centre employees, (including executive directors).

iii. Detail by director

The detail, by bank director, of the short-term (immediate) and deferred (not subject to long-term goals) remuneration for 2022 and 2021 is provided below:

EUR thousand

	2022										2021								
	Bylaw-stipulated emoluments																		
	Annual emolument					Short-term and deferred (not subject to long-term goals) salaries of executive directors					Pension contribution	Other remuneration	Total	Total					
	Board ^F	Executive committee	Audit committee	Appointments committee	Remuneration committee	Risk supervision, regulation and compliance oversight committee	Responsible banking, sustainability and culture committee	Innovation and technology committee	Attendance fees and commissions	Fixed					Variable-immediate payment	Deferred variable		Total	
									In cash	In instruments	In cash	In instruments							
Ana Botín	95	170	—	—	—	—	74	41	3,176	1,688	1,689	1,013	1,013	8,579	1,081	961	11,001	11,436	
José Antonio Álvarez	95	170	—	—	—	—	25	39	2,541	1,139	1,140	684	684	6,188	811	1,758	9,086	9,160	
Bruce Carnegie-Brown	280	170	—	75	75	—	—	25	75	—	—	—	—	—	—	—	700	700	
Homaira Akbari	95	—	40	—	—	—	15	25	69	—	—	—	—	—	—	—	244	248	
Javier Botín ^A	95	—	—	—	—	—	—	—	34	—	—	—	—	—	—	—	129	129	
Álvaro Cardoso ^B	24	—	—	—	—	—	4	—	11	—	—	—	—	—	—	—	39	183	
R.Martin Chávez ^C	48	—	—	13	8	11	—	29	40	—	—	—	—	—	—	—	147	374	
Sol Daurella	95	—	—	25	25	—	15	—	70	—	—	—	—	—	—	—	230	239	
Henrique de Castro	95	—	40	—	25	—	—	25	76	—	—	—	—	—	—	—	261	267	
Gina Díez Barroso	95	—	—	25	—	—	—	—	52	—	—	—	—	—	—	—	172	130	
Luis Isasi ¹	95	170	—	—	25	40	—	—	82	—	—	—	—	—	—	1,000	1,412	1,406	
Ramiro Mato	95	170	40	—	—	40	65	—	90	—	—	—	—	—	—	—	500	499	
Sergio Rial	95	—	—	—	—	—	—	—	36	—	—	—	—	—	—	—	131	879	
Belén Romana	95	170	40	—	—	110	15	25	94	—	—	—	—	—	—	—	549	533	
Pamela Walkden	95	—	110	—	—	40	—	—	78	—	—	—	—	—	—	—	323	303	
Germán de la Fuente ^D	66	—	31	—	—	—	—	—	40	—	—	—	—	—	—	—	137	—	
Glenn Hutchins ^E	3	—	—	1	1	—	—	1	4	—	—	—	—	—	—	—	10	—	
Total 2022	1,561	1,020	301	139	159	241	114	229	930	5,717	2,827	2,829	1,697	1,697	14,767	1,892	3,719	25,071	—
Total 2021	1,536	1,020	270	126	175	268	125	245	1,036	6,467	3,079	3,079	1,847	1,848	16,320	1,824	3,542	26,487	—

A. All amounts received were reimbursed to Fundación Botín.

B. Stepped down as director on 1 April 2022.

C. Stepped down as director on 1 July 2022.

D. Director since 1 April 2022.

E. Director since 20 December 2022.

F. Also includes emoluments for other roles in the board.

1. Includes EUR 1,000 thousand for his role as non-executive Chair of Santander España and for Santander España board and committees meetings

Following is the detail by executive director of the salaries linked to multi-year objectives at their fair Value, which will only be received if the conditions of permanence in the Group, non-applicability of malus clauses and achievement of the established objectives are met (or, as the case may be, of the minimum thresholds thereof, with the consequent reduction of amount agreed-upon at the end of the year) in the terms described in Note 42.

EUR thousand

	2022				2021	
	Variable subject to Long-term objectives ¹				Total	Total
	In cash	In shares	In share options	In RSUs		
Ana Botín	1,064	404	404	255	2,128	2,316
José Antonio Álvarez	718	273	273	172	1,436	1,563
Total	1,782	677	677	428	3,564	3,880

1. Corresponds with the fair value of the maximum amount they are entitled to in a total of 3 years: 2026, 2027 and 2028, subject to conditions of continued service, with the exceptions provided, and to the non-applicability of malus clauses and achievement of the objectives established.

The fair value has been determined at the grant date based on the valuation report of an independent expert, Willis Towers Watson. Based on the design of the plan for 2022 and the levels of achievement of similar plans in comparable entities, the fair value considered is 70% of the variable remuneration subject to long-term objectives. (see note 42).

Note 5.e below includes disclosures on the shares delivered from the deferred remuneration schemes in place in previous years and for which delivery conditions were met, as well as on the maximum number of shares that may be received in future years in connection with the aforementioned 2022 and 2021 variable remuneration plans.

b) Remuneration of the board members as representatives of the Bank

By resolution of the executive committee, all the remuneration received by the Bank's directors who represent the Bank on the boards of directors of listed companies in which the Bank has a stake, paid by those companies and relating to appointments made on or after 18 March, 2002, accrues to the Group. In 2022 and 2021 the Bank's directors did not receive any remuneration in respect of these representative duties.

On the other hand, in their personal capacity, in 2022 Álvaro Cardoso was paid BRL 150 thousand (EUR 28 thousand) as member of the sustainability committee of Banco Santander Brasil S.A., Homaira Akbari was paid USD 169 thousand (EUR 161 thousand) as member of the board of Santander Consumer USA Holdings, Inc. and EUR 200 thousand as member of the board of PagoNxt S.L., and Henrique de Castro and R. Martín Chávez were each paid the same EUR 200 thousand as members of the board of PagoNxt S.L. Likewise, Pamela Walkden was paid GBP 125 thousand (EUR 147 thousand) as member of Santander UK plc and Santander UK Group Holdings. And Sergio Rial, as non-Executive Chair of Ebury Partners Limited received a total pay of GBP 244 thousand (EUR 286 thousand) and as Chair of board of directors of Banco Santander Brasil S.A. was paid BRL 10,981 thousand (EUR 2,000 thousand).

Likewise, Luis Isasi was paid EUR 1,000 thousand as non-Executive Chair of the board of Santander España and for attending its board and committee meetings (amounts paid by Banco Santander, S.A.).

Additionally, Héctor Grisi has received at the end of 2022 a payment of EUR 2,500 thousand as relocation expenses, for settling in Spain to carry out his CEO role with effect from 1 January 2023. Because the payment is based on his annual allowance capitalized over five years, in accordance with corporate practices and policies, if the CEO terminates his contract before said period, he will reimburse the proportional share of that amount.

c) Post-employment and other long-term benefits

In 2012, the contracts of Ana Botín and José Antonio Álvarez (and other members of the Bank's senior management) with defined benefit pension commitments were modified to transform these commitments into a defined contribution system, which covers the contingencies of retirement, disability and death. From that moment on, the Bank makes annual contributions to their pension system for their benefit.

This system gives them the right to receive benefits upon retirement, regardless of whether or not they are active at the Bank at such time, based on contributions to the system, and replaced their previous right to receive a pension supplement in the event of retirement.

The initial balance for each of them in the new defined benefits system corresponded to the market value of the assets from which the provisions corresponding to the respective accrued obligations had materialised on the date on which the old pension commitments were transferred into the new benefits system.

Since 2013, the Bank has made annual contributions to the benefits system for executive directors and senior executives, in proportion to their respective pensionable bases, until they leave Grupo Santander or until their retirement within the Group, death, or disability.

The benefit plan system is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A., and the economic rights of the foregoing directors under this plan belong to them regardless of whether or not they are active at the Bank at the time of their retirement, death or disability.

In accordance with the provisions of the remuneration regulations, contributions made calculated on variable remuneration are subject to the discretionary pension benefits regime. Under this regime, contributions are subject to malus clauses and clawback according to the policy in force at any given time and during the same period in which the variable remuneration is deferred.

Furthermore, they must be invested in bank shares for a period of five years from the date when the executive director leaves the Group, regardless of whether or not they leave to retire. Once that period has elapsed, the amount invested in shares will be reinvested, along with the remainder of the cumulative balance corresponding to the executive director, or it will be paid to the executive director or to their beneficiaries in the event of a contingency covered by the benefits system.

As per the director's remuneration policy approved at the 23 March 2018 general shareholder's meeting, the system was changed with a focus on:

- Aligning the annual contributions with practices of comparable institutions.
- Reducing future liabilities by eliminating the supplementary benefits scheme in the event of death (death of spouse or parent) and permanent disability of serving directors.
- Not increasing total costs for the Bank.

The changes to the system were the following:

- Fixed and variable pension contributions were reduced to 22% of the respective pensionable bases. The gross annual salaries and the benchmark variable remuneration were increased in the corresponding amount with no increase in total costs for the Bank. The pensionable base for the purposes of the annual contributions for the executive directors is the sum of fixed remuneration plus 30% of the average of their last three variable remuneration amounts.

- The death and disability supplementary benefits were eliminated since 1 April 2018. A fixed remuneration supplement (included in other remuneration in section a.iii in this note) was implemented the same date.

- The total amount insured for life and accident insurance was increased.

The provisions recognised in 2022 and 2021 for retirement pensions were as follows:

EUR thousand		
	2022	2021
Ana Botín	1,081	1,041
José Antonio Álvarez	811	783
Total	1,892	1,825

Following is a detail of the balances relating to each of the executive directors under the welfare system as of 31 December 2022 and 2021:

EUR thousand		
	2022	2021
Ana Botín	46,725	48,075
José Antonio Álvarez	18,958	18,821
Total	65,683	66,896

d) Insurance

The Group pays for life insurance policies for the Bank's directors, who will be entitled to receive benefits if they are declared disabled. In the event of death, the benefits will be payable to their heirs. The premiums paid by the Group are included in the 'Other remuneration' column of the table shown in Note 5.a.iii above. Also, the following table provides information on the sums insured for the Bank's executive directors:

Insured capital		
EUR thousand		
	2022	2021
Ana Botín	20,988	21,489
José Antonio Álvarez	17,345	18,028
Total	38,333	39,517

The insured capital has been modified in 2018 for Ana Botín and José Antonio Alvarez as part of the pension systems transformation set out in note 5.c) above, which has encompassed the elimination of the supplementary benefits systems (death of spouse and death of parent) and the increase of the life insurance annuities.

During 2022 and 2021, the Group has disbursed a total amount of EUR 48.2 million and EUR 25.5 million, respectively, for the payment of civil-liability insurance premiums. These premiums correspond to several civil-liability insurance policies that hedge, among others, directors, senior executives and other managers and employees of the Group and the Bank itself, as well as its subsidiaries, in light of certain types of potential claims. For this reason, it is not possible to disaggregate or individualize the amount that correspond to the directors and executives.

As of 31 December 2022 and 2021, no life insurance commitments exist for the Group in respect of any other directors.

e) Deferred variable remuneration systems

The following information relates to the maximum number of shares to which the executive directors are entitled at the beginning and end of 2022 and 2021 due to their participation in the deferred variable remuneration systems, which instrumented a portion of their variable remuneration relating to 2022 and prior years, as well as on the deliveries, in shares or in cash, made to them in 2022 and 2021 once the conditions for the receipt thereof had been met (see note 42):

i. Deferred conditional variable remuneration plan

From 2011 to 2015, the bonuses of executive directors and certain executives (including senior management) and employees who assume risk, who perform control functions or receive an overall remuneration that puts them on the same remuneration level as senior executives and employees who assume risk (all of whom are referred to as identified staff) have been approved by the board of directors and instrumented, respectively, through various cycles of the deferred conditional variable remuneration plan. Application of these cycles, insofar as they entail the delivery of shares to the plan beneficiaries, was authorized by the related annual general meetings.

The purpose of these plans was to defer a portion of the bonus of the plan beneficiaries (60% in the case of executive directors) over a period of five years (three years for the plans approved up to 2014) for it to be paid, where appropriate, in cash and in Santander shares. The remaining 40% portion of the bonus is paid in cash and Santander shares (in equal parts), upon commencement of this plan, in accordance with the rules set forth below.

In addition to the requirement that the beneficiary remains in Grupo Santander's employ, the accrual of the deferred remuneration was conditional upon none of the following circumstances existing in the opinion of the board of directors -following a proposal of the remuneration committee-, in relation to the corresponding year, in the period prior to each of the deliveries: (i) poor financial performance of the Group; (ii) breach by the beneficiary of internal regulations, including, in particular, those relating to risks; (iii)

material restatement of the Group's consolidated financial statements, except when it is required pursuant to a change in accounting standards; or (iv) significant changes in the Group's economic capital or its risk profile. All the foregoing shall be subject in each case to the regulations of the relevant plan cycle.

Similarly, Banco Santander can claw back any paid variable amounts in the scenarios and for the period dictated by the terms and conditions in the said policy.

On each delivery, the beneficiaries are paid an amount in cash equal to the dividends paid for the amount deferred in shares and the interest on the amount deferred in cash. If the Santander Dividendo Elección scrip dividend scheme is applied, payment will be based on the price offered by the Bank for the bonus share rights corresponding to those shares.

The maximum number of shares to be delivered is calculated taking into account the daily volume-weighted average prices for the 15 trading sessions prior to the date on which the board of directors approves the bonus for the Bank's executive directors for each year.

This plan and the Performance Shares (ILP) plan described below have been integrated for the executive directors and other senior managers in the deferred variable compensation plan linked to multiannual objectives, in the terms approved by the General Meeting of Shareholders held on March 18, 2016.

2021 was the last financial year in which a payment was made in application of this plan.

ii. Deferred variable compensation plan linked to multiannual objectives

In the annual shareholders meeting of 18 March 2016, with the aim of simplifying the remuneration structure, improving the ex-ante risk adjustment and increasing the incidence of long-term objectives, the bonus plan (deferred and conditioned variable compensation plan) and ILP were replaced by one single plan.

The variable remuneration of executive directors and certain executives (including senior management) corresponding to 2022 has been approved by the board of directors and implemented through the seventh cycle of the deferred variable remuneration plan linked to multi-year objectives. The application of the plan was authorised by the annual general meeting of shareholders, as it entails the delivery of shares to the beneficiaries.

As indicated in section a.ii of this note, 60% of the variable remuneration amount is deferred over five years for executive directors, to be paid, where appropriate, in five portions, provided that the conditions of permanence in the Group, according to the following accrual scheme:

- The accrual of the first and second parts (instalments in 2024 and 2025) is conditional on none of the malus clauses being triggered.
- The accrual of the third, fourth and fifth parts (instalments in 2026, 2027 and 2028) is linked to non-concurrence of malus clauses and the fulfilment of certain objectives related to the 2022-2024 period. These objective and their respective weights are:
 - Banco Santander's consolidated Return on tangible equity (RoTE) target in 2024 (weight of 40%).
 - Relative performance of Banco Santander's total shareholder return (TSR) in 2022-2024 in respect of the weighted TSR of a peer group comprising 9 credit institutions, with the appropriate TSR ratio based on the group's TSR among its peers (weight of 40%).
 - Five ESG (environmental, social and governance) metrics. Each of the five Responsible banking targets have the same weighting (and total weight of ESG objective, 20%).

The degree of compliance with the above objectives determines the percentage to be applied to the deferred amount in these three annuities, with a maximum achievement ratio of 125%, so executives have the incentive to exceed their targets.

Both the immediate (short-term) and each of the deferred (long-term and conditioned) portions are paid 50% in cash and the remaining 50% in instruments.

The accrual of deferred amounts (whether or not subject to performance measures) is conditioned, in addition to the permanence of the beneficiary in the Group, to non-occurrence, during the period prior to each of the deliveries, of any the circumstances giving rise to the application of malus as set out in the Group's remuneration policy in its chapter related to malus and clawback. Likewise, the amounts already paid of the incentive will be subject to clawback by the Bank in the cases and during the term foreseen in said policy, and in accordance with the terms and conditions foreseen in it.

Malus and clawback clauses are triggered by poor financial performance of Banco Santander, a division or area, or exposures from staff as a result of an executive(s)'s management of, at least, one of these factors:

- (i) Significant failures in risk management committed by the entity, or by a business unit or risk control.
- (ii) The increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures.
- (iii) Regulatory sanctions or judicial sentences from events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity.
- (iv) Irregular conduct, whether individual or collective. In this regard, the negative effects derived from the marketing of inappropriate products and the responsibilities of the people or bodies that made those decisions will be specially considered.

And among the specific cases that could lead to the application of these clauses, of note the restatement of the annual financial statements that does not result from a regulatory change, but from incorrect application of accounting regulations or criteria, as appreciated by supervisors and as long as it results in a lower variable remuneration to be settled than that initially accrued or where no remuneration would have been paid in accordance with the variable remuneration system of the Entity or a specific unit.

The maximum number of shares to be delivered is calculated by taking into account the average weighted daily volume of the average weighted listing prices corresponding to the fifteen trading sessions prior to the previous Friday (excluded) to the date on which the bonus is agreed by the board of executive directors of the Bank.

iii. Shares assigned by deferred variable remuneration plans

The following table shows the number of Santander shares assigned to each executive director and pending delivery as of 1 January 2021, 31 December 2021 and 31 December 2022, as well as the gross shares that were delivered to them in 2021 and 2022, either in the form of an immediate payment or a deferred payment. In this case after having been appraised by the board, at the proposal of the remuneration committee, that the corresponding one-fifth of each plan had accrued. They come from the deferred conditional and linked to multi-year objectives in 2016, 2017, 2018, 2019, 2020, 2021 and 2022 were formalized.

Share-based variable remuneration

	Maximum number of shares to be delivered at January 1, 2021	Shares delivered in 2021 (immediate payment 2020 variable remuneration)	Shares delivered in 2021 (deferred payment 2019 variable remuneration)	Shares delivered in 2021 (deferred payment 2018 variable remuneration)	Shares delivered in 2021 (deferred payment 2017 variable remuneration)	Shares delivered in 2021 (deferred payment 2016 variable remuneration)	Variable remuneration 2021 (Maximum number of shares to be delivered)
2016 variable remuneration							
Ana Botín	110,029	—	—	—	—	(55,014)	—
José Antonio Álvarez	74,264	—	—	—	—	(37,133)	—
	184,293					(92,147)	
2017 variable remuneration							
Ana Botín	94,083	—	—	—	(31,361)	—	—
José Antonio Álvarez	62,919	—	—	—	(20,973)	—	—
	157,001				(52,334)		
2018 variable remuneration							
Ana Botín	413,215	—	—	(103,304)	—	—	—
José Antonio Álvarez	276,129	—	—	(69,032)	—	—	—
	689,344			(172,336)			
2019 variable remuneration							
Ana Botín	532,316	—	(106,463)	—	—	—	—
José Antonio Álvarez	355,749	—	(71,150)	—	—	—	—
	888,065		(177,613)				
2020 variable remuneration							
Ana Botín	310,615	(124,246)	—	—	—	—	—
José Antonio Álvarez	168,715	(67,486)	—	—	—	—	—
	479,330	(191,732)					
2021 variable remuneration							
Ana Botín	—	—	—	—	—	—	1,480,622
José Antonio Álvarez	—	—	—	—	—	—	999,259
	—	—	—	—	—	—	2,479,881
2022 variable remuneration¹							
Ana Botín	—	—	—	—	—	—	—
José Antonio Álvarez	—	—	—	—	—	—	—

1. For each director, 40% of the shares indicated correspond to the short-term variable (or immediate payment). The remaining 60% is deferred for delivery, where appropriate, by fifths in the next five years, the last three being subject to the fulfilment of multiannual objectives. Sergio Rial's has the right to a maximum of 51,483 Santander shares and 269,148 options over Santander shares for his participation in the 2019 Digital Transformation Award. In addition, as of 31 December 2022, Rodrigo Echenique maintains the right to a maximum of 150,979 shares arising from his participation in the corresponding plans during his term as executive director.

Share-based variable remuneration

Maximum number of shares to be delivered at December 31, 2021	Instruments matured but not consolidated at January 1, 2022 ²	Shares delivered in 2022 (immediate payment 2021 variable remuneration)	Shares delivered in 2022 (deferred payment 2020 variable remuneration)	Shares delivered in 2022 (deferred payment 2019 variable remuneration)	Shares delivered in 2022 (deferred payment 2018 variable remuneration)	Shares delivered in 2022 (deferred payment 2017 variable remuneration)	Shares delivered in 2022 (deferred payment 2016 variable remuneration)	Variable remuneration 2022 (Maximum number of shares to be delivered)	Maximum number of shares to be delivered at December 31, 2022
55,015	—	—	—	—	—	—	(55,015)	—	—
37,131	—	—	—	—	—	—	(37,131)	—	—
92,146							(92,146)		
62,722	—	—	—	—	—	(31,361)	—	—	31,361
41,946	—	—	—	—	—	(20,973)	—	—	20,973
104,668						(52,334)			52,334
309,911	(206,618)	—	—	—	(34,431)	—	—	—	68,862
207,097	(138,072)	—	—	—	(23,008)	—	—	—	46,017
517,008	(344,689)				(57,440)				114,879
425,853	—	—	—	(106,463)	—	—	—	—	319,390
284,599	—	—	—	(71,150)	—	—	—	—	213,449
710,452				(177,613)					532,839
186,369	—	—	(37,274)	—	—	—	—	—	149,095
101,229	—	—	(20,246)	—	—	—	—	—	80,983
287,598			(57,520)						230,078
1,480,622	—	(592,249)	—	—	—	—	—	—	888,373
999,259	—	(399,704)	—	—	—	—	—	—	599,555
2,479,881		(991,953)							1,487,928
—	—	—	—	—	—	—	—	585,079	585,079
—	—	—	—	—	—	—	—	394,916	394,916
								979,995	979,995

2. After reviewing the results of the 3rd cycle of the deferred variable remuneration plan linked to multi-year targets (2018), the board of directors confirmed in 2022, upon recommendation from the remuneration committee, a 33.3% achievement of the long-term metrics of the plan (as the following level of achievement was met during 2018-2020 period: CET1 at 100% at 2020 year-end (the target was 11.30%); underlying EPS growth at 0% (the target was a 25% growth); and TSR metric at 0% (33% minimum target not reach), with a 33% weight each one) and the amounts of the pending deliveries for each executive director, payable in February 2022, 2023 and 2024 in connection with this plan. Therefore, regarding the maximum number of shares to be delivered at December 31 of 2021 in relation with the last three payments of the 2018 variable remuneration (309,911 and 207,097 shares in the case of Ana Botín and José Antonio Álvarez, respectively) only one third have been delivered (corresponding to the 33.3% of the achievement mentioned above), with the rest of shares definitively not collected as "matured but not consolidated". This applies to all persons under this plan.

Furthermore, the maximum number of share options to be delivered regarding the 2022 variable remuneration plan is 1,575,335 options in the case of Ana Botín, and 1,063,316 options in the case of José Antonio Álvarez. Meanwhile, the maximum number of RSUs of PagoNxt, S.L. to be delivered under the current plan is 12,646 and 8,527 units for Ana Botín and José Antonio Álvarez, respectively.

In addition, the table below shows the cash delivered in 2022 and 2021, by way of either immediate payment or deferred payment, in the latter case once the Board had determined, at the proposal of the remuneration committee, that one-fifth relating to each plan had accrued:

EUR thousand

	2022		2021	
	Cash paid (immediate payment 2021 variable remuneration)	Cash paid (deferred payments from 2020, 2019, 2018 and 2017 variable remuneration)	Cash paid (immediate payment 2020 variable remuneration)	Cash paid (deferred payments from 2019, 2018, 2017 and 2016 variable remuneration)
Ana Botín	1,838	1,102	334	1,550
José Antonio Álvarez	1,241	726	181	1,037
Total	3,079	1,827	515	2,586

iv. Information on former members of the board of directors

The chart below includes information on the maximum number of shares to which former members of the board of directors who ceased in office prior to 1 January 2021 are entitled for their participation in the various deferred variable remuneration systems, which instrumented a portion of their variable remuneration relating to the years in which they were executive directors. Also set forth below is information on the deliveries, whether in shares or in cash, made in 2022 and 2021 to former board members, upon achievement of the conditions for the receipt thereof (see note 42):

Maximum number of shares to be delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	—
Deferred conditional variable remuneration plan and linked to objectives (2016)	—	60,251
Deferred conditional variable remuneration plan and linked to objectives (2017)	33,783	64,659
Deferred conditional variable remuneration plan and linked to objectives (2018)	36,543	164,462
Deferred conditional variable remuneration plan and linked to objectives (2019)	98,092	130,790
Deferred conditional variable remuneration plan and linked to objectives (2020)	—	—

Number of shares delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	92,557
Performance shares plan ILP (2015)	—	—
Deferred conditional variable remuneration plan and linked to objectives (2016)	60,251	60,254
Deferred conditional variable remuneration plan and linked to objectives (2017)	33,783	32,330
Deferred conditional variable remuneration plan and linked to objectives (2018)	18,272	54,821
Deferred conditional variable remuneration plan and linked to objectives (2019)	32,698	32,698
Deferred conditional variable remuneration plan and linked to objectives (2020)	—	—

In addition, EUR 702 thousand and EUR 1,213 thousand relating to the deferred portion payable in cash of the aforementioned plans were paid each in 2022 and 2021.

f) Loans

Grupo Santander's direct risk exposure to the bank's directors and the guarantees provided for them are detailed below. These transactions were made on terms equivalent to those that prevail in arm's-length transactions or the related compensation in kind was recognized:

EUR thousand

	2022			2021		
	Loans and credits	Guarantees	Total	Loans and credits	Guarantees	Total
Mrs Ana Botín-Sanz de Sautuola y O'Shea	20	—	20	25	—	25
Mr José Antonio Álvarez Álvarez	7	—	7	4	—	4
Mr Bruce Carnegie-Brown	—	—	—	—	—	—
Mr Javier Botín-Sanz de Sautuola y O'Shea	23	—	23	16	—	16
Mrs Sol Daurella Comadrán	49	—	49	69	—	69
Mrs Belén Romana García	1	—	1	—	—	—
Mr Ramiro Mato García-Ansorena	—	—	—	—	—	—
Mrs Homaira Akbari	—	—	—	—	—	—
Mr Álvaro Cardoso de Souza	—	—	—	—	—	—
Mr Henrique de Castro	—	—	—	—	—	—
Mrs Pamela Ann Walkden	—	—	—	—	—	—
Mr Luis Isasi Fernández de Bobadilla	—	—	—	—	—	—
Mr Sergio Agapito Lires Rial	5	—	5	1	—	1
Mr R. Martín Chávez Márquez	—	—	—	—	—	—
Mrs Gina Lorenza Díez Barroso	—	—	—	—	—	—
Mr Germán de la Fuente Escamilla	—	—	—	—	—	—
	105	—	105	115	—	115

g) Senior managers

The table below includes the amounts relating to the short-term remuneration of the members of senior management at 31 December 2022 and those at 31 December 2021, excluding the remuneration of the executive directors, which is detailed above. This amount has been reduced by 35% compared to that reported in 2014 (EUR 80,792 thousand):

EUR thousand

Year	Number of persons	Short-term salaries and deferred remuneration								Total
		Fixed	Variable remuneration (bonus) - Immediate payment		Deferred variable remuneration		Pensions	Other remuneration ¹		
			In cash	In shares ²	In cash	In shares ³				
2022	14	18,178	7,733	7,733	3,398	3,399	5,339	6,956	52,736	
2021	15	19,183	8,402	8,402	3,648	3,648	5,542	5,055	53,880	

1. Includes other remuneration items such as life and medical insurance premiums and localization aids and lastly RSUs from PagoNxt S.L., for his work as a director in said entity.

2. The amount of immediate payment in shares for 2022 is 2,504,000 shares (2,706,819 Santander shares in 2021).

3. The deferred amount in shares not linked to long-term objectives for 2022 is 1,101,000 shares (1,175,191 Santander shares in 2021).

The board of directors approved the 2022 Digital Transformation Incentive which is a variable remuneration scheme split in two different blocks:

- the first one, with the same design as in previous years, that delivers Santander shares and share options if the group hits major milestones on its digital roadmap. It is aimed at a group of up to 250 employees whose functions are deemed essential to Santander's growth. No senior executives are included within this plan in 2022 and 2021.
- And the second one, which delivers PagoNxt, S.L. RSUs and premium priced options (PPOs), and is aimed at up to 50 employees whose roles are considered key to PagoNxt's success, including 1 senior executive who will receive EUR 500 thousand.

See note 42 to the 2022, Bank's financial statements for further information on the Digital Transformation Incentive.

In 2022, the ratio of variable to fixed pay components was 120% of the total for senior managers, well within the maximum limit of 200% set by 2022 AGM. Also, the detail of the breakdown of the remuneration linked to long-term objectives of the members of senior management at 31 December 2022 and 31 December 2021 is provided below. These remuneration payments shall be received, as the case may be, in the corresponding deferral periods, upon achievement of the conditions stipulated for each payment (see note 42):

EUR thousand

Year	Number of people	Variable remuneration subject to long-term objectives		Total
		Cash payment	Share payment	
2022	14	3,568	3,569	7,137
2021	15	3,830	3,830	7,660

1. Relates to the fair value of the maximum annual amounts for years 2026, 2027 and 2028 of the seventh cycle of the deferred conditional variable remuneration plan (2025, 2026 and 2027 for the sixth cycle of the deferred variable compensation plan linked to annual objectives for the year 2021).

Additionally, senior executives who stepped down from their roles in 2022 consolidated salary remuneration and other remuneration for a total amount of EUR 3,691 thousand (EUR 5,294 thousand in 2021). They also have the right to receive, in total, EUR 447 thousand in variable pay subject to long-term objectives (this right has been generated in 2021 for a total amount of EUR 55 thousand).

The maximum number of Santander shares that the members of senior management at each plan grant date (excluding executive directors) were entitled to receive as of 31 December 2022 and 31 December 2021 relating to the deferred portion under the various plans then in force is the following (see note 42):

Maximum number of shares to be delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	—
Deferred conditional variable remuneration plan (2017)	—	—
Deferred conditional variable remuneration plan (2018)	—	3,475
Deferred conditional variable remuneration plan and linked to objectives (2016)	18,500	150,445
Deferred conditional variable remuneration plan and linked to objectives (2017)	76,053	164,428
Deferred conditional variable remuneration plan and linked to objectives (2018)	155,758	803,056
Deferred conditional variable remuneration plan and linked to objectives (2019)	949,917	1,274,450
Deferred conditional variable remuneration plan and linked to objectives (2020)	1,438,437	1,829,720
Deferred conditional variable remuneration plan and linked to objectives (2021)	2,711,926	—

Since the conditions established in the corresponding deferred share-based remuneration schemes for prior years had been met, the following number of Santander shares was delivered in 2022 and 2021 to the senior management, in addition to the payment of the related cash amounts:

Number of shares delivered

	2022	2021
Deferred conditional variable remuneration plan (2015)	—	146,930
Deferred conditional variable remuneration plan (2017)	—	2,786
Deferred conditional variable remuneration plan (2018)	—	3,474
Deferred conditional variable remuneration plan and linked to objectives (2016)	114,006	131,938
Deferred conditional variable remuneration plan and linked to objectives (2017)	107,891	79,104
Deferred conditional variable remuneration plan and linked to objectives (2018)	79,037	267,686
Deferred conditional variable remuneration plan and linked to objectives (2019)	288,041	321,006
Deferred conditional variable remuneration plan and linked to objectives (2020)	360,614	1,742,419
Deferred conditional variable remuneration plan and linked to objectives (2021)	2,556,117	—

As indicated in note 5.c above, senior management participate in the benefit system created in 2012, which covers the contingencies of retirement, disability and death. Banco Santander makes annual contributions to the benefit plans of its senior managers. In 2012, the contracts of the senior managers with benefit pension commitments were amended to transform them into a contribution system. The system, which is outsourced to Santander Seguros y Reaseguros, Compañía Aseguradora, S.A., gives senior managers the right to receive benefits upon retirement, regardless of whether or not they are active at Banco Santander at such time, based on contributions to the system. This new system replaced their previous right to receive a pension supplement in the event of retirement. In the event of pre-retirement, and up to the retirement date, senior managers appointed prior to September 2015 are entitled to receive an annual allowance.

In addition, further to applicable remuneration regulations, from 2016 (inclusive), a discretionary pension benefit component of at least 15% of total remuneration in contributions to the pension system has been included. Under the regime corresponding to these discretionary benefits, the contributions that are calculated on variable remunerations are subject to malus and clawback clauses, subject to policies applicable at each time, and during the same period in which the variable remuneration is deferred.

Likewise, the annual contributions calculated on variable remunerations must be invested in Bank shares for a period of five years from the date that the senior manager leaves the Group, regardless of whether or not they leave to retire. Once that period has elapsed, the amount invested in shares will be reinvested, along with the remainder of the cumulative balance corresponding to the senior manager, or it will be paid to the senior manager or to their beneficiaries in the event of a contingency covered by the benefits system.

The contracts of some senior executives were modified at the beginning of 2018 with the same objective and changes indicated in section c of this note for Ana Botín and José Antonio Álvarez. The modifications, which are aimed at aligning the annual contributions with the practices of comparable institutions and reducing the risk of future obligations by eliminating the supplementary scheme for death (widowhood and orphanhood) and permanent disability in service without increasing the costs to the bank, are as follows:

- Contributions to the pensionable bases were reduced. Gross annual salaries were increased in the corresponding amount.

- The death and disability supplementary benefits were eliminated since January 1, 2018 for some senior executives and since April 1, 2018 for executive directors. A fixed remuneration supplement reflected in other remuneration in the table above was implemented on the same date.
- The amounts insured for life and accident insurance were increased.

All of the above was done without an increase in total cost for the Bank.

The balance as of 31 December 2022 in the pension system for those who were part of senior management at year end amounted to EUR 54 million (EUR 57 million at 31 December 2021).

The net charge to income corresponding to pension amounted to EUR 5.3 million in 2022 (EUR 5.5 million in 31 December 2021).

In 2022 and 2021 there have been no payments in the form of a single payment of the annual voluntary pre-retirement allowance.

Additionally, the capital insured by life and accident insurance at 31 December 2022 of this group amounts to EUR 98 million (EUR 100 million at 31 December 2021).

h) Post-employment benefits to former Directors and former senior executive vice presidents

The post-employment benefits and settlements paid in 2022 to former directors of the Bank, other than those detailed in note 5.c amounted to EUR 5.6 million and EUR 5.6 million in 2021, respectively. Also, the post-employment benefits and settlements paid in 2022 to former executive vice presidents amounted to EUR 4.8 million and EUR 51.6 million in 2021, respectively.

Contributions to insurance policies that hedge pensions and complementary widowhood, orphanhood and permanent disability benefits to previous members of the Bank's board of directors, amounted to EUR 0.17 million in 2022 (EUR 0.17 million in 2021). Likewise, contributions to insurance policies that hedge pensions for previous senior managers amounted to EUR 3.1 million in 2022 (EUR 4.4 million in 2021).

During the 2022 financial year, no releases or charges were recorded in the consolidated income statement for pension commitments and similar obligations held by the Group with previous former members of the bank's board of directors or former senior managers in 2022 and 2021.

In addition, 'Provisions - Pension Fund and similar obligations' in the consolidated balance sheet as at 31 December 2022 included EUR 48 million in respect of the post-employment benefit obligations to former Directors of the Bank (EUR 50 million at 31 December 2021) and EUR 99 million corresponding to former senior managers (EUR 114 million at 31 December 2021).

i) Pre-retirement and retirement

The board of directors approved an amendment to the contracts of the executive directors whereby Ana Botín and José Antonio Álvarez ceased to have the right to pre-retire in case of termination of his contract.

j) Contract termination

The executive directors and senior managers have indefinite-term employment contracts. Executive directors or senior managers whose contracts are terminated voluntarily or due to breach of duties are not entitled to receive any economic compensation. If Banco Santander terminates the contract for any other reason, they will be entitled to the corresponding legally-stipulated termination benefit, without prejudice to any compensation that may for non-competition obligations, as detailed in the directors' remuneration policy.

If Banco Santander were to terminate her contract, Ana Botín would have to remain at Banco Santander's disposal for a period of 4 months in order to ensure an adequate transition, and would receive her fixed salary during that period.

k) Information on investments held by the directors in other companies and conflicts of interest

None of the members of the board of directors have declared that they or persons related to them may have a direct or indirect conflict of interest with the interests of Banco Santander, S.A., as set forth in article 229 of the Corporate Enterprises Act.

6. Loans and advances to central banks and credit institutions

The detail by classification, type and currency, of loans and advances to central banks and credit institutions in the balance sheet is as follows:

EUR million	2022	2021
CENTRAL BANKS		
Classification		
Financial assets held for trading	1,933	1,118
Financial assets at amortized cost	94	26
	2,027	1,144
Type		
Reverse repurchase agreements	1,933	1,118
Other term loans	25	25
Advances different from loans	69	1
<i>Of which, impaired assets</i>	—	—
<i>Of which, valuation adjustments for impairment</i>	—	—
	2,027	1,144
Currency		
Euro	2,027	1,143
US Dollars	—	1
	2,027	1,144
CREDIT INSTITUTIONS		
Classification		
Financial assets held for trading	9,807	6,980
Financial assets designated at fair value through profit or loss	934	3,445
Financial assets designated at fair value through other comprehensive income	1	—
Financial assets at amortized cost	35,067	35,084
	45,809	45,509
Type		
Reverse repurchase agreements	16,684	13,602
Other term loans	14,876	21,192
Non-loans advances	14,249	10,715
<i>Of which, impaired assets</i>	—	—
<i>Of which, valuation adjustments for impairment</i>	(2)	(4)
	45,809	45,509
Currency		
Euro	27,841	32,341
Pound sterling	4,196	1,493
US dollar	13,428	11,395
Chilean pesos	12	3
Brazilian real	1	—
Other currencies	331	277
	45,809	45,509
TOTAL	47,836	46,653

The loans and advances classified in the 'Financial assets held for trading' portfolio correspond to temporary acquisitions of assets from Spanish and foreign institutions.

Deposits in credit institutions classified as 'Financial assets at amortized cost' are mainly term accounts and guarantees given in cash to credit institutions.

In addition, at 31 December 2022, there were outstanding balances with central banks and credit institutions of EUR 124,577 million and EUR 4,249 million, respectively (88,268 and 2,284 million EUR at 31 December 2021). The increase occurs due to the liquidity management carried out by the Bank. These balances are included under 'Cash, cash balances at central banks and other deposits on demand'.

Note 48 shows the details of the maturity terms of 'Financial assets at amortized cost' and 'Cash, cash balances at central banks and other deposits on demand'.

The breakdown at 31 December 2022 of the exposure and the provision fund for financial assets at amortized cost is EUR 35,163 million and EUR 2 million, respectively, all in Phase 1 (EUR 35,114 million and EUR 4 million, also Phase 1, in 2021).

7. Debt securities

The detail, by classification, sector and currency, of 'Debt instruments' in the accompanying balance sheets is as follows:

EUR million	2022	2021
Classification		
Financial assets held for trading	17,846	14,320
Non-trading financial assets mandatorily at fair value through profit or loss	950	734
Financial assets designated at fair value through other comprehensive income	4,120	9,394
Financial assets at amortized cost	40,182	17,208
	63,098	41,656
Sector		
Central banks	894	892
Public sector	31,618	13,358
Credit institutions	16,237	14,771
Other financial institutions	12,858	11,356
Non-financial institutions	1,491	1,279
<i>Of which, impaired assets</i>	154	144
<i>Of which, value adjustments for impairment</i>	(255)	(148)
	63,098	41,656
Currency		
Euro	47,037	27,246
US dollar	8,339	7,764
Pound sterling	4,913	4,161
Brazilian real	1,059	1,245
Other currencies	1,750	1,240
	63,098	41,656

The increase in the debt securities portfolio under the heading 'Financial assets at amortized cost' of EUR 22,974 million during the year is mainly due to the origination of two new business models whose goal is to hold financial assets to collect contractual cash flows. These new business models pursue mainly two different strategies:

Optimisation of excess liquidity through management aimed at making the liquidity held on the balance sheet profitable in order to comply with regulatory metrics by investing in HQLAs (High Quality Liquid Assets), basically very short-term public debt instruments or central bank bills (terms of no more than 2 years) that offer higher returns than the alternative of keeping cash on deposit at the central bank, in order to generate margin at maturity.

Management of the duration of the balance sheet through the reconstruction of ALCO portfolios that contribute to the generation of financial margin to offset, at least partially, the higher financial cost derived from the increase in the cost of customer deposits and medium/long-term wholesale financing in the face of rising interest rates, while at the same time constituting a hedging position of the balance sheet/long-term financial margin in the face of potential future falls in interest rates. This investment is also made mainly through liquid assets, sovereign debt, but at longer maturities (3, 5, 7, 10 years).

At 31 December 2022, the nominal amount of the debt securities subject to own obligations, mostly as collateral for financing lines received by the Bank, amounts to EUR 19,293 million (EUR 14,877 million at 31 December 2021), of which EUR 10,222 million correspond to Spanish Public Debt (EUR 8,607 million at 31 December, 2021)

The breakdown at 31 December 2022 of the exposure, by phase of impairment, of the assets subject to impairment is EUR 44,403 million in phase 1 and EUR 154 million in phase 3. In 2021 it was EUR 26,606 million in phase 1 and EUR 144 million in phase 3.

The breakdown at 31 December 2022 of the provision fund by phase of impairment of assets subject to impairment is EUR 129 million in phase 1 and EUR 126 million in phase 3. In 2021 it was EUR 33 million in phase 1 and EUR 115 million in phase 3.

Note 25.e) shows the details of 'Other comprehensive income' recognized in Equity for the 'Financial Assets designated at fair value through other comprehensive income'.

Note 48 contains details of the maturity periods of 'Debt securities' classified in the 'financial assets at fair value through other comprehensive income' and 'financial assets at amortized cost' portfolios.

8. Equity instruments

a) Breakdown

The detail, by classification and type, of Equity instruments in the accompanying balance sheets is as follows:

EUR million	2022	2021
Classification		
Financial assets held for trading	9,450	14,619
Non-trading financial assets mandatorily at fair value through profit or loss	1,041	908
Financial assets designated at fair value through other comprehensive income	1,268	1,705
	11,759	17,232
Type		
Shares of Spanish companies	3,215	3,818
Shares of foreign companies	8,071	12,843
Shares of investments funds	473	571
	11,759	17,232

Note 25.c) contains a detail of the 'Other comprehensive income', recognized in equity, on 'Financial assets designated at fair value through other comprehensive income'.

b) Changes

The changes in 'Non-trading financial assets mandatorily at fair value through profit or loss' and 'Financial assets at fair value through other comprehensive income' during 2022 and 2021 were as follows:

EUR million	2022	2021
Balance at beginning of the year	1,705	1,942
Purchases and capital increases	1	2
Disposals and capital reductions	(13)	(4)
Of which		
<i>JC Flowers I, LP</i>	(10)	—
<i>Epi Interim Company SE</i>	(2)	—
Other comprehensive income and other concepts	(425)	(235)
Balance at end of the year	1,268	1,705

A. During 2022 and 2021 there were significant changes in value due, among others, to the fall in the prices of the listed companies included under this heading.

During 2022 and 2021, the fair value of the investment in Project Quasar Investments 2017, S.L. was reduced by EUR 250 million on both years, as a result of the valuation update of the assets of this company.

In January 2022, Banco Santander has exercised its preferential acquisition right, set out in the shareholders' agreement dated June 27, 2016 of shares in Bizum, S.L. for EUR 1 million. As a result, significant influence was achieved in the company and the share was reclassified from this heading to "Investments in subsidiaries, joint ventures and associates - Associates" (see note 13.a.ii).

c) Notifications of acquisitions of investments

The notifications of the acquisitions and disposals of holdings in investees made by the Bank in 2022, in compliance with Article 155 of the Spanish Limited Liability Companies Law and Article 125 of Spanish Securities Market Law 24/1998, are listed in appendix IV.

9. Trading Derivatives (assets and liabilities) and short positions

a) Trading derivatives

The detail, by type of inherent risk, of the fair value of the trading derivatives arranged by Banco Santander at 31 December 2022 and 2021 is as follows:

EUR million	2022		2021	
	Debit balance	Credit balance	Debit balance	Credit balance
Interest rate	34,453	31,011	26,763	23,483
Equity instruments	1,416	851	1,393	955
Currency and gold	18,230	19,783	13,739	15,911
Credit	178	197	104	252
Commodities	—	—	—	—
Others	179	284	24	71
Total	54,456	52,126	42,023	40,672

b) Short positions

The following is a breakdown of short positions (liabilities):

EUR million	2022	2021
Borrowed Securities		
Equity instruments	934	318
Short sales		
Debt instruments	13,519	8,926
Total	14,453	9,244

10. Loans and advances to customers

a) Detail

The detail, by classification, of 'Loans and advances to customers' on the balance sheets is as follows:

EUR million	2022	2021
Financial assets held for trading	10,376	7,025
Non-trading financial assets mandatorily at fair value through profit or loss	1,177	713
Financial assets designated at fair value through profit or loss	5,707	9,958
Financial assets at fair value through other comprehensive income	5,218	3,936
Financial assets at amortized cost	302,804	286,735
Loans and advances to customers (carrying amount)	325,282	308,367
<i>Of which</i>		
<i>Impairment losses</i>	(4,729)	(6,899)
Loans and advances to customers disregarding impairment losses	330,011	315,266

'Note 48 shows the details of the maturity periods of financial assets at amortized cost.'

At 31 December 2022 and 2021, there were no loans and advances to customers for material amounts without fixed maturity dates.

b) Breakdown

The following is a breakdown of the loans and advances granted to Banco Santander's customers, which, reflect the bank's exposure to credit risk in its main activity without considering the balance of impairment losses taking into account the type and situation of the transactions, the geographical area of their residence and type of interest rate on the transactions:

EUR million	2022	2021
Loan type and status		
On demand and with a short prior period	3,060	3,167
Credit cards receivables	1,342	1,269
Commercial credit	35,212	27,423
Finance leases	2,698	2,965
Reverse repurchase agreements	10,399	6,459
Other term loans	260,357	255,799
Non loans advances	12,214	11,285
Of which		
<i>Impaired assets</i>	9,017	12,882
<i>Impairment losses</i>	(4,729)	(6,899)
Book value	35,067	308,367
Gross book value	330,011	315,266
Geographical area		
Spain	204,994	211,525
European Union (excluding Spain)	41,435	28,469
United States of America and Puerto Rico	28,757	25,065
Other OECD countries	31,248	28,186
Latin America (non-OECD)	10,643	9,548
Rest of the world	12,934	12,473
	330,011	315,266
Interest rate:		
Fixed rate	180,745	143,101
Floating rate	149,266	172,165
	330,011	315,266

At 31 December 2022 and 2021 the Bank had EUR 14,269 million and EUR 13,819 million, respectively, of loans and advances granted to Spanish public administrations whose rating at 31 December 2022 is A (rating at 31 December 2021 was A) and with EUR 4,579 million and EUR 2,085 million, respectively, granted to the Public Sector of other countries (at 31 December 2022 this amount was composed, based on the rating of the issuer as follows: 7% AAA, 21% AA, 0% A, 53% BBB and 18% lower than BBB).

The above-mentioned ratings were obtained by converting the internal ratings awarded to customers by Banco Santander (see note 49) into the external ratings classification established by Standard & Poor's, in order to make them more readily comparable.

Without considering Public Administrations, the amount of loans and advances at 31 December 2022 amounts to EUR 311,163 million, of which EUR 302,146 million are in a non-doubtful situation (at 31 December 2021, they amounted to EUR 299,362 million and EUR 286,480 million respectively).

The following is a detail, by activity, of the loans to customers at 31 December 2022, net of impairment losses:

EUR million

	Total*	Without collateral	Secured loans						
			Net exposure		Loan-to-value ratio ^C				
			Of which, property collateral	Of which, other collateral	Less than or equal to 40%	More than 40% and less than or equal to 60%	More than 60% and less than or equal to 80%	More than 80% and less than or equal to 100%	More than 100%
Public sector	16,620	15,625	148	847	60	68	16	850	1
Other financial institutions and individual traders (business financial activity)	63,969	37,130	1,732	25,107	604	973	314	24,544	404
Non-financial companies and individual entrepreneurs (non-financial business activity) (broken down by purpose)	152,255	112,219	19,667	20,369	8,648	7,214	3,925	15,749	4,500
<i>Of which</i>									
<i>Construction and property development (including land)</i>	2,209	11	2,182	16	1,056	796	246	39	61
<i>Civil engineering construction</i>	1,947	1,197	26	724	16	77	4	634	19
<i>Large companies</i>	101,320	80,886	5,622	14,812	2,653	2,074	1,354	11,181	3,172
<i>SMEs and individual traders</i>	46,779	30,125	11,837	4,817	4,923	4,267	2,321	3,895	1,248
Other households (broken down by purpose)	80,224	10,298	68,437	1,489	20,132	22,415	21,568	4,097	1,714
<i>Of which</i>									
<i>Residential</i>	63,669	788	62,718	163	18,093	20,520	20,057	3,136	1,075
<i>Consumer loans</i>	8,404	7,559	412	433	208	159	213	203	62
<i>Other purposes</i>	8,151	1,951	5,307	893	1,831	1,736	1,298	758	577
Total^A	313,068	175,272	89,984	47,812	29,444	30,670	25,823	45,240	6,619
<i>Memorandum item</i>									
Refinanced and restructured transactions ^B	12,620	6,714	4,521	1,385	1,161	1,144	959	1,409	1,232

A. Not including loan advances.

B. Includes the net balance of value adjustments associated with impaired assets.

C. The ratio is the carrying amount of the transactions at 31 December 2022 calculated using the latest available appraisal value of the collateral.

Note 49 contains information relating to the forborne loan portfolio.

Below is a breakdown of the movement in gross exposure by impairment stage of loans and advances from customers recorded under the headings 'Financial assets at amortized cost' and 'Financial assets at fair value through other comprehensive income' under Bank of Spain Circular 4/2017 to 31 December 2022 and 2021:

2022

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of the year	267,980	16,708	12,882	297,570
Movements				
Transfers				
Transfer to Stage 2 from Stage 1	(3,919)	3,919		—
Transfer to Stage 3 from Stage 1	(654)		654	—
Transfer to Stage 3 from Stage 2		(1,674)	1,674	—
Transfer to Stage 1 from Stage 2	3,478	(3,478)		—
Transfer to Stage 2 from Stage 3		574	(574)	—
Transfer to Stage 1 from Stage 3	23		(23)	—
Net changes on financial assets	23,195	(2,418)	(2,400)	18,377
Write-offs	—	—	(3,196)	(3,196)
Differences in change and other movements				
Balance at end of the year	290,103	13,631	9,017	312,751

A. The movement of Phase 3 includes portfolio sales for EUR 2,583 million

2021

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at the beginning of year	252,388	12,031	13,524	277,943
Movements				
Transfers				
To stage 2 from stage 1	(8,873)	8,873		—
To stage 3 from stage 1	(1,368)		1,368	—
To stage 3 from stage 2		(1,116)	1,116	—
To stage 1 from stage 2	1,386	(1,386)		—
To stage 2 from stage 3		357	(357)	—
To stage 1 from stage 3	36		(36)	—
Net changes on financial assets	24,411	(2,051)	(278)	22,082
Write-offs			(2,455)	(2,455)
Differences in change and other movements				
Balance at end of the year	267,980	16,708	12,882	297,570

A. The movement of Phase 3 includes portfolio sales for EUR 1,713 million

At 31 December 2022, the total net exposure of loans and advances to the Bank's customers is EUR 308,022 million, of which EUR 289,616 million correspond to phase 1, EUR 12,973 million to phase 2 and EUR 5,433 million to phase 3 (EUR 267,471 million, EUR 16,002 million and EUR 7,198 million respectively at 31 December, 2021). This exposure includes EUR 104 million (EUR 233 million at 31 December 2021) in impaired assets purchased with impairment, classified in phase 3, which correspond mainly to the business combination carried out by the Bank.

c) Impairment losses on loans and advances to customers at amortized cost and at fair value through other comprehensive income

The changes in the impairment losses on the assets making up the balances of financial assets at amortized cost and at fair value through other comprehensive income 'Loans and advances to customers':

EUR million	2022	2021
Balance at beginning of the year	6,899	6,981
Net impairment losses charged to income for the year	1,404	2,304
<i>Of which</i>		
<i>Impairment losses charged to profit or loss</i>	2,492	3,535
<i>Impairment losses reversed with a credit to profit or loss</i>	(1,088)	(1,231)
Write-off of impaired balances against recorded impairment allowance	(3,196)	(2,455)
Exchange differences and other changes	(378)	69
Balance at end of the year	4,729	6,899
<i>Of which</i>	—	—
<i>By status of the asset</i>		
<i>Impaired assets</i>	3,584	5,684
<i>Of which, due to country risk</i>	5	7
<i>Other assets</i>	1,140	1,208
Balance at end of the year	4,729	6,899
<i>Of which</i>		
<i>Individually calculated</i>	867	881
<i>Collective calculated</i>	3,862	6,018

The net provision that has an impact on the results for the year includes provisions for renegotiation or contractual modification of EUR 23 million (EUR 75 million at 31 December 2021).

Taking into account the assets in suspense recovered, which amount to EUR 111 million at 31 December, 2022 (EUR 89 million at 31 December, 2021) and adding to the net provision of the previous table, the impairment of 'Credit Entities and Debt Securities' (see notes 6 and 7), the amount recorded under the heading 'Impairment or reversal of impairment of financial assets not measured at fair value through profit or loss and net gains or losses', due to changes in 'Financial assets at fair value with changes in other comprehensive income' and 'Financial assets at amortized cost', amounts to EUR 1,398 million at 31 December, 2022 (EUR 2,287 million at 31 December, 2021).

The following is the movement of impairment losses broken down by impairment stage of loans and advances to customers, during 2022 and 2021:

2022				
EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of the year	509	706	5,684	6,899
Transfers				
Transfer to Stage 2 from Stage 1	(25)	139		114
Transfer to Stage 3 from Stage 1	(5)		193	188
Transfer to Stage 3 from Stage 2		(93)	315	222
Transfer to Stage 1 from Stage 2	22	(84)		(62)
Transfer to Stage 2 from Stage 3		73	(119)	(46)
Transfer to Stage 1 from Stage 3	—		(18)	(18)
Net changes of the exposure and modifications in the credit risk	42	(83)	1,047	1,006
Changes due to update in the methodology of estimates of the entity				
Write-offs			(3,196)	(3,196)
FX and other movements	(56)	—	(322)	(378)
Gross carrying amount at end of the year	487	658	3,584	4,729

2021

EUR million				
	Stage 1	Stage 2	Stage 3	Total
Balance at beginning of the year	485	714	5,782	6,981
Transfers				
Transfer to Stage 2 from Stage 1	(19)	248		229
Transfer to Stage 3 from Stage 1	(52)		240	188
Transfer to Stage 3 from Stage 2		(119)	384	265
Transfer to Stage 1 from Stage 2	4	(76)		(72)
Transfer to Stage 2 from Stage 3		23	(77)	(54)
Transfer to Stage 1 from Stage 3	1		(13)	(12)
Net changes of the exposure and modifications in the credit risk	71	(84)	1,773	1,760
Changes due to update in the methodology of estimates of the entity				
Write-offs			(2,455)	(2,455)
FX and other movements	19	—	50	69
Gross carrying amount at end of the year	509	706	5,684	6,899

d) Impaired assets

The detail of the movement in the balance of financial assets classified as 'Loans and advances to customers' and considered to be impaired by reason of their credit risk during 2022 and 2021 is:

EUR million		
	2022	2021
Balance at beginning of the year	12,882	13,524
Net additions	(669)	1,813
Written-off assets	(3,196)	(2,455)
Other changes	—	—
Balance at end of the year	9,017	12,882

This amount, once the corresponding provisions have been deducted, is Banco Santander's best estimate of the discounted value of the cashflows that are expected to be recovered from impaired assets.

At 31 December 2022, the balance of the assets written-off amounted to EUR 6,732 million (8,198 million EUR at 31 of december 2021).

The following are the credit impaired financial assets and related guarantees maintained to mitigate potential losses as of 31 December 2022:

EUR million			
	Gross amount	Allowance recognized	Estimated collateral value*
Without associated real collateral	3,106	1,641	—
With associated real collateral	4,790	1,562	2,942
With other collateral	1,121	381	452
Total	9,017	3,584	3,394

A. Collects the estimated value of the collateral associated with each loan. Consequently, it does not include any other cash flow that could be obtained, such as those from the personal guarantees of the accredited.

When classifying assets in the previous table, the main factors considered by Banco Santander to determine whether an asset has become impaired are the existence of amounts past due -assets impaired due to arrears- or other circumstances may be arise which will not result in all contractual cash flow being recovered, such as a deterioration of the borrower's financial situation, the worsening of its capacity to generate funds or difficulties experienced by it in accessing credit.

e) Transferred credits

The heading 'Loans and advances to customers' includes, among others, those loans transferred to third parties by securitisation on which risks and profits are maintained, albeit partially, which is why and in accordance with the accounting regulations that apply, they cannot be removed from the balance sheet. This is mainly due to mortgage loans, loans to companies and consumer loans. The breakdown of securitised loans held on the balance sheet, taking into account the nature of the financial instrument from which they originate, is shown below:

EUR million		
	2022	2021
Retained on the balance sheet ^A	13,171	15,347
Of which, mortgage assets are securitized through:		
Mortgage transfer certificates (nota 20.c) ^A	9,769	11,133
Total^A	13,171	15,347

A. Note 19 reports the liabilities associated with securitization operations, discounting the bonds of the securitization funds repurchased by the Bank.

The evolution of this activity responds to its use as a regulatory capital management tool and as a resource for the diversification of Banco Santander's liquidity sources. During 2022 and 2021 the Bank didn't derecognize any of the securitizations carried out in years mentioned before, and the balance derecognized at those dates corresponds to securitizations carried out in previous years and portfolio sales.

On the other hand, at 31 December 2022, Banco Santander has credits derecognized from the balance sheet and on which the administration maintains for an amount of EUR 3,383 million. (EUR 2,397 million at 31 December 2021). Within the total loans written off the balance sheet, at 31 December 2022, there are EUR 721 million (EUR 845 million in 2021) of securitized assets.

f) Guarantee

Below is the breakdown of the liabilities issued guaranteed by assets, discounting own values as of 31 December 2022 and 2021:

EUR million	2022	2021
Liabilities secured by assets:		
Mortgage-backed bonds	22,106	22,274
Asset-backed securities	1,995	2,290
Territorial bonds	345	625
Total	24,446	25,189

The mortgage-backed bonds ('*cédulas hipotecarias*') are secured by mortgage loans with average maturities of more than ten years. In order to calculate the amount of the qualifying assets in accordance with Royal Decree-Law 24/2021 transposing the European Union directive on covered bonds, the following transactions are excluded from the total base of the unsecuritized mortgage portfolio:

- Transactions classified as at pre-action stage and procedural stage.
- Transactions without appraisal by a specialist valuer.
- Transactions exceeding 80% of the appraised value in residential financing and 60% in the case of other assets.
- Second mortgages or mortgages with insufficient collateral.
- Transactions without insurance or with insufficient insurance.

The asset-backed securities, including asset-backed securities and notes issued by special-purpose vehicles (SPVs), are secured by:

- Mortgage loans to individuals to finance the acquisition and refurbishment of homes with an average maturity of more than ten years.
- Personal consumer finance loans with no specific guarantee and unsecured loans with an average maturity of five years.
- Loans to SMEs (non-financial small and medium-sized enterprises) secured by State guarantees, and loans to companies (SMEs -self-employed, microbusinesses, small and medium-sized enterprises- and large companies) secured by property mortgages, the borrower's personal guarantee, guarantees and other collateral other than property mortgages, with an average maturity of 7 years.
- Mortgage and non-mortgage loans to finance municipalities, autonomous communities and subsidiaries with an average maturity of more than 10 years.
- Commercial credit of Banco Santander (ordinary and occasional invoice discounting and advances to customers on legitimate receivables) with an average maturity of 45 days.

Additionally, Banco Santander issues internationalization bonds, which are securities whose capital and interest are guaranteed by loans and credits that are linked to the financing of export contracts or the internationalization of companies. These internationalization bonds have been repurchased in their entirety by Banco Santander.

The fair value of the guarantees received by Banco Santander (financial and non-financial assets) which the Bank is authorized to sell or pledge even if the owner of the guarantee has not defaulted is scanty material taking into account the Bank's financial statements as a whole.

11. Trading derivatives

The detail of the notional and/or contractual amounts and the market values of the trading derivatives held by the Bank in 2022 and 2021 is as follows:

EUR million

	2022		2021	
	Notional value	Market value	Notional value	Market value
Held for trading:				
Interest rate	4,962,408	3,442	4,163,388	3,280
Options	212,704	(488)	203,013	(304)
Other	4,749,704	3,930	3,960,375	3,584
Equity instruments	54,947	566	55,548	439
Options	37,770	(267)	36,920	(231)
Other	17,177	833	18,628	670
Currency and gold	737,276	(1,554)	687,473	(2,172)
Options	42,382	227	43,666	48
Other	694,894	(1,781)	643,807	(2,220)
Credit	13,669	(18)	12,856	(147)
Hedging default derivative and total through out	13,669	(18)	12,856	(147)
Securities and commodities derivatives and other	5,683	(106)	5,518	(49)
	5,773,983	2,330	4,924,783	1,351

12. Non-current assets held for sale

The detail of non-current assets held for sale in the balance sheets is as follows:

EUR million

	2022	2021
Foreclosed assets	668	966
Other assets leased out under an operating lease	34	27
Investment property	—	—
Total	702	993

At 31 December 2022, reducing the balance of this heading, there were EUR 575 million corresponding to value adjustments due to impairment of those assets, which entails a coverage of 45% of them (EUR 644 million, with a coverage of 39.3%, in the 2021 financial year) of which EUR 68 million have been recorded during the 2022 financial year (EUR 70 million in the 2021 financial year) under the heading 'Gains or losses from non-current assets and groups disposal of items classified as held for sale not eligible as discontinued operations' (see Note 46).

At 31 December 2022 and 2021 there are no liabilities associated in disposable groups of items that have been classified as held for sale associated with other 'non-current assets and alienable groups of items that have been classified as held for sale'

13. Investments

a) Associated entities

'Investments - Associates' in the accompanying balance sheets includes Banco Santander's ownership interests in associates (see note 2.b).

Appendix II contains a detail of these companies, indicating the percentages of direct or indirect ownership and other relevant information.

At 31 December 2022, there were no capital increases in progress at any associated company.

i. Breakdown

The detail of the balance of this heading of the attached balances, based on the contracting currency and the admission or non-listing of the securities, is as follows:

EUR million

	2022	2021
Currency:		
Euro	2,954	3,020
Foreign Currency	—	—
	2,954	3,020
Listing status:		
Listed	1,844	1,917
Unlisted	1,110	1,103
	2,954	3,020

ii. Changes

The changes in 2022 and 2021 in 'Investments - Associates', disregarding impairment losses, were as follows, (see note 13.a.iii):

EUR million	2022	2021
Balance at the beginning of the year	3,312	3,363
Purchases, capital increases and mergers	1	20
<i>Of which</i>		
Merlín Properties, SOCIMI, S.A.	—	6
Redsys Servicios de Procesamiento, S.L.	—	10
Disposals, reductions and mergers:	(112)	(78)
<i>Of which</i>		
Merlín Properties, SOCIMI, S.A.	(4)	(25)
Metrovacesa, S.A.	(107)	(52)
Transfers	1	—
Other changes (net)	19	7
Balance at end of the year	3,221	3,312

During 2022, Banco Santander has sold shares in Merlín Properties, SOCIMI, S.A. for a net total of EUR 4 million through various transactions on the stock market.

In May and December 2022, Metrovacesa, S.A. has made dividend distributions charged to the unrestricted reserve (issue premium), and Banco Santander received two payments of EUR 29 million and EUR 51 million, respectively. These transactions resulted in a reduction in the cost of the participations of EUR 107 million and an impairment loss of EUR 27 million (see note 13.a.iii).

In April 2021, the company Merlín Properties, SOCIMI, S.A. made a distribution of dividends charged to the issue premium, with Banco Santander which received an amount of EUR 27 million, which has led to the recording of a reduction in the cost of the participation of EUR 25 million and the recording of an income of EUR 2 million.

Additionally, during the 2021 financial year, Banco Santander acquired, through various purchases in the stock market, shares of the entity Merlín Properties, SOCIMI, S.A. for a net total of EUR 6 million.

In May and December 2021, Metrovacesa, S.A. made distributions of dividends charged to the unrestricted reserve (issue premium), with Banco Santander receiving two payments of EUR 19 million. These operations meant a reduction in the cost of the participation of EUR 52 million and an impairment application of EUR 14 million.

In July 2021 and September 2021, as a result of changes in the composition of the Spanish banking sector, Banco Santander exercised its preferential acquisition right, included in the partners' agreement dated on 29 June 2021, of shares in Redsys Servicios de Procesamiento, S.L. for amounts of EUR 2 million and EUR 8 million, respectively, until reaching the maximum established share of 24.9%.

iii. Impairment losses

The changes in the balance of this item were as follows:

EUR million	2022	2021
Balance at the beginning of the year	292	281
Net impairment losses (reversals) (note 44)	2	24
Other changes	(27)	(13)
Balance at end of the year	267	292

b) Group entities

'Investments - Group entities' includes the equity instruments owned by Banco Santander and issued by subsidiaries belonging to Grupo Santander.

Relevant information on these companies is provided in Appendix I.

i. Breakdown

The detail, by currency and listing status, of 'Investments - Subsidiaries' on the balance sheets at 31 December 2022 and 2021 is as follows:

EUR million	2022	2021
Currency:		
Euro	48,952	45,780
Pound Sterling	13,737	13,303
Other currencies	28,247	26,189
	90,936	85,272
Listing status:		
Listed	6,552	6,338
Unlisted	84,384	78,934
	90,936	85,272

ii. Changes

The changes in 2022 and 2021 in 'Investments - Group entities', disregarding impairment losses, were as follows:

EUR million	2022	2021
Balance at beginning of the year	96,724	93,918
Acquisitions, contributions, capital increase payments and mergers	4,107	6,593
<i>Of which</i>		
<i>Deuda contingentemente convertibles (AT1)</i>	1,314	996
<i>PagoNXT, S.L.</i>	627	917
<i>Altamira Santander Real Estate, S.A.</i>	550	—
<i>Santander Global Services, S.L.</i>	320	—
<i>Tresmares Santander Direct Lending, SICCC, S.A.</i>	274	274
<i>Santander Fintech Holdings, S.L.</i>	250	62
<i>Blecco Investments, S.L. Unipersonal</i>	209	—
<i>Open Bank, S.A.</i>	91	170
<i>Munduspar Participações S.A.</i>	73	—
<i>Santander Global Technology and Operations, S.L. Unipersonal</i>	68	—
<i>Open Digital Services, S.L.</i>	50	161
<i>Deva Capital Holding Company, S.L. Unipersonal</i>	13	96
<i>Ablasa Participaciones, S.L. Unipersonal</i>	—	616
<i>Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México</i>	—	343
<i>PagoNXT Merchant Solutions, S.L. (antes Santander Merchant Platform Solutions, S.L.)</i>	—	296
<i>Retail Company 2021, S.L.U.</i>	—	262
<i>Banco Santander de Negocios Colombia S.A.</i>	—	178
Disposals, capital reductions and mergers	(405)	(4,841)
<i>Of which</i>		
<i>Santander Fintech Limited (UK)</i>	(144)	—
<i>Deuda contingentemente convertibles (AT1)</i>	(119)	(1,157)
<i>Santander Tecnología y Operaciones España, S.L. Unipersonal</i>	(68)	—
<i>Popular Spain Holding de Inversiones S.L.U. (Antes Allianz Popular, S.A.)</i>	—	(542)
<i>PagoNXT Merchant Solutions, S.L. (antes Santander Merchant Platform Solutions, S.L.)</i>	—	(296)
<i>Sterrebeeck B.V.</i>	—	(264)
<i>Getnet Europe, Entidad de Pago, S.L. Unipersonal</i>	—	(185)
<i>Grupo Empresarial Santander, S.L.</i>	—	(141)
Transfers	—	—
FX and other movements	2,450	1,054
Balance at end of the year	102,876	96,724

At 7 March 2022, the Bank acquired 80% of Brazil's Munduspar Participações S.A. owner of the 100% of Waycarbon Soluções Ambientais e Projetos de Carbono S.A., for EUR 73 million.

In July 2022, the Bank has acquired Blecno Investments, S.L. Unipersonal, the owner of a portfolio of assets comprising 381 bank branches leased to Banco Santander since 2007 (purchased from Uro Property Holdings, SOCIMI, S.A. (Actually Uro Property Holdings, S.A.) in 2015). The amount of this purchase was EUR 209 million.

At 1 December 2022, the merger by absorption of Santander Tecnología y Operaciones España, S.L. Unipersonal (absorbed company) into Santander Global Technology and Operations, S.L. Unipersonal (absorbing company) was made public, with dissolution without liquidation of the absorbed company and transfer en bloc of its assets and liabilities to the absorbing company.

At 20 December 2022, Santander Fintech Limited S.L. has approved a dividend for practically all of its net assets, having recorded part of the same as a return of the capital contributed, in the amount of EUR 144 million. On that date, Banco Santander, S.A. and Santander Fintech Limited signed a contract for the transfer of assets and liabilities to the Bank as payment of the dividend and for the subsequent liquidation of the company. Subsequently, at 23 December 2022, the non-monetary contribution of the credit rights acquired from Santander Fintech Limited to Santander Fintech Holdings, S.L. in the amount of EUR 229 million took place.

In addition, in July 2022, Banco Santander made a cash contribution of EUR 21 million to Santander Fintech Holdings, S.L."

Also, throughout 2022 Banco Santander has subscribed capital increases and made contributions from shareholders, the most relevant being: EUR 627 million to PagoNxt, S.L., EUR 550 million to Altamira Santander Real Estate, S.A., EUR 320 million to Santander Global Services, S.L., EUR 274 million to Tresmares Santander Direct Lending, SICCC, S.A., EUR 91 million to Open Bank, S.A., EUR 13 million to Deva Capital Holding Company, S.L. Unipersonal, and EUR 50 million to Open Digital Services, S.L.

In June 2021, the companies PagoNxt Merchant Solutions, S.L. (formerly Santander Merchant Platform Solutions, S.L.), Grupo Empresarial Santander, S.L. and Sterrebeeck B.V. drafted two partial spin-off projects pursuant to which the spun-off companies (Grupo Empresarial Santander, S.L. and Sterrebeeck B.V.) has transferred at once and by universal succession part of their assets consisting of all the shares representing the share capital of Getnet Adquirência e Serviços para Meios de Pagamento S.A.- Instituição de Pagamento (Getnet Brasil) of its ownership to the beneficiary

company (PagoNxt Merchant Solutions, S.L.). This has led to a capital increase of PagoNxt Merchant Solutions, S.L. and a decrease, for the same amount, in Grupo Empresarial Santander, S.L. and Sterrebeeck B.V. the amounts were EUR 141 million and EUR 264 million, respectively. The Bank, as shareholder of the spun-off companies, has received social participations of PagoNxt Merchant Solutions, S.L.

On the other hand, throughout the 2021 financial year, Banco Santander made various monetary contributions to the equity of the company PagoNxt, S.L. (formerly Santander Digital Businesses, S.L.) amounting EUR 407 million. Likewise, during the 2021 financial year it has also subscribed non-monetary contributions to this company for a total of EUR 510 million, through the contribution of its participation in the following companies: EUR 215 million by Getnet Europe, Entidad de Pago, S.L. Unipersonal (formerly Santander España Merchant Services, Entidad de Pago, S.L.) and EUR 295 million for PagoNxt Merchant Solutions, S.L. (formerly Santander Merchant Platform Solutions, S.L.).

At 5 July 2021, the merger by absorption of Santander Global Operations, S.A. was signed (absorbed company) by Santander Global Technology, S.L. (absorbing company), with dissolution without liquidation of the absorbed company and en bloc transfer of its assets to the absorbing company. The new company resulting from the merger is renamed Santander Global Technology and Operations, S.L. Unipersonal.

At 21 October 2021, within the process of rationalizing and optimizing the corporate structure of Grupo Santander, a segregation project was signed by virtue of which Banco Santander has segregated the autonomous economic unit that integrates the branch management business empty bank offices, with closure project or leased to third parties not linked to the banking activity of Banco Santander (split company), including the contracts linked to them and the employees currently in charge of their management, in favor of a newly creation called Retail Company 2021, S.L.U (beneficiary company). The amount of the segregation has risen to EUR 262 million.

On December 7, 2021, within the framework of the Public Offer for the Acquisition of shares of Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México, for up to all of the Series B shares representing the capital stock, Banco Santander acquired 4.51% of the shares of these company, both in Mexico and in the United States. This meant a disbursement of EUR 343 million, including the expenses of the operation.

On December 16, 2021, the deed of merger by absorption by the Bank of the companies Popular Spain Holding de Inversiones, S.L.U. (formerly Allianz Popular, S.L.), Santander Investment I, S.A.U. and Administration of Bancos Latinoamericanos Santander, S.L., incorporating, among other assets, the companies Ablasa Participaciones, S.L. Unipersonal and Banco Santander de Negocios Colombia S.A. The net amount registered under this heading for this operation was EUR 223 million, with a credit in reserves of EUR 1,039 million.

Also, throughout the 2021 financial year Banco Santander subscribed capital increases and made partner contributions, the most relevant being: EUR 274 million to Tresmares Santander Direct Lending, SICCO, S.A., EUR 170 million to Open Bank, S.A., EUR 161 million to Open Digital Services, S.L., EUR 96 million to Deva Capital Holding Company, S.L. Unipersonal and EUR 62 million to Santander Fintech Holdings, S.L.

iii. Impairment losses

The changes in the balance of this item were as follows:

EUR million	2022	2021
Balance at beginning of the year	11,452	12,358
Net impairment losses (reversals) (note 44)	503	(851)
Other changes	(15)	(55)
Balance at end of the year	11,940	11,452

The Management carries out an analysis of the potential loss of value of the investments in subsidiaries, joint ventures and associates that it has registered with respect to their book value. Said analysis is carried out using different parameters, such as equity value, listed value and recoverable value, which is obtained from estimates of expected cash flows or net worth corrected by tacit capital gains existing on the date of the valuation.

In accordance with the foregoing, Banco Santander carried out the evaluation of its investees in December 2022. The impairment allowances made by the Bank during 2022 include 550 million euros corresponding to the impairment of the stake held in Altamira Santander Real Estate, S.A., as a consequence of a EUR 550 million contribution from the shareholders in order to restore the equity balance of the company. Additionally, during the year impairment releases have been made, including 119 million euros from PagoNxt, S.L.

As it was previously stated Banco Santander carried out in December 2021 the evaluation of its investees. The provisions for impairment made by the Bank during the 2021 financial year include EUR 144 million corresponding to the impairment of the stake held in Open Digital Services, S.L. Additionally, during the year impairment releases have been made that include EUR 887 million corresponding to the stake in Santander UK Group Holdings plc, derived from the results obtained by the group of entities of which it is the parent and the positive evolution of the interest rate of exchange affected.

c) Joint venture entities

The cost of the investees recorded under this heading at 31 December 2022 amounts to EUR 525 million, while the impairment provisions recorded at that date are EUR 201 million (EUR 451 million and EUR 194 million in 2021).

In March 2022 and December 2022, UCI, S.A. has approved capital increases of EUR 50 million and EUR 24 million, respectively, corresponding to Banco Santander.

In December 2021, UCI, S.A. approved a capital increase, corresponding to Banco Santander an amount of EUR 30 million.

In 2022, Banco Santander made impairment charges of EUR 7 million (EUR 27 million in 2021) for the entities included under this heading, mainly UCI, S.A., while in 2021 it made impairment charges of EUR 25 million for the same company.

14. Insurance contracts linked to pensions

The detail of Insurance contracts linked to pensions in the balance sheets are as follows:

EUR million	2022	2021
Assets relating to insurance contracts covering post-employment benefit plan obligations (notes 17 and 23)	313	381
Total	313	381

15. Tangible assets

a) Changes

The changes in 'Tangible assets' in the balance sheet were as follows:

EUR million

	Tangible assets				Of which: For leasing			
	For own use	Leased out under an operating lease	Investment property	Total	For own use	Leased out under an operating lease	Investment property	Total
Cost								
Opening balance at 1 January 2021	8,316	976	327	9,619	2,954	—	—	2,954
Additions/disposals (net)	110	147	(2)	255	(51)	—	—	(51)
Transfers and other	(627)	—	55	(572)	(8)	—	—	(8)
Balance at 31 December 2021	7,799	1,123	380	9,302	2,895	—	—	2,895
Additions/disposals (net)	89	36	—	125	(12)	—	—	(12)
Transfers and others	243	—	(10)	233	253	—	—	253
Balance at 31 December 2022	8,131	1,159	370	9,660	3,136	—	—	3,136
Accumulated depreciation								
Opening balance at 1 January 2021	(2,513)	(229)	(16)	(2,758)	(502)	—	—	(502)
Charge for the year	(404)	(114)	(4)	(522)	(192)	—	—	(192)
Disposals	142	72	—	214	133	—	—	133
Transfers and others	506	—	(2)	504	—	—	—	—
Balance at 31 December 2021	(2,269)	(271)	(22)	(2,562)	(561)	—	—	(561)
Charge for the year	(383)	(124)	(4)	(511)	(227)	—	—	(227)
Disposals	28	114	—	142	27	—	—	27
Transfers and others	3	—	(10)	(7)	—	—	—	—
Balance at 31 December 2022	(2,621)	(281)	(36)	(2,938)	(761)	—	—	(761)
Impairment losses								
Opening balance at 1 January 2021	(88)	—	(93)	(181)	—	—	—	—
Charge for the year	(85)	—	—	(85)	—	—	—	—
Disposals	—	—	—	—	—	—	—	—
Transfers and others	35	—	6	41	—	—	—	—
Balance at 31 December 2021	(138)	—	(87)	(225)	—	—	—	—
Charge for the year	—	—	—	—	—	—	—	—
Disposals	—	—	—	—	—	—	—	—
Transfers and others	20	—	(5)	15	—	—	—	—
Balance at 31 December 2022	(118)	—	(92)	(210)	—	—	—	—
Tangible assets, net								
Balance at 31 December 2021	5,392	852	271	6,515	2,334	—	—	2,334
Balance at 31 December 2022	5,392	878	242	6,512	2,375	—	—	2,375

b) Property, plant and equipment for own use

The detail, by class of asset, of 'Property, plant and equipment - For own use' on the balance sheets in 2022 and 2021 sheets is as follows:

EUR million

	Cost	Accumulated depreciation	Impairment losses	Carrying amount	Of which, right-of-use for operating lease
Land and buildings	5,389	(740)	(138)	4,511	2,334
Furniture, fixtures and vehicles	2,037	(1,278)	—	759	—
Computer hardware	326	(251)	—	75	—
Other	47	—	—	47	—
Balance at 31 December 2021	7,799	(2,269)	(138)	5,392	2,334
Land and buildings	5,632	(990)	(118)	4,523	2,375
Furniture, fixtures and vehicles	2,092	(1,343)	—	749	—
Computer hardware	348	(287)	—	61	—
Other	59	(1)	—	59	—
Balance at 31 December 2022	8,131	(2,621)	(118)	5,392	2,375

The carrying amount at 31 December 2022 in the table above includes the following approximate amounts:

- EUR 4 million (EUR 3 million at 31 december 2021) relating to property, plant and equipment owned by Banco Santander's branches located abroad.
- EUR 422 million (EUR 484 million at 31 December 2021) relating to property, plant and equipment held under finance leases by Banco Santander, of which EUR 287 million related to leases in effect as of 31 December 2022 (EUR 360 million at 31 December 2021)

c) Tangible assets - Leased out under an operating lease

Banco Santander has assets assigned under operating lease where the company is the lessor and they do not meet the accounting requirements to be classified as financial leases. The net cost of these leases is recorded as an asset and is depreciated on a straight-line basis over the contractual term of the lease up to the expected residual value.

The expected residual value and, consequently, the monthly depreciation expense may change during the term of the lease. The Bank estimates expected residual values using independent data sources and internal statistical models. Likewise, it evaluates the estimate of the residual value of said leases and adjusts the depreciation rate based on the change in the expected value of the asset at the end of the lease.

Banco Santander periodically evaluates its investment in operating leases and whenever there are indications of impairment, such as a systemic and material decrease in the values of the assigned assets. If assets leased under operating leases are considered to be impaired, impairment is measured as the amount by which the assets' carrying amount exceeds fair value as estimated by discounted cash flows. During the years 2022 and 2021, the Bank has not recorded any material impairment for this concept.

During the years 2022 and 2021, no significant variable payments have been made not included in the valuation of lease assets.

d) Tangible assets - Investment property

The fair value of the investment property at 31 December 2022 and 2021 amounts to EUR 327 million and EUR 332 million, respectively. A comparison of the fair value of investment property at 31 December 2022 and 2021 with the net book value results in gross unrealised gains of EUR 85 million and EUR 61 million for each of these years, respectively, attributed to the Bank in full.

Rental income from investment properties and direct expenses related to both investment properties that generated income during 2022 and 2021 and those investment properties that did not generate income during 2022 and 2021 are not material in the context of the entity's annual accounts.

16. Intangible assets

a) Goodwill

The detail of the 'Goodwill', on the balance sheets is as follows:

EUR million	2022	2021
Santander España	623	623
Amortization charge	(289)	(227)
Balance at end of year	334	396

The movement during the years 2022 and 2021 has been as follows:

EUR million	2022	2021
Balance at beginning of the year	396	458
Additions (note 3)	—	—
Amortization charge	(62)	(62)
Impairment losses	—	—
Disposals or changes in scope	—	—
Balance at end of year	334	396

Neither in 2022, nor in 2021 has goodwill been generated.

All of the goodwill recorded at the end of the 2022 and 2021 financial years comes from the following corporate operations that were carried out in the 2018 financial year:

- Merger by absorption of Banco Popular Español, S.A.U. On June 7, 2017, Banco Santander acquired 100% of the share capital of Banco Popular Español, S.A.U. Subsequently, on September 28, 2018, the deed of merger by absorption of Banco Popular Español, S.A.U. was registered in the Mercantile Registry of Cantabria by Banco Santander, S.A. with accounting effects January 1, 2018, transferring to the books of Banco Santander a gross goodwill of EUR 248 million.
- Repurchase of the credit and debit card business marketed by Grupo Banco Popular in Spain and Portugal generating the business combination a goodwill of EUR 375 million.

In accordance with Bank of Spain Circular 4/2017, the goodwill is amortized within a period of ten years. In addition, the Bank periodically reviews the term and method of amortization and, if deemed inappropriate, the impact will be treated as a change in accounting estimates.

As of 31 December 2022 the amount of goodwill recorded by Banco Santander, net of accumulated depreciation, amounted to EUR 334 million and EUR 396 million, respectively.

Banco Santander, at least annually and whenever there are indicators of impairment, conducts an analysis of the potential loss of value of the trade funds it has recorded in respect of their recoverable value.

The first step in carrying out this analysis requires the identification of the cash-generating units, which are the smallest identifiable groups of assets in Banco Santander that generate cash inflows and are largely independent of the cash flows of other assets or asset groups.

For the purposes of those mentioned in the preceding paragraph, the Bank's administrators have identified the commercial banking business in Spain as the cash-generating unit to which to allocate goodwill arising both by the acquisition and subsequent merger by absorption of Banco Popular Español, S.A.U. and by the repurchase of the credit and debit cards from Grupo Banco Popular.

Its carrying value is determined taking into account the book value of all the assets and liabilities that make up the commercial banking business in Spain, together with the corresponding goodwill. Said book value is compared with its recoverable amount in order to determine if there is impairment.

The recoverable amount of Santander España cash-generating unit has been determined as the fair value of such cash-generating unit obtained using quotes, market references (multiples) or internal estimates. At the end of the fiscal year said value exceeded the book value.

Based on previous data, and in accordance with the estimates of the Bank's administrators, during the years 2022 and 2021 the Bank has not recorded any amount under the heading 'Impairment in value or reversal of impairment in value of non-financial assets - intangible assets' in concept of impairment of goodwill.

b) Other intangible assets

i. Breakdown

The detail of Intangible assets 'Other intangible assets' on the balance sheets is as follows:

EUR million	2021	2020
With finite useful life		
IT Developments	1,243	1,106
Accumulated amortization	(718)	(606)
Balance at end of year	525	500

ii. Changes

The changes in Intangible assets 'Other intangible assets' on the balance sheets were as follows:

EUR million		
	2022	2021
Balance at end of prior year	500	490
Net additions and disposals	137	110
Amortization charge	(112)	(100)
Impairments losses	—	—
Balance at end of year	525	500

17. Other assets and Other liabilities

The detail of 'Other assets and Other liabilities' on the accompanying balance sheets is as follows:

	Assets		Liabilities	
	2022	2021	2022	2021
Transactions in transit	—	11	5	—
Insurance contracts linked to pensions (note 14)	313	381	—	—
Inventory	—	—	—	—
Prepayments and accrued income	479	504	2,560	2,133
Other ^A	1,888	1,044	1,184	1,138
Total	2,680	1,940	3,749	3,271

A. Includes, mainly, unsettled transactions.

18. Deposits from central banks and credit institutions

The detail by classification, type and currency of 'Deposits from central banks' and 'Deposits from credit institutions' on the accompanying balance sheets is as follows:

EUR million	2022	2021
CENTRAL BANKS		
Classification		
Financial liabilities held for trading	4,265	44
Financial liabilities designated at fair value through profit or loss	1,740	607
Financial liabilities at amortized cost	15,728	64,649
	21,733	65,300
Type		
Time deposits	15,471	63,161
Deposits available with prior notice	—	—
Repurchase agreements	6,262	2,139
	21,733	65,300
Currency		
Euro	15,571	60,343
US dollar	3,274	2,809
Pound Sterling	2,596	2,110
Other currencies	292	38
	21,733	65,300
CREDIT INSTITUTIONS		
Classification		
Financial liabilities held for trading	8,949	5,718
Financial liabilities designated at fair value through profit or loss	2,160	1,067
Financial liabilities at amortized cost	41,609	35,262
	52,718	42,047
Nature		
Current accounts / Intraday deposits	12,930	15,989
Time deposits	22,242	15,698
Deposits available with prior notice	—	—
Repurchase agreements	17,546	10,360
	52,718	42,047
Currency		
Euro	35,711	31,067
US dollar	12,406	7,737
Pound Sterling	3,807	2,577
Other currencies	794	666
	52,718	42,047
Total	74,451	107,347

Banco Santander, following the various long-term financing programmes of the European Central Bank (TLTRO, *targeted longer-term refinancing operation*), maintain deposits at amortized cost from the TLTRO III programme amounting to EUR 11,278 million as of 31 December 2022 (EUR 61,183 million at 31 December 2021 from TLTRO III). At December 2022, the income

recognized in the profit and loss account, corresponding to TLTRO III, is EUR 348 million (EUR 608 millions at 31 December 2021).

The deposits classified in the 'Liabilities held for trading' portfolio correspond to temporary transfers of assets of Spanish and foreign institutions.

Note 48 contains a detail of the residual maturity periods of financial liabilities at amortized cost.

19. Customer deposits

The detail by classification, type, sector and geographical area, of 'Customer deposits' is as follows:

EUR million	2022	2021
Classification		
Financial liabilities held for trading	6,580	1,291
Financial liabilities designated at fair value through profit or loss	34,579	11,069
Financial liabilities at amortized cost	345,875	296,243
	387,034	308,603
Type		
Current accounts / Intraday deposits	279,219	269,721
Time deposits ^A	88,979	36,644
Deposits available with prior notice	—	—
Repurchase agreements	18,836	2,238
<i>Of which, subordinated deposits</i>	—	—
<i>Of which, issued securities</i>	1,995	2,290
	387,034	308,603
Sector		
Public sector	28,845	23,231
Other financial companies	77,363	43,610
Non-financial companies	125,577	95,810
Households	155,249	145,952
	387,034	308,603
Geographical area		
Spain	266,672	262,261
European Union (excluding Spain)	73,007	25,002
United States and Puerto Rico	26,504	9,027
Other OECD countries	10,622	6,699
Latin America (non-OECD)	5,856	2,796
Rest of the world	4,373	2,818
	387,034	308,603

A. Of the total time deposits, EUR 25,883 million correspond to branches of the entity abroad (EUR 8,012 million in 2021).

The item issued securities in the table above include the liabilities associated with securitisation transactions (see note 10.e).

Note 48 contains a detail of the residual maturity periods of financial liabilities at amortized cost.

20. Marketable debt securities

a) Breakdown

The detail by classification and type, of 'Marketable debt securities' in the accompanying balance sheets is as follows:

EUR million	2022	2021
Classification:		
Financial liabilities at amortized cost	125,969	104,094
Financial liabilities designated at fair value through profit or loss	89	—
	126,058	104,094
Type:		
Certificates of deposit	11,611	4,444
Guaranteed bonds	48,161	62,454
Mortgage-backed bonds	39,520	49,764
Others mortgage-backed bonds and guaranteed bonds	8,641	12,690
Other issued securities (note 21)	93,192	76,890
<i>Of which, subordinated liabilities</i>	19,640	20,399
Treasury shares ^A	(26,149)	(41,018)
Valuation adjustments	(757)	1,324
	126,058	104,094

A. At 31 December 2022 y 2021, the registered balance corresponds mainly to guaranteed bonds.

Note 48 contains a detail of the residual maturity periods of financial liabilities at amortized cost.

b) Certificates of deposit

The detail of certificates of deposits by currency of issuance is as follows:

Currency of issuance	EUR million		2022	
	2022	2021	Outstanding issue amount in foreign currency (million)	Annual interest rate ^A
US dollar	8,303	1,564	8,866	2.52 %
Hong Kong Dollars	3,260	2,880	2,891	3.36 %
Pound Sterling	48	—	397	3.66 %
Balance at end of the year	11,611	4,444		

A. Average interest rates for different issue based on their nominal values.

i. Changes

The changes in certificate of deposit on the balance sheet for the years 2022 and 2021 are as follows:

EUR million	2022	2021
Balance at end of the prior year	4,444	3,921
Issues	31,582	15,684
Redemptions	(24,476)	(15,386)
Exchange differences and other changes	61	225
Balance at end of the year	11,611	4,444

At 31 December 2022, the Bank issued certificates of deposit amounting to EUR 31,582 million (EUR 15,684 million as at 31 December 2021), with an average maturity of 3 months (3 months during the 2021 financial year), of which EUR 24,476 million have been amortized (EUR 15,386 million at December 2021).

c) Marketable Mortgage- backed securities

The detail by currency of issuance, of 'Marketable mortgage-backed securities' is as follows:

Currency of issuance	EUR million		2022
	2022	2021	Annual interest rate ^A
Euros	39,520	49,764	1.18 %
Balance at end of the year	39,520	49,764	1.18 %

A. Average interest rate of the various issues based on their nominal values.

i. Changes

The changes in 2022 and 2021 in 'Marketable mortgage-backed securities' were as follows:

EUR million	2022	2021
Balance at the end of the prior year	49,764	44,343
Reclassification of deposits	—	—
Issues	13,500	12,720
<i>Of which</i>		
June 2021	—	6,000
July 2021	—	4,970
September 2021	—	1,000
December 2021	—	750
February 2021	1,000	—
March 2021	1,500	—
June 2021	5,000	—
July 2021	6,000	—
Transfers	(44)	1
Amortizations on maturity	(23,700)	(7,300)
Balance at end of the year	39,520	49,764

The members of the board of directors state that Banco Santander operates in the field of issuances in the Spanish mortgage market, has and has established express policies and procedures that cover all the activities carried out and that guarantee strict compliance with the mortgage market regulations applicable to these activities for the purposes of the provisions of Bank of Spain Circular 4/2017.

The risk policies applicable to mortgage market transactions envisage maximum loan-to-value (LTV) ratios, and specific policies are also in place adapted to each mortgage product, which occasionally require the application of stricter limits.

Banco Santander's general policies in this respect require the repayment capacity of each potential customer (the effort ratio in loan approval) to be analysed using specific indicators that must be met. This analysis must determine whether each customer's income is sufficient to meet the repayments of the loan requested. In addition, the analysis of each customer must include a conclusion on the stability over time of the customer's income considered with respect to the life of the loan. The aforementioned indicator used to measure the repayment capacity (effort ratio) of each potential customer takes into account mainly the relationship between the potential debt and the income generated, considering on the one hand the monthly repayments of the loan requested and other transactions and, on the other, the monthly salary income and duly supported income.

Grupo and Banco Santander have specialised document comparison procedures and tools for verifying customer information and solvency (see note 49).

Grupo and Banco Santander procedures envisage that each mortgage originated in the mortgage market must be individually valued by an appraisal company not related to the Group.

In accordance with Articles 18.1 and 21 of RDL 24/2021, any appraisal company approved by the Bank of Spain may issue valid appraisal reports. However, as permitted by this same article, the Group and the Bank perform several checks and select, from among these companies, a small group with which they enter into cooperation agreements with special conditions and automated control mechanisms. The Group's and the Bank's internal regulations specify, in detail, each of the internally approved companies, as well as the approval requirements and procedures and the controls established to uphold them. In this connection, the regulations establish the functions of an appraisal company committee on which the various areas of the Group and the Bank related to these companies are represented. The aim of the committee is to regulate and adapt the internal regulations and the activities of the appraisal companies to the current market and business situation (see note 2.i).

Basically, the companies wishing to cooperate with the Group and the Bank must have a significant level of activity in the mortgage market in the area in which they operate, they must pass a preliminary screening process based on criteria of independence, technical capacity and solvency -in order to ascertain the continuity of their business- and, lastly, they must pass a series of tests prior to obtaining definitive approval.

In order to fully comply with the legislation, any appraisal provided by the customer is reviewed, irrespective of which appraisal company issues it, to check that the requirements, procedures and methods used to prepare it are formally adapted to the valued asset pursuant to current legislation and that the values reported are customary in the market.

Mortgage-backed bonds

The mortgage bonds issued by Banco Santander are securities that, without prejudice to the universal patrimonial responsibility of the issuer, and in accordance with the provisions of RDL 24/2021, are specially guaranteed, together with the rest of the issuer's obligations under a preferential right on all the assets that make up the Mortgage Bonds Coverage Set at any time without the need to affect said assets as collateral by means of a public deed, or any registration in any public registry or any other formality.

The Mortgage Bonds Coverage Set is made up of: (i) admissible mortgage loans in accordance with the provisions of article 23 of RDL 24/2021, although it may also be made up of, likewise, (ii) admissible liquid assets in accordance with the contained in article 11 of RDL 24/2021, (iii) admissible substitution assets in accordance with the provisions of the third section of article 23 of RDL 24/2021 and (iv) admissible derivative instruments in accordance with the provisions of article 12 of the RDL 24/2021, in the quantity and with the characteristics provided for in RDL 24/2021.

Mortgage bonds incorporate the credit right of their holder against the issuing entity, guaranteed in the manner indicated in the previous paragraph, and are accompanied by execution to claim payment from the issuer after its expiration. The holders of these titles have the character of singularly privileged creditors, with the preference currently indicated in numbers 8 of article 1,922 and 6 of article 1,923 of the Civil Code over any other creditors, in relation to all the assets that integrate the Mortgage Bonds Coverage Set. Pursuant to current regulations, all holders of the Issuer's covered bonds, regardless of their issuance date, will have the same priority over the assets included in the Mortgage Bonds Coverage Set.

In the event of bankruptcy, holders of identity cards, as long as they are not considered 'persons specially related' to the issuing entity in accordance with Royal Legislative Decree 1/2020, of May 5, which approves the consolidated text of the Bankruptcy Law (the

'Bankruptcy Law'), would enjoy the special privilege established in number 7 of article 270 of the aforementioned Bankruptcy Law, which will only apply to the part of the bankruptcy credit that does not exceed the value of the guarantee (calculated in accordance with article 44 of RDL 24/2021). Pursuant to the provisions of said Chapter, in the event of bankruptcy of the Issuer, the coverage assets of the Mortgage Bonds Coverage Set individualized and identified in the special register where the Mortgage Bonds Coverage Set is segregated in accordance with the certification issued by the mortgage bond control body will be materially segregated from the issuer's equity and will form a separate equity that will operate in legal transactions represented by a special administrator.

Once the segregation has been carried out, in accordance with the provisions of article 44.2 of RDL 24/2021, if the total value of the assets that make up each separate patrimony is greater than the total value of the liabilities guaranteed by said separate patrimony plus the legal over-guarantee, contractual or voluntary and the liquidity requirement, the special administrator may decide whether to continue with the current management of the corresponding separate equity until its maturity or make a total or partial assignment of the separate equity to another entity issuing guaranteed bonds. Otherwise, the special administrator will request the liquidation of said separate patrimony following the ordinary bankruptcy procedure. The request for liquidation of the separate patrimony will produce (a) the early maturity of all the issuer's securities guaranteed by the assets that make up the separate patrimony and (b) the beginning of the liquidation of the assets of the separate patrimony. With the amount obtained in the liquidation of the separate patrimony, after deducting the expenses and costs derived from the liquidation of the same, including the remuneration of the special administrator, the holders of the mortgage bonds and the counterparties of derivative contracts included in the Mortgage Bonds Coverage Set (if applicable), in proportion to their credits regardless of the age of the debt. If, once the liquidation of the separate equity has been completed or all its liabilities have expired, there is a remainder, this will correspond to the active mass of the issuer's bankruptcy. If, on the contrary, full satisfaction of the credit is not achieved, in accordance with the provisions of article 42.1 of RDL 24/2021, the unsatisfied part will be recognized in the issuer's bankruptcy with the same priority as that of the rights of credit of the ordinary unsecured creditors of the issuer.

The issuing entity may repay the mortgage bonds early, if this has been expressly established in the final conditions of the issue in question and in the conditions established there.

None of the mortgage bonds issued by Banco Santander have replacement assets involved.

The following is a detail, by their main features and nominal amounts, of the marketable mortgage-backed bonds outstanding at 31 December 2022 and 2021:

	Code ISIN	EUR million		Nominal amount	Annual interest rate (%)
		2022	2021		
Issues:					
Euros					
Issue February 2006	ES0413900129	1,500	1,500	1,500	3.87 %
Issue May 2007	ES0413900160	1,500	1,500	1,500	4.63 %
Issue January 2010	ES0413900194	—	100		
Issue November 2014	ES0413900368	1,750	1,750	1,750	1.13 %
Issue November 2014	ES0413900376	1,250	1,250	1,250	2.00 %
Issue September 2015	ES0413900384	—	1,000		
Issue January 2016	ES0413900392	1,000	1,000	1,000	1.50 %
Issue February 2016	ES0413900400	907	907	907	2.04 %
Issue March 2016	ES0413900418	100	100	100	1.52 %
Issue June 2017	ES0413900475	—	350		
Issue June 2017	ES0413900491	—	2,000		
Issue November 2017	ES0413900509	12	12	12	2.53 %
Cedula Pitch		—	300		
Issue July 2013	ES0413790264	15	15	15	5.28 %
Issue July 2013	ES0413790280	—	400		
Issue July 2013	ES0413790298	—	500		
Issue July 2013	ES0413790306	—	1,500		
Issue February 2014	ES0413790330	—	1,000		
Issue March 2014	ES0413790348	—	200		
Issue March 2014	ES0413790389	—	250		
Issue April 2015	ES0413790397	1,000	1,000	1,000	1.00 %
Issue June 2015	ES0413790405	575	575	575	0.41 %
Issue March 2016	ES0413790439	—	1,500		
Issue December 2016	ES0413790462	250	250	250	1.13 %
Issue March 2017	ES0413790470	—	1,000		
Issue April 2017	ES0413790488	—	1,600		
Issue July 2014 (Banco Pastor)	ES0405035009	—	1,000		
Issue June 2018	ES0413900517	350	350	350	1.27 %
Issue October 2018	ES0413900533	1,000	1,000	1,000	1.12 %
Issue October 2018	ES0413900525	—	2,000		
Issue November 2018	ES0413900541	200	200	200	0.40 %
Issue May 2019	ES0413900558	1,500	1,500	1,500	0.88 %
Issue July 2019	ES0413900566	1,500	1,500	1,500	0.25 %
Issue December 2019	ES0413900574	1,750	1,750	1,750	0.13 %
Issue February 2020	ES0413900590	1,250	1,250	1,250	0.01 %
Issue February 2020	ES0413900608	1,250	1,250	1,250	0.10 %
Issue February 2020	ES0413900582	250	250	250	0.05 %
Issue March 2020	ES0413900616	—	1,000		
Issue April 2020	ES0413900624	—	2,000		
Issue October 2020	ES0413900699	500	500	500	0.01 %
Issue June 2021	ES0413900723	4,000	4,000	4,000	0.18 %
Issue June 2021	ES0413900731	2,000	2,000	2,000	0.19 %
Issue July 2021	ES0413900749	4,000	4,000	4,000	0.18 %

	Code ISIN	EUR million			Annual interest rate (%)
		2022	2021	Nominal amount	
Issue July 2021	ES0413900756	220	220	220	0.18 %
Issue July 2021	ES0413900764	750	750	750	0.02 %
Issue September 2021	ES0413900772	—	1,000	—	—
Issue December 2021	ES0413900780	750	750	750	2.64 %
Issue February 2022	ES0413900806	1,000	—	1,000	0.79 %
Issue March 2022	ES0413900814	1,500	—	1,500	1.39 %
Issue September 2022	ES0413900848	2,250	—	2,250	2.38 %
Issue September 2022	ES0413900855	1,250	—	1,250	2.75 %
Issue September 2022	ES0413900863	1,000	—	1,000	2.03 %
Issue September 2022	ES0413900871	1,000	—	1,000	2.08 %
Issue September 2022	ES0413900889	500	—	500	2.11 %
Balance at end of the year		39,629	49,829	39,629	

The detail of the principal amount of Banco Santander mortgage securities outstanding at 31 December 2022 and 2021 is as follows:

EUR million

	Principal amount	
	2022	2021
1. Mortgage bonds outstanding	—	—
2. Mortgage-backed bonds issued (note 10.f)	39,629	49,829
<i>Of which, recognized in liabilities</i>	22,106	22,274
2.1. Debt instruments. Issued through a public offering	39,629	49,829
- Term to maturity of up to one year	1,125	7,700
-Term to maturity of one to two years	2,000	1,125
-Term to maturity of two to three years	2,250	3,000
-Term to maturity of three to five years	6,250	7,150
-Term to maturity of five to ten years	25,347	26,947
-Term to maturity of more than ten years	2,657	3,907
2.2. Debt instruments. Other issues	—	—
2.3 Deposits	—	—
3. Mortgage transfer certificates issued (1)	—	—
4. Mortgage transfer certificates issued (1) (2)	9,769	11,133
4.1. Issued through a public offering (note 10.e)	9,769	11,133

(1) Relating solely to mortgage loans and credits not derecognized.

(2) The average term to maturity weighted by amount, expressed in months, rounded up, was 489 months.

Asset transactions

According to Bank of Spain Circular 4/2017, on the implementation of certain aspects of the mortgage market, the table below details: the principal amount of all the mortgage loans and credits, those that are eligible pursuant to Royal Decree 716/2009 on the regulation of the Spanish mortgage market for the purposes of calculating the limit of mortgage-backed bond issues, the mortgage loans and credits covering mortgage bond issues, those that have been transferred through mortgage participation certificates or mortgage transfer certificates, and the uncommitted transactions relating to Banco Santander. The breakdown of the mortgage loans at 31 December 2022 and 2021 indicating their eligibility and computability for mortgage market regulatory purposes, is as follows:

EUR million

	Principal amount	
	2022	2021
Total mortgage loans and credits (1)	93,917	94,975
Mortgage participation certificates issued	1,442	1,699
<i>Of which, loans recognized in assets</i>	—	—
Mortgage transfer certificates issued	11,529	11,590
<i>Of which, loans recognized in assets (note 10.e)</i>	9,769	11,133
Mortgage loans and credits backing mortgage and mortgage-backed bond issues (2)	80,946	81,686
i) Non-eligible mortgage loans and credits (3)	15,167	17,744
- Which comply with the eligibility requirements, except for the limit established in Article 5.1 of Royal Decree 716/2009	7,699	11,357
- Other non-eligible loans	7,468	6,387
ii) Eligible mortgage loans and credits (4)	65,779	63,942
- Un-measurable amounts (5)	—	—
- Measurable amounts	65,779	63,942
a) Mortgage loans and credits covering mortgage bond issues	—	—
b) Mortgage loans and credits eligible to cover mortgage-backed bond issues	65,779	63,942

(1) Including mortgage loans and credits acquired through mortgage participation certificates and mortgage transfer certificates, irrespective of whether they have been derecognized.

(2) Total loans less mortgage participation certificates issued, mortgage transfer certificates issued and mortgage loan securing borrowings.

(3) Due to non-compliance with the requirements of Art. 3 of Royal Decree 716/2009.

(4) Pursuant to Art. 3 of Royal Decree 716/2009, without taking into account the measurement limits established in Art. 12 of Royal Decree 716/2009.

(5) Pursuant to Art. 12 of Royal Decree 716/2009.

In accordance with Bank of Spain Circular 4/2017 in force, the nominal value of mortgage loans and credits and the nominal value of loans and credits that are eligible, are shown below, without considering the measurement limits established under Article 12 of Royal Decree 716/2009, by origin, currency, payment status, average term to maturity, interest rate, borrower and type of guarantee:

	Principal amount			
	2022		2021	
	Mortgage loans and credits backing mortgage and mortgage-backed bond issues	Of which, eligible loans ^A	Mortgage loans and credits backing mortgage and mortgage-backed bond issues	Of which, eligible loans ^A
By origin of transactions				
Originated by the entity	80,354	65,206	80,951	63,246
From subrogations	592	573	735	696
	80,946	65,779	81,686	63,942
By currency				
Euro	80,328	65,779	80,984	63,942
Other currencies	618	—	702	—
	80,946	65,779	81,686	63,942
By payment status				
Current	76,289	64,729	73,299	62,148
Past due	4,657	1,050	8,387	1,794
	80,946	65,779	81,686	63,942
By term to maturity				
Less than 10 years	22,923	14,082	25,460	15,418
10 to 20 years	28,849	25,824	30,185	26,059
20 to 30 years	28,644	25,872	25,125	22,125
More than 30 years	530	1	916	340
	80,946	65,779	81,686	63,942
By interest rate				
Fixed-rate loans	26,704	23,513	20,601	17,944
Floating-rate loans	54,242	42,266	61,085	45,998
	80,946	65,779	81,686	63,942
By borrower				
Legal entities and individual traders	21,612	11,332	23,554	12,877
Of which, property developments (including land)	2,411	482	2,572	—
Other individuals and non-profit institutions serving households	59,334	54,447	58,132	51,065
	80,946	65,779	81,686	63,942
By type of guarantee				
Completed buildings – residential	64,100	57,165	63,465	53,989
Of which, officially sponsored housing	7,515	6,640	8,837	6,419
Completed buildings – commercial	4,956	3,017	5,744	3,652
Completed buildings – other	8,516	4,505	9,035	5,212
Buildings under construction – residential	1,222	1	1,031	—
Of which, officially sponsored housing	49	—	33	—
Buildings under construction – commercial	10	—	67	—
Buildings under construction – other	22	5	46	5
Land – developed consolidated land	1,136	534	1,110	382
Land – other	984	552	1,188	702
	80,946	65,779	81,686	63,942

A. Pursuant to Art. 3 of Royal Decree 716/2009, without taking into account measurement limits established in Art. 12 of Royal Decree 716/2009.

In accordance with the provisions of Bank of Spain Circular 4/2017 in force, the following is a detail, by loan-to-value ratio, of the principal amount of the eligible mortgage loans and credits pursuant to Royal Decree 716/2009, without considering the measurement limits established in Article 12 of Royal Decree 716/2009:

EUR million	31 December 2022				
	Principal amount by LTV range				
	<=40%	>40%, <= 60%	>60%, <= 80%	>80%	TOTAL
Mortgage loans and credits for mortgage and mortgage-backed bond issues	18,127	24,435	23,217	—	65,779
Home property	14,178	19,773	23,217	—	57,168
Other property	3,949	4,662	—	—	8,611

A. Pursuant to Art. 3 of Royal Decree 716/2009, without taking into account measurement limits established in Art. 12 of Royal Decree 716/2009.

The following is a detail of the changes in 2022 (in accordance with Bank of Spain Circular 4/2017 in force) in the principal amount of eligible and non-eligible mortgage loans and credits pursuant to Royal Decree 716/2009:

EUR million	Eligible mortgage loans and credits ^A	Non-eligible mortgage loans and credits ^B
Balance at 31 December 2021	63,942	17,744
Period additions:	12,243	6,285
Originated by Banco Santander	10,185	2,949
Subrogations from other entities	—	1
Other	2,058	3,335
Period disposals:	(10,406)	(8,862)
Repayments on maturity	(211)	(996)
Early repayments	(3,357)	(1,229)
Other	(6,838)	(6,637)
Balance at 31 December 2022	65,779	15,167

A. Pursuant to Art. 3 of Royal Decree 716/2009, without taking into account the measurement limits established in Art. 12 of Royal Decree 716/2009.

B. That do not comply with the requirements of Art. 3 of Royal Decree 716/2009.

Below is a breakdown of the available balances of the mortgage loans and credits that back the issuance of mortgage bonds and mortgage backed-bonds in accordance with Bank of Spain Circular 4/2017 in force:

EUR million	Principal amount ^A	
	2022	2021
Potentially eligible ^B	630	662
Non-eligible	2,188	1,608

A. Amounts committed less amounts drawn down, including amounts delivered to property developers only when the housing units are sold.

B. Pursuant to Art. 3 of Royal Decree 716/2009.

d) Other mortgage bonds and guaranteed bonds

The balance of 'Other mortgage bonds and guaranteed bonds' relates to the rest of covered bonds and certificates. The breakdown, by issue currency and interest rate, is as follows:

Currency of issuance	EUR million		Annual interest rate ^A
	2022	2021	
Euro	4,145	8,452	1.64 %
US dollar	4,496	4,238	4.78 %
Balance at end of the year	8,641	12,690	

A. Average interest rate of the various securities at 31 December 2022 based on their nominal amounts.

i. Changes

The following movement in 2022 and 2021 in the 'Other non-convertible marketable securities' account was as follows:

	EUR million		2022	Annual interest rate (%)**	Maturity date
	2022	2021			
Balance at end of the prior year	12,690	10,767			
Issues	1,000	1,851			
<i>Of which</i>					
<i>March, 2021</i>	—	851	0.26 %	mar-26	
<i>May, 2021</i>	—	1,000	0.20 %	may-31	
<i>January, 2022</i>	500	—	0.80 %	jan-32	
<i>September, 2022</i>	500	—	2.06 %	sept-32	
Amortizations	(5,307)	(218)			
Exchange differences	258	290			
Balance at end of the year	8,641	12,690			

In May, June and July 2022, Banco Santander redeemed outstanding territorial bonds as of December 2021 amounting to EUR 172 million, EUR 135 million and EUR 5,000 million, respectively.

In January and September 2022, two issues of covered bonds were made for EUR 500 million each one.

In May 2021, Banco Santander has amortized the outstanding territorial bonds at December 2020 for an amount of EUR 218 million.

In March 2021, Internalization bonds were issued for an amount of USD 1,000 million (EUR 851 million) and in May, Territorial bonds were issued for an amount of EUR 1,000 million.

ii. Territorial bonds

The members of the board of directors have stated that in the territorial bond issuances Banco Santander has established specific policies and procedures in relation to the financing activities of public entities pursuant to Bank of Spain Circular 4/2017, of 27 November.

The following is a detail of the total principal amount of the loans used to secure the territorial bonds outstanding at 31 December 2022:

EUR million	Principal amount ^A
Central governments	23
Autonomous or regional governments	3,416
Local governments	524
Total	3,963

A. Unrepaid portion of the loan nominal amounts.

The following is a detail of the territorial bonds issued on the balance sheet at 31 December 2022:

EUR million	Principal amount
Issued through a public offering	—
Other emissions	1,845
<i>Of which, treasury shares</i>	1,500
Term to maturity of up to one year	95
Term to maturity of one to two years	250
Term to maturity of two to three years	—
Term to maturity of three to five years	500
Term to maturity of five to ten years	1,000
Term to maturity of more than ten years	—

The coverage ratio of the territorial bonds with respect to the loans was 46.55% at 31 December 2022 (55.50% at 31 December 2021).

iii. Internationalization bonds

The following is a detail of the face value of all loans that serve as collateral to live internationalization bonds at 31 December 2022:

	Nominal value (EUR million)
Eligible loans under Article 34.6 and 7 of Law 14/2013	12,720
Less: loans that support the issuance of internationalization bonds	—
Less: loans in arrears to be deducted in the calculation of the emission limit, in accordance with Article 13 of Royal Decree 579/2014	—
Total loans included in the base of the emission limit	12,720

Below is a detail of the internationalization bonds issued in the balance sheet on December 31, 2022:

	Nominal value (EUR million)
(1) Debt securities. Issued by public offer	—
(2) Debt securities. Other emissions	6,796
<i>Of which, own values</i>	6,796
Residual maturity up to one year	—
Residual maturity greater than one year and up to two years	—
Residual maturity greater than two and up to three years	—
Residual maturity greater than two and up to three years	1,100
Residual maturity greater than three and up to five years	5,696
Residual maturity greater than five and up to ten years	—
Residual maturity greater than ten years	—
(3) Deposits	—
Residual maturity up to one year	—
Residual maturity greater than one year and up to two years	—
Residual maturity greater than two and up to three years	—
Residual maturity greater than three and up to five years	—
Residual maturity greater than five and up to ten years	—
Residual maturity greater than ten years	—
TOTAL	6,796

The coverage ratio of internationalization bonds on loans is a 53.42% at 31 December 2022 (55.38% at 31 December 2021).

21. Other issuances

a) Breakdown

The following is a breakdown of the balance under this heading on the attached balance sheets, taking into account their nature and currency of the transactions:

EUR million ^A		
	2022	2021
Type		
Other issuances	93,192	76,890
<i>Of which, subordinated liabilities</i>	19,640	20,399
	93,192	76,890
Currency		
Euro	43,470	39,266
US dollar	39,972	27,628
Pound Sterling	4,731	5,240
Other currencies ^B	5,019	4,756
	93,192	76,890

A. This amount includes the principal, in other currencies.

B. At 31 December 2022, the most significant currencies are yen (EUR 1,187 million), Swiss Francs (EUR 1,712 million) and Australian Dollar (EUR 1,340 million). At 31 December 2021, the most significant currencies were yen (EUR 1,283 million), Swiss Francs (EUR 1,431 million) and Australian Dollar (EUR 1,310 million).

b) Changes

The changes in 'Other issuances' in the foregoing table for the years 2022 and 2021 are as follows:

EUR million		
	2022	2021
Balance at the end of prior year	76,890	59,209
Issues	44,065	43,474
Redemptions	(28,840)	(28,107)
Exchange differences	1,077	2,314
Balance at end of the year	93,192	76,890

Within the sub-heading 'Other issuances' there are commercial paper issues as well as other issuances made by Banco Santander.

- Commercial paper

On 15 April 2022, Banco Santander approved the annual renewal of the "European Commercial Paper Issuance Programme" for an overall maximum nominal amount of up to EUR 15,000 million. On 17 November, 2022, the "American Commercial Paper Issuance Program" was renewed for a global nominal amount of up to 25,000 million US dollars.

At 31 December 2022 the interest rate is 1.77% p.a. At year-end 2021 the interest rate was between -0.88% and 0.33% per annum, the average nominal interest rate being 0.125% per annum.

As regards renewals in 2021, on April 15, 2021, Banco Santander approved the annual renewal of the "European commercial paper programme" for a maximum aggregate nominal amount of up to EUR 15,000 million. On November 22, 2021, the "American commercial paper programme" was renewed for an aggregate nominal amount of up to USD 25,000 million.

- Remaining emissions

During the 2022 fiscal year, Banco Santander, S.A. has reported 41 issues for a nominal amount of EUR 16,406 million (no perpetual issues were made in 2022, see note 21.c), of which the Bank has repurchased a balance of EUR 74 million. The average remuneration of these issues has been set at 3.45% per year.

During the 2021 fiscal year, Banco Santander, S.A. has reported 37 issues for a nominal amount of EUR 11,846 million (without considering perpetual issues amounting to EUR 2,568 million, see note 21.c), of which the Bank has repurchased a balance of EUR 74 million. The average remuneration of these issues has been set at 1.30% per year.

c) Other disclosures

This caption includes contingent convertible preferred participations, as well as other subordinated financial instruments issued, which do not qualify as equity (preferred shares).

Preferred shares do not have voting rights and are non-cumulative. They have been subscribed by third parties outside the Group and are redeemable by decision of the issuer, according to the terms of each issue.

Banco Santander's contingently convertible preferred participations are subordinated debentures and rank after common creditors and any other subordinated credit that by law and/or by their terms, to the extent permitted by Spanish law, ranks higher than the contingently convertible preferred participations. Their remuneration is conditioned to the obtaining of sufficient distributable profits, and to the limitations imposed by the regulations on shareholders' equity, and they have no voting rights. The other issues of Banco Santander, S.A. mentioned in this caption are also subordinated debentures and, for credit ranking purposes, they rank behind all the common creditors of the issuing entities and ahead of any other subordinated credit that ranks *pari passu* with the Bank's contingently convertible preferred participations.

The main issues of subordinated debt securities issued, broken down by company, are detailed below:

Issues by Banco Santander, S.A.

On July 6, 2022 and July 20, 2022, two subordinated issues matured for a nominal amount of EUR 114 million and EUR 25 million, respectively.

At 25 April 2022, Banco Santander, S.A. proceeded to prepay all the Tier 1 Contingently Convertible Preferred Securities with ISIN code XS1602466424 and common code 160246642 in circulation, for a total nominal amount of EUR 750 million and which were traded on the Irish Stock Market 'Global Exchange Market' (the 'PPCC').

At 22 November 2021, Banco Santander, S.A. issued subordinated debentures for a term of eleven years, with a redemption option on the tenth anniversary of the issue date, in the amount of USD 1,000 million (EUR 1,007 million at the exchange rate on the day of issue). The issue bears interest at an annual rate of 3.225%, payable semi-annually, for the first ten years (then repricing at a margin of 160 points over the one-year US government bond).

At 4 October 2021, Banco Santander, S.A. issued subordinated debentures for a term of eleven years, with a redemption option on the sixth anniversary of the issue date, amounting to GBP 850 million (EUR 887 million at the exchange rate on the day of issue). The issue bears interest at an annual rate of 2.25%, payable annually for the first six years (then repricing at a margin of 165 points over the 5-year UK government bond).

At 21 September 2021, Banco Santander, S.A. carried out a placement of preferential shares contingently convertible into newly issued ordinary shares of the Bank ('PPCC') for a nominal amount of EUR 1,000 million (issue placed on the market EUR 997 million). The issuance was carried out at par and the remuneration of the PPCC, whose payment is subject to certain conditions and is also discretionary, was set at 3.625% per year for the first eight years, being reviewed every five years applying a margin of 376 basis points over the 5-year Mid-Swap Rate.

At 11 September 2021, Banco Santander, S.A. proceeded to redeem early and voluntarily the entire issue made on 11 September 2014 of tier 1 contingently convertible preference shares (PPCC) with ISIN code XS110729154 which are traded in the Irish Stock Exchange Market 'Global Exchange Market', for a total nominal amount of EUR 1,500 million.

At 12 May 2021, Banco Santander placed the issue of preference shares contingently convertible into newly issued ordinary shares of the Bank, previously announced, for a total nominal amount of EUR 1,578 million, issued in a Series in Dollars of USD 1,000 million (EUR 828 million at the exchange rate on the day of issue) and a Series in Euros for an amount of EUR 750 million. The issuance is carried out at par and the remuneration of the PPCC, whose payment is subject to certain conditions and is also discretionary, has been set (i) for the Series in Dollars at 4.750% per annum for the first six years, being revised every five years applying a margin of 375.3 basis points over the 5-year UST rate and (ii) for the Series in Euros by 4.125% per annum for the first seven years, being revised every five years applying a margin of 431.1 basis points over the applicable 5-year euro mid-swap.

At 3 December 2020, Banco Santander, S.A. issued subordinated debentures with a ten-year term of USD 1,500 million (EUR 1,222 million at the date of issue). The issue bears interest at an annual rate of 2.749%, payable semiannually.

At 22 October 2020, it carried out a ten-year subordinated debenture issue for an amount of EUR 1,000 million. The issue bears interest at an annual rate of 1.625%, payable annually.

At 12 March 2020, it proceeded to redeem early and voluntarily the entire outstanding issue of Tier 1 Contingently Convertible Preferred Participations Series I/2014, for a total nominal amount of EUR 1,500 million.

At 14 January 2020, it carried out a placement of contingently convertible preferred participations into newly issued ordinary shares of the Bank (the 'PPCCs'), excluding the pre-emptive subscription rights of its shareholders and for a nominal amount of EUR 1,500 million (the 'Issue' and the 'PPCCs'). The Issue was made at par and the remuneration of the PPCCs, the payment of which is subject to certain conditions and is also discretionary, was set at 4.375% per annum for the first six years, revised every five years thereafter by applying a margin of 453.4 basis points over the 5-year Mid-Swap Rate (5-year Mid-Swap Rate).

At 8 February 2019, Banco Santander, S.A. carried out an issue of PPCC for a nominal amount of USD 1,200 million (EUR 1,056 million). The remuneration of the issues whose payment is subject to certain conditions and is also discretionary was set at 7.50% per annum, for the first five years (revised thereafter by applying a margin of 498.9 points over the mid-swap rate).

At 19 March 2018, a 'PPCC' issue was carried out, for a nominal amount of EUR 1,500 million. The remuneration of the issue, the payment of which is subject to certain conditions and is also discretionary, was set at 4.75% per annum, payable quarterly, for the first seven years (revised thereafter by applying a margin of 410 basis points over the Mid-swap rate).

At 8 February 2018, a ten-year subordinated debenture issue of EUR 1,250 million was carried out. The issue accrues annual interest of 2.125% payable annually.

At 29 September 2017, Banco Santander, S.A. carried out issues of 'PPCCs', for a nominal amount of EUR 1,000 million. The remuneration of the PPCC, the payment of which is subject to certain conditions and is also discretionary, was set at 5.25% per annum for the first six years (revised thereafter by applying a margin of 499.9 basis points over the 5 years Mid-Swap Rate).

22. Other financial liabilities

a) Breakdown

The following is a detail of 'Other financial liabilities' on the accompanying balance sheets:

EUR million	2022	2021
Trade payables	839	888
Payment obligations	2,797	2,711
Public agency revenue collection accounts	4,996	4,506
Unsettled financial transactions	1,104	617
Other accounts	2,762	1,302
Total	12,498	10,024

b) Average payment period to suppliers

Set forth below are the disclosures required by Additional Provision Three of Law 15/2010, of 5 July (amended by Final Provision Two of Law 31/2014, of 3 December), prepared in accordance with the Spanish Accounting and Audit Institute (ICAC) Resolution of 29 January 2016 on the disclosures to be included in notes to financial statements in relation to the average period of payment to suppliers in commercial transactions.

	2022	2021
	Days	
Average period of payment to suppliers	10	10
Ratio of transactions paid	10	10
Ratio of transactions pending payments	19	—
	EUR million	
Total payments made	2,652	2,848
Total payments outstanding	17	—

Additionally, the data for Grupo Santander in Spain, in the financial year 2022, are as follows:

	2022
	Days
Average period of payment to suppliers	15
Ratio of transactions paid	14
Ratio of transactions pending payments	100
	EUR million
Total payments made	7,083
Total payments outstanding	45

In accordance with the ICAC Resolution, the average period of payment to suppliers was calculated by taking into account commercial transactions relating to the supply of goods or services for which payment has accrued since the date of issuance of Law 31/2014, of December, 3.

Additionally, in accordance with Law 18/2022 of September 28, listed commercial companies must report the average payment period to suppliers, the monetary volume and number of invoices paid in a period less than the maximum established in the delinquency regulations, and the percentage that it represents over the total number of invoices and over the total monetary payments to its suppliers.

Payments to suppliers made sooner than maximum period established by the regulations	2022	2021
Average payment period to suppliers (days)	9	9
Number of invoices paid	160,245	136,706
Invoices paid in a period sooner than the maximum established over the total number of invoices paid	98.37%	94.09%
Total payments made (EUR million)	2,634	2,827
Invoices paid in a period less than the maximum on the total amount of invoices paid	99.32%	99.26%

Additionally, the data for Grupo Santander in Spain, in the financial year 2022, are as follows:

Payments to suppliers made sooner than maximum period established by the regulations	2022
Average payment period to suppliers (days)	13
Number of invoices paid	340,899
Invoices paid in a period sooner than the maximum established over the total number of invoices paid	98.28%
Total payments made (EUR million)	6,990
Invoices paid in a period less than the maximum on the total amount of invoices paid	98.69%

For the sole purpose of the disclosures provided in the Resolution, suppliers are considered to be commercial creditors for debts with suppliers of good and services.

“Average period of payment to suppliers” is taken to be the period that elapses from the delivery of the goods of the provision of the services by the supplier to the effective payment of the operation.

Note 48 contains a detail of the maturity periods of ‘Other financial liabilities’ at each year-end.

c) Lease liabilities

The cash outflow of leases in 2022 was EUR 307 million (in 2021 it was EUR 301 million). The analysis of the maturities corresponding to the lease liabilities at 31 December 2022 and 2021, is as follows:

EUR million	2022	2021
Maturity Analysis – Discounted payments		
Within 1 year	386	351
Between 1 and 3 years	442	445
Between 3 and 5 years	330	317
Later than 5 years	1,361	1,336
Total Discounted payments at 31 December 2022	2,519	2,449

During 2022 and 2021, no significant variable payments have been made not included in the valuation of lease liabilities.

23. Provisions

a) Breakdown

The detail of 'Provisions' in the balance sheets at 31 December 2022 and 2021 is as follows:

EUR million		2022	2021
Provision for pensions and similar obligations		2,001	2,730
<i>Of which</i>			
<i>Pensions and similar defined benefit obligations post-employment</i>		1,220	1,677
<i>Other long-term remunerations to employees</i>		781	1,053
Restructuring		422	439
Provisions for taxes and other legal contingencies		622	516
Provisions for commitments and guarantees given		220	190
Other provisions		621	474
Total		3,886	4,349

b) Changes

The changes in 'Provisions' in 2022 and 2021 were as follows:

EUR million	2022					2021				
	Post-employment	Long - Term	Contingent liabilities and commitments	Other provisions	Total	Post-employment	Long - Term	Contingent liabilities and commitments	Other provisions	Total
Balance at end of prior year	1,677	1,053	190	1,429	4,349	1,849	1,581	157	1,420	5,007
Changes in value recognized in equity	(279)	—	—	—	(279)	(29)	—	—	—	(29)
Additions charged to income	27	41	33	585	686	(9)	24	24	747	786
(Interest income)/ Interest expense (notes 34 and 35)	31	23	—	—	54	12	11	—	—	23
Staff costs (note 42)	1	1	—	—	2	4	1	—	—	5
Provisions or reversal of provision	(5)	17	33	585	630	(25)	12	24	747	758
Payments to pensioners and pre-retirees	(178)	(313)	—	—	(491)	(164)	(552)	—	—	(716)
Amounts used and other changes	(27)	—	(3)	(349)	(379)	30	—	9	(738)	(699)
Balances at end of year	1,220	781	220	1,665	3,886	1,677	1,053	190	1,429	4,349

c) Provision for pensions and similar obligations

The detail of 'Provision for pensions and similar obligations' at 31 December 2022 and 2021 is as follows:

EUR million	2022	2021
Provisions for pensions and similar defined benefit plan obligations	2,001	2,730
<i>Of which</i>		
Provisions for pensions	1,220	1,677
Provisions for similar obligations	781	1,053
Of which, pre-retirements	771	1,041
Provisions for pensions and similar defined contribution plan obligations	—	—
Total provisions for pensions and similar obligations	2,001	2,730

i. Defined contribution plans

At the end of 2012, Banco Santander reached an agreement with workers' representatives to transform the defined benefit commitments derived from the collective agreement into defined contribution plans. Similarly, the contracts for senior management staff with pension commitments in the defined benefit modality were amended to transform them into a defined contribution provision system.

Almost all of the pension commitments with active personnel correspond to defined contribution plans. The total contributions made to these plans during 2022 amounted to EUR 88 million (EUR 77 million during 2021) (see nota 42).

ii. Defined Benefit Plans

In addition to the previous defined contribution plans, at 31 December 2022, Banco Santander maintained definite service commitments. Below is the present value of the Bank's commitments in post-employment remuneration for defined benefit programs, as well as the value of the reimbursement entitlements for insurance contracts linked to those obligations at 31 December 2022 and preceding years:

EUR million	2022	2021	2020
Present value of the obligations			
To current employees	34	42	78
To retired employees	2,009	2,806	3,304
Other	—	—	—
	2,043	2,848	3,382
Fair value of plan assets	(851)	(1,205)	(1,537)
Assets not recognized	6	5	4
Provisioned assets on the balance sheet	22	29	—
Provisions - Provisions for pensions	1,220	1,677	1,849
<i>Of which</i>			
Internal provisions for pensions	907	1,296	1,426
Insurance contracts linked to pensions (note 14)	313	381	423
<i>Of which</i>			
Group insurance entities	209	232	249
Other insurers	104	149	174

On July 8, 2021, the Bank reached an agreement with the employees' representatives for the transformation of the defined benefit pension commitments into defined contribution for certain retired personnel from Banco Popular and Banco Pastor.

Through the previously mentioned Collective Agreement, an agreement has been to carry out an offer to replace the annuities that the passive personnel included in the scope of application of said Collective Agreement had been receiving with a capitalization fund in the Santander Employees pension plan.

The number of beneficiaries who exercised the voluntary option to accept the substitution of the life annuity for a capitalization fund in the Santander Employees pension plan amounted to 1,468 people. The effect of the reduction of the aforementioned commitments is shown in the tables below under the headings 'Benefits paid by settlement' amounting to EUR 166 million and 'Effect reduction / settlement' amounting to EUR 38 million.

The amount of the defined benefit obligations was determined on the basis of the work performed by independent actuaries using the following actuarial techniques:

1. Valuation method: projected unit credit method, which sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately.
2. Actuarial assumptions used: unbiased and mutually compatible. Specifically, the most significant actuarial assumptions used in the calculations were as follows:

EUR million		
	2022	2021
Annual discount rate	3.80 %	0.90 %
Expected return on plan assets rate	3.80 %	0.90 %
Mortality tables	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1
Cumulative annual CPI growth	2.00 %	1.00 %
Annual salary increase rate	1.25 %	1.25 %
Annual pension increase rate	2.00 %	1.00 %

3. The discount rate used for the flows was determined referencing to high-quality corporate bonds.
4. The estimated retirement age of each employee is the first at which the employee is entitled to retire or the agreed-upon age, as appropriate.
5. The fair value of insurance contracts was determined as the present value of the related payment obligations, taking into account the following assumptions:

EUR million		
	2022	2021
Expected rate of return on plan assets	3.80 %	0.90 %
Expected rate of return on reimbursement rights	3.80 %	0.90 %

The amounts recognized in the accompanying income statements in relation to the aforementioned defined benefit obligations are as follows:

EUR million		
	2022	2021
Service cost:		
Current service cost (note 42)	1	4
Past service cost (including reductions)	3	13
Pre-retirement cost	—	—
Reductions/liquidations	(8)	(38)
Net interest (note 35)	48	24
Expected return on insurance contracts linked to pensions (note 34)	(17)	(12)
Total	27	(9)

In addition, in 2022 'Other comprehensive income – items not reclassified to profit or loss - Actuarial gains or (-) losses on defined benefit pension plans, has led to an actuarial gain of 279 million euros with respect to benefit commitments defined (actuarial gain of EUR 30 million in the year 2021).

The changes in 2022 and 2021 of the present value of the accrued defined benefit obligations were as follows:

EUR million		
	2022	2021
Present value of the obligations at beginning of the year	2,848	3,382
Current service cost (note 42)	1	4
Interest cost	77	36
Pre-retirement cost	—	—
Reductions/liquidations	(8)	(60)
Benefits paid for settlements	—	(166)
Other benefits paid	(254)	(245)
Past service cost	3	13
Actuarial (gains)/losses ^A	(623)	(122)
Exchanges rate differences and others	(1)	6
Present value of the obligations at end of the year	2,043	2,848

A. Included in 2022 are demographic actuarial losses of EUR 2 million and financial actuarial profits of EUR 625 million (2021: demographic actuarial losses of EUR 9 million and financial actuarial losses of EUR 131 million).

The changes in 2022 and 2021 in the fair value of the plan assets are as follows:

EUR million	2022	2021
Fair value of plan assets at beginning of year	1,205	1,537
Expected return on plan assets	29	12
Benefits paid	(77)	(262)
Contributions payable by the employer	1	14
Settlements gains/(losses)	—	(22)
Exchange rate differences and others	(7)	5
Actuarial gains/(losses)	(300)	(79)
Fair value of plan assets at end of year	851	1,205

The changes in 2022 and 2021 in the fair value of the insurance contracts linked to pensions are as follows:

EUR million	2022	2021
Fair value of insurance contracts linked to pensions at beginning of the year	381	423
Expected return on insurance contracts (note 34)	17	12
Actuarial gains/(losses)	(43)	(12)
Premiums paid/(surrenders)	(1)	—
Benefits paid	(40)	(42)
Exchange rate differences and others	(1)	—
Fair value of insurance contracts linked to pensions at end of the year (note 14)	313	381

Plan assets and pension insurance contracts linked to pensions are mainly based in insurance policies.

iii. Other long-term employee benefits

In various years, Banco Santander offered to some certain of its employees, the possibility of leaving its employ prior to their retirement. Therefore, provisions are recognized to cover the obligations to pre-retirees -in terms of salaries and other employee benefit costs- from the date of their pre-retirement to the date of their effective retirement.

The present value of the aforementioned obligations and the fair value of the assets arising from insurance contracts linked to these obligations at 31 December 2022 and for the previous exercises are as follows:

EUR million	2022	2021	2020
Present value of the obligations:			
Early retirement	779	1,052	1,580
Long-service bonuses and other benefits	10	11	13
	789	1,063	1,593
Fair value of plan assets	(8)	(10)	(12)
Provisions - Provisions for pensions	781	1,053	1,581
Insurance plans linked to pensions	—	—	—
Group insurers	—	—	—
Other insurance entities	—	—	—

In December 2020, Banco Santander reached an agreement with the workers' representatives to implement an early retirement and voluntary redundancy plan to which 3,572 employees were expected to take advantage during 2021, setting up a provision to cover these commitments amounting to EUR 674 million. In addition to the above, the provision made to cover the departures of employees who took early retirement and incentive retirement offers during 2020 amounted to EUR 84 million. In 2021, a provision of EUR 139 million was made to complete the plan announced in 2020, bringing the number of early retirements and voluntary redundancies to 3,643 employees over the entire period. In 2022, the provisions made to cover commitments to 357 employees under early retirement and voluntary severance plans amounted to EUR 76 million.

The amount of the other long-term remuneration commitments defined benefit has been determined on the basis of work performed by independent actuaries, applying the following criteria to quantify them:

1. Valuation method: projected unit credit method.
2. Actuarial assumptions used: unbiased and mutually compatible. Specifically, the most significant actuarial assumptions used in the calculations were as follows:

EUR million		
	2022	2021
Annual discount rate	3.80 %	0.90 %
Expected return on plan assets rate	3.80 %	0.90 %
Mortality tables	PE2020 M/F Col. Orden 1	PE2020 M/F Col. Orden 1
Cumulative annual CPI growth	2.00 %	1.00 %
Annual benefit increase rate	Between 0% and 1.5%	Between 0% and 1.5%

- The discount rate used for the flows was determined by reference to high-quality corporate bonds.
- The estimated retirement age of each employee is the first at which the employee is entitled to retire or the agreed-upon age, as appropriate.
- The amounts recognised in the income statement in relation to the aforementioned defined benefit obligations are as follows:

EUR million		
	2022	2021
Service cost:		
Current service cost (note 42)	1	1
Interest cost (note 35)	23	11
Extraordinary charges	—	—
Actuarial (gains)/losses recognized in the year	(59)	(14)
Pre-retirement cost	76	81
Other	—	(55)
Total	41	24

The changes in 2022 and 2021 in the present value of the accrued obligations for other long-term benefits were as follows:

EUR million		
	2022	2021
Present value of the obligations at beginning of the year	1,063	1,593
Current service cost	1	1
Cost per interest (note 35)	23	11
Past service cost	—	—
Pre-retirement cost	76	81
Effect of curtailment/settlement	—	(55)
Benefits paid	(314)	(554)
Actuarial (gains)/losses	(59)	(14)
Other	(1)	—
Present value of the obligations at end of the year	789	1,063

The movement that has occurred, during the years 2022 and 2021, in the fair value of the assets of the plan, has been as follows:

EUR million		
	2022	2021
Fair value of plan assets at the beginning of the year	10	12
Expected return on plan assets	—	—
Benefits paid	(2)	(2)
Contributions by the employer	—	—
Contributions by the employee and others	—	—
Actuarial gains / (losses)	—	—
Present value of the obligations at end of the year	8	10

iv. Sensitivity analysis

Variations in the main assumptions may affect the calculation of commitments. At 31 December 2022, in the event that the discount interest rate had decreased or increased by 50 basis points, there would have been an increase or decrease in the current value of post-employment obligations of 3.8% and 3.6% respectively, and an increase or decrease in the current value of long-term obligations of 1.04% and -1.02%. These variations would be partially offset by increases or decreases in the fair value of assets and insurance contracts linked to pensions.

The following table shows the estimate of benefits to be paid as of December 31, 2022 for the next ten years:

EUR Million	
2023	463
2024	396
2025	332
2026	286
2027	237
2028 to 2032	788

d) Provisions for taxes and other legal contingencies and Other provisions

'Provisions - Provisions for taxes and other legal contingencies' and 'Provisions - Other provisions', which include, inter alia, provisions for restructuring costs and tax-related and non-tax-related proceedings, were estimated using prudent calculation procedures in keeping with the uncertainty inherent to the obligations covered. The definitive date of the outflow of resources embodying economic benefits for the Bank depends on each obligation. In certain cases, these obligations have no fixed settlement period and, in other cases, depend on the legal proceedings in progress.

'Provisions for taxes and other legal contingencies' include proceedings and other legal proceedings such as judicial, arbitral or administrative proceedings initiated against Banco Santander. Qualitative information on the main disputes is provided in note 23.e. For their part, the provisions for restructuring include only costs arising from restructuring processes incurred at Banco Santander.

The Bank general policy is to record provisions for tax and legal proceedings in which the Group assesses the chances of loss to be probable and the Group does not record provisions when the chances of loss are possible or remote. Banco Santander determines the amounts to be provided for as its best estimate of the expenditure required to settle the corresponding claim based, among other factors, on a case-by-case analysis of the facts and the legal opinion of internal and external counsel or by considering the historical average amount of the loss incurred in claims of the same nature. The definitive date of the outflow of resources embodying economic benefits for the Bank depends on each obligation. In certain cases, the obligations do not have a fixed settlement term and, in others, they depend on legal proceedings in progress.

As for the 'Other provisions' contains very atomized and individually insignificant provisions, such as the provisions corresponding to cover other operational risks of the Bank.

e) Litigation and other matters

i. Tax-related litigation

At 31 December 2022 the main tax-related proceedings concerning the Group and the Bank were as follows:

- Legal actions filed by Banco Santander (Brasil) S.A. and other Group entities to avoid the application of Law 9.718/98, which modifies the basis to calculate Programa de Integração Social (PIS) and Contribuição para Financiamento da Seguridade Social (COFINS), extending it to all the entities income, and not only to the income from the provision of services. In relation of Banco Santander (Brasil) S.A. process, in May 2015 the Federal Supreme Court (FSC) admitted the extraordinary appeal filed by the Federal Union regarding PIS, and dismissed the extraordinary appeal lodged by the Brazilian Public Prosecutor's Office regarding COFINS contribution, confirming the decision of Federal Regional Court favourable to Banco Santander (Brasil) S.A. of August 2007. The appeals filed by the other entities before the Federal Supreme Court, both for PIS and COFINS, are still pending and fully provisioned.

- Banco Santander (Brasil) S.A. and other Group companies in Brazil have appealed against the assessments issued by the Brazilian tax authorities questioning the deduction of loan losses in their income tax returns (Imposto sobre a Renda das Pessoas Jurídicas - IRPJ - and Contribuição Social sobre o Lucro Líquido -CSLL-) in relation to different administrative processes of various years on the ground that the requirements under the applicable legislation were not met. The appeals are pending decision in the administrative Court, the Conselho Administrativo de Recursos Fiscais (CARF). No provision was recognised in connection with the amount considered to be a contingent liability.
- Banco Santander (Brasil) S.A. and other Group companies in Brazil are involved in administrative and legal proceedings against several municipalities that demand payment of the Service Tax on certain items of income from transactions not classified as provisions of services. There are several cases in different judicial instances. A provision was recognised in connection with the amount of the estimated loss.
- Banco Santander (Brasil) S.A. and other Group companies in Brazil are involved in administrative and legal proceedings against the tax authorities in connection with the taxation for social security purposes of certain items which are not considered to be employee remuneration. There are several cases in different judicial instances. A provision was recognised in connection with the amount of the estimated loss.
- In May 2003 the Brazilian tax authorities issued separate infringement notices against Santander Distribuidora de Títulos e Valores Mobiliários, Ltda. (DTVM, actually Santander Brasil Tecnologia S.A.) and Banco Santander (Brasil) S.A. in relation to the Provisional Tax on Financial Movements (Contribuição Provisória sobre Movimentação Financeira) of the years 2000 to 2002. The administrative discussion ended unfavourably for both companies, and on July 3, 2015, filed a lawsuit requesting the cancellation of both tax assessments. The lawsuit was judged unfavourably in first instance. Therefore, both plaintiffs appealed to the court of second instance. On December 2020, the appeal was decided unfavourably. Against the judgment, the bank filed a motion for clarification which has not been accepted. Currently it is appealed to higher courts. There is a provision recognized for the estimated loss.

- In December 2010 the Brazilian tax authorities issued an infringement notice against Santander Seguros S.A. (Brazil), currently Zurich Santander Brasil Seguros e Previdência S.A., as the successor by merger to ABN AMRO Brasil dois Participações S.A., in relation to income tax (IRPJ and CSLL) for 2005, questioning the tax treatment applied to a sale of shares of Real Seguros, S.A. The administrative discussion ended unfavourably, and the CARF decision has been appealed at the Federal Justice. As the former parent of Santander Seguros S.A. (Brasil), Banco Santander (Brasil) S.A. is liable in the event of any adverse outcome of this proceeding. No provision was recognised in connection with this proceeding as it is considered to be a contingent liability.
- In November 2014 the Brazilian tax authorities issued an infringement notice against Banco Santander (Brasil) S.A. in relation to corporate income tax (IRPJ and CSLL) for 2009 questioning the tax-deductibility of the amortisation of the goodwill of Banco ABN AMRO Real S.A. performed prior to the absorption of this bank by Banco Santander (Brasil) S.A., but accepting the amortisation performed after the merger. Actually it is appealed before the Higher Chamber of CARF. No provision was recognised in connection with this proceeding as it was considered to be a contingent liability.
- Banco Santander (Brasil) S.A. has also appealed against infringement notices issued by the tax authorities questioning the tax deductibility of the amortisation of the goodwill arising on the acquisition of Banco Comercial e de Investimento Sudameris S.A from years 2007 to 2012. No provision was recognised in connection with this matter as it was considered to be a contingent liability.
- Banco Santander (Brasil) S.A. and other companies of the Group in Brazil are undergoing administrative and judicial procedures against Brazilian tax authorities for not admitting tax compensation with credits derived from other tax concepts, not having registered a provision for the amount considered to be a contingent liability.
- Banco Santander (Brasil) S.A. is involved in appeals in relation to infringement notices initiated by tax authorities regarding the offsetting of tax losses in the CSLL of year 2009. The appeal is pending decision in CARF. No provision was recognised in connection with this matter as it is considered to be a contingent liability.
- Banco Santander (Brasil) S.A. filed a suspensive judicial measure aiming to avoid the withholding income tax (Imposto sobre a Renda Retido na Fonte - IRRF), on payments derived from technology services provided by Group foreign entities. A favorable decision was handed down and an appeal

was filed by the tax authority at the Federal Regional Court, where it awaits judgment. No provision was recognized as it is considered to be a contingent liability.

- Brazilian tax authorities have issued infringement notices against Getnet Adquirência e Serviços para Meios de Pagamento S.A and Banco Santander (Brasil) S.A. as jointly liable in relation to corporate income tax (IRPJ and CSLL) for 2014 to 2018 questioning the tax-deductibility of the amortization of the goodwill from the acquisition of Getnet Tecnologia Proces S.A., considering that the company would not have complied with the legal requirements for such amortization. A defense against the tax assessment notices were submitted, and the appeal is pending decision in CARF. No provision was recognized as it is considered to be a contingent liability.

The total amount for the aforementioned Brazil lawsuits that are fully provisioned is EUR 691 million, and for lawsuits that qualify as contingent liabilities is EUR 4,977 million.

- Banco Santander appealed before European Courts the Decisions 2011/5/CE of 28 October 2009 (First Decision), and 2011/282/UE of 12 January 2011 (Second Decision) of the European Commission, ruling that the deduction of the financial goodwill regulated pursuant to Article 12.5 of the Corporate Income Tax Law constituted illegal State aid. On October 2021 the Court of Justice definitively confirmed these Decisions. The dismissal of the appeal, that only affects these two decisions, had no impact on results.

At the date of approval of these annual accounts, there are other less significant tax disputes.

ii. Non-tax-related proceedings

At 31 December 2022 the main non-tax-related proceedings concerning the Group and the Bank were as follows:

- Payment Protection Insurance (PPI): In recent years Santander UK plc has processed customer claims associated with the sale of payment protection insurance (PPI), derived from the Financial Conduct Authority guidelines. As of 31 December 2022 there is no provision related to those claims as the deadline for presenting them has already expired. However, customers can still commence in-court litigation for the mis-sale of PPI and a provision for the best estimate of any obligation to pay compensation in respect of current and future claims is recognized for this purpose.

- In addition, there is a legal dispute regarding allocation of liability for pre-2005 PPI policies that two entities of the Axa Group (hereinafter "Axa France" acquired from Genworth Financial International Holdings, Inc. in September 2015. The dispute involves Santander Cards UK Limited (formerly known as GE Capital Bank Limited which was acquired by Banco Santander, S.A. from GE Capital group in 2008) which was the distributor of the policies in dispute and Santander Insurance Services UK Limited (the Santander Entities).

In July 2017, the Santander Entities notified Axa France that they did not accept liability for losses on PPI policies relating to the referred period. Santander UK plc entered in a Complaints Handling Agreement –that included a standstill agreement– agreeing to handle complaints on Axa France, whilst Axa France accepted paying redress assessed to be due to relevant policyholders on a without prejudice basis.

After the termination of the Complaints Handling Agreement, on 30 December 2020 Axa France provided written notice to the Santander Entities to terminate the standstill agreement. On 5 March 2021, the Santander Entities were served with a Claim Form and Brief Details of Claim by Axa France, claiming that the Santander Entities are liable to reimburse Axa France for pre-2005 PPI mis-selling losses, currently estimated at GBP 636 million (EUR 717.2 million). On 22 March 2021, the Santander Entities acknowledged service of the claim and notified the court of their intention to defend the claim in full and issued an application for Axa France's claim to be struck out/summarily dismissed, which was heard by the Commercial Court on 22 and 23 February 2022 with judgement reserved. Judgment was handed down by the Commercial Court on 12 July 2022. The Commercial Court upheld a significant part of the Santander Entities' strike-out plead. The Santander Entities have sought permission to appeal aspects of the strike out decision on which they were unsuccessful. Axa France updated the amount of losses claimed from GBP 636 million (EUR 717.2 million) to GBP 670 million (EUR 755.5 million) in their Amended Particulars of Claim dated 21 October 2022.

Regarding those claims admitted or those that may eventually be made in the aforementioned appeal, there are factual issues that will be resolved during the processing of the trial that may have legal consequences including in relation to liability. These issues create uncertainties which mean that it is difficult to reliably predict the outcome or the timing of the resolution of the matter. The provision includes our best estimate of the Santander Entities' liability for this matter.

- Delforca: dispute arising from equity swaps entered into by Gaesco (now Delforca 2008, S.A.) on shares of Inmobiliaria Colonial, S.A. Banco Santander, S.A. is claiming to Delforca before the Court of Barcelona in charge of the bankruptcy proceedings, a total of EUR 66 million from the liquidation resulting from the early termination of financial transactions due to Delforca's non-payment of the equity swaps. In the same bankruptcy proceedings, Delforca and Mobiliaria Monesa have in turn claimed the Bank to repay EUR 57 million, which the Bank received for the enforcement of the agreed guarantee, as a result of the aforementioned liquidation. On 16 September 2021 the Commercial Court Number 10 of Barcelona has ordered Delforca to pay the Bank EUR 66 million plus EUR 11 million in interest and has dismissed the claims filed by Delforca. This decision has been appealed by Delforca, Mobiliaria Monesa and the bankruptcy administrator. The appeal which the Bank has already opposed to will be resolved by the Provincial Court of Barcelona.

Separately, Mobiliaria Monesa, S.A. (parent of Delforca) filed in 2009 a civil procedure with the Courts of Santander against the Bank claiming damages that have not been specified to date. The procedure is suspended.

- Former employees of Banco do Estado de São Paulo S.A., Santander Banespa, Cia. de Arrendamiento Mercantil: claim initiated in 1998 by the association of retired Banespa employees (AFABESP) requesting the payment of a half-yearly bonus contemplated in the by-laws of Banespa in the event that Banespa obtained a profit and that the distribution of this profit were approved by the Board of Directors. The bonus was not paid in 1994 and 1995 since Banespa had not made a profit during those years. Partial payments were made from 1996 to 2000, as approved by the Board of Directors. The relevant clause was eliminated in 2001. The Tribunal Regional do Trabalho (Regional Labour Court) and the High Employment Court (TST) ordered Santander Brazil, as successor to Banespa, to pay this half-yearly bonus for the period from 1996 to the present. On 20 March 2019, the Supreme Federal Court (STF) rejected the extraordinary appeal filed by Santander Brazil.

Santander Bank Brazil filed a rescissory action before the TST to nullify the decisions of the main proceedings and suspend the execution of the judgment, which was deemed inadmissible, therefore its execution was suspended. The rescissory action was dismissed and a motion for clarification was filed, due to the absence of an explicit argument to deny the rescissory action filed by Santander Brazil. After the decision of the motion for clarification, Santander Brazil filed an extraordinary appeal in the rescissory action in February 2021, which was denied in an interlocutory

decision in June 2021 by the TST. As Santander Brazil understands there is a conflict between the TST decision and the doctrine set by the STF, Santander Brazil appealed this decision. This appeal is pending.

In August 2021, a first instance court ruled that the enforcement of the TST decision shall be carried out individually, at the jurisdiction pertaining to each person. AFABESP appealed this decision. In December 2021, the Regional Labor Court denied the appeal filed by AFABESP. This decision has not been appealed by AFABESP, and therefore it has become firm. Santander Brazil external advisers have classified the risk as probable. The recorded provisions are considered sufficient to cover the risks associated with the legal claims that are being substantiated as of 31 December 2022.

- 'Planos Económicos': like the rest of the banking system in Brasil, Santander Brazil has been the target of customer complaints and collective civil suits stemming mainly from legislative changes and its application to bank deposits ('economic plans'). At the end of 2017, an agreement between regulatory entities and the Brazilian Federation of Banks (Febraban) with the purpose of closing the lawsuits was reached and was approved by the Supremo Tribunal Federal. Discussions focused on specifying the amount to be paid to each affected client according to the balance in their notebook at the time of the Plan. Finally, the total value of the payments will depend on the number of adhesions there may be and the number of savers who have demonstrated the existence of the account and its balance on the date the indexes were changed. In November 2018, the STF ordered the suspension of all economic plan proceedings for two years from May 2018. On 29 May 2020, the STF approved the extension of the agreement for 5 additional years starting from 3 June 2020. Condition for this extension was to include in the agreement actions related to the 'Collor I Plan'. On 31 December 2022, the provision recorded for the economic plan proceedings amounts to EUR 220 million.
- Floor clauses: as a consequence of the acquisition of Banco Popular Español, S.A.U. ('Banco Popular'), the Group has been exposed to a material number of transactions with floor clauses. The so-called "floor clauses" are those under which the borrower accepts a minimum interest rate to be paid to the lender, regardless of the applicable reference interest rate. Banco Popular included "floor clauses" in certain asset-side transactions with customers. In relation to this type of clauses, and after several rulings made by the Court of Justice of the European Union and the Spanish Supreme Court, and the extrajudicial process established by the Spanish Royal Decree-Law 1/2017, of 20 January, Banco Popular made provisions that were updated in order to cover the effect of the potential return of the excess interest

charged for the application of the floor clauses between the contract date of the corresponding mortgage loans and May 2013. At 31 December 2022, after having processed most of the customer requests, the potential residual loss associated with ongoing court proceedings is estimated at EUR 60.1 million, amount which is fully covered by provisions.

- Banco Popular's acquisition: After the declaration of the resolution of Banco Popular, some investors filed claims against the EU's Single Resolution Board decision, and the FROB's resolution executed in accordance to the aforementioned decision. Likewise, numerous appeals were filed against Banco Santander, S.A. alleging that the information provided by Banco Popular was erroneous and requesting from Banco Santander, S.A. the restitution of the price paid for the acquisition of the investment instruments or, where appropriate, the corresponding compensation.

In relation to these appeals, on the one hand, the General Court of the European Union ("GCUE") selected 5 appeals from among all those filed before the European courts by various investors against the European institutions and processed them as pilot cases. On 1 June 2022, the GCUE has rendered five judgements in which it has completely dismissed the appeals, (i) supporting the legality of the resolution framework applied to Banco Popular, (ii) confirming the legality of the action of the European institutions in the resolution of Banco Popular and (iii) rejecting, in particular, all the allegations that there were irregularities in the sale process of Banco Popular to Banco Santander, S.A. Four of these judgments have been appealed before the Court of Justice of the European Union ("CJEU").

On the other hand, in relation to the lawsuits initiated by investors directly against Banco Santander, S.A. derived from the acquisition of Banco Popular, on 2 September 2020, the Provincial Court of La Coruña submitted a preliminary ruling to the CJEU in which it asked for the correct interpretation of the Article 60, section 2 of Directive 2014/59/EU of the European Parliament and of the Council of 15 May, establishing a framework for the restructuring and resolution of credit institutions and investment services companies. Said article establishes that, in the cases of redemption of capital instruments in a bank resolution, no liability will subsist in relation to the amount of the instrument that has been redeemed. On 5 May 2022, the CJEU has rendered its judgement confirming that Directive 2014/59/EU of the European Parliament and of the Council does not allow that, after the total redemption of the shares of the share capital of a credit institution or an investment services company subject to a resolution procedure, the shareholders who have acquired shares within the framework of a public subscription

offer issued by said company before the start of such a resolution procedure, exercise against that entity or against its successor, an action for liability for the information contained in the prospectus, under Directive 2003/71/EC of the European Parliament and of the Council, or an action for annulment of the subscription contract for those shares, which, taking into account its retroactive effects, gives rise to the restitution of the equivalent value of said shares, plus the interest accrued from the date of execution of said contract. In respect to this judgement, in December 2022 the Spanish Supreme Court submitted pre-judicial issues before the CJEU in respect of its applicability to subordinated obligations amortized with the resolution and to subordinated obligations and/or preferred shares converted into shares before resolution.

Separately, the Central Court of Instruction 4 is currently conducting preliminary proceedings 42/2017, in which, amongst other things, is being investigated the following: (i) the accuracy of the prospectus for the capital increase with subscription rights carried out by Banco Popular in 2016; and (ii) the alleged manipulation of the share price of Banco Popular until the resolution of the bank, in June 2017. During the course of the proceedings, on 30 April 2019, the Spanish National Court, ruled in favour of Banco Santander, S.A. declaring that Banco Santander, S.A. cannot inherit Banco Popular's potential criminal liability. This ruling was appealed before the Supreme Court, which rejected it. In these proceedings, Banco Santander, S.A. could potentially be subsidiarily liable for the civil consequences. In view of the CJEU ruling of 5 May 2022, the Bank has requested confirmation of the exclusion of its subsidiary civil liability status in this criminal proceeding. On 26 July 2022, the Court has rejected this request stating that it is a matter to be determined at a later procedural time. This decision has been confirmed on appeal by the Chamber of the National Court by sentence of 5 October 2022. The estimated cost of any compensation to shareholders and bondholders of Banco Popular recognized in the 2017 accounts amounted to EUR 680 million, of which EUR 535 million were applied to the commercial loyalty program. The CJEU judgement of 5 May represents a very significant reduction in the risk associated with these claims.

- German shares investigation: the Cologne Public Prosecution Office is conducting an investigation against the Bank, and other group entities based in UK - Santander UK plc, Santander Financial Services Plc and Cater Allen International Limited -, in relation to a particular type of tax dividend linked transactions known as cum-ex transactions. The Group is cooperating with the German authorities. According to the state of the investigations, the result and the effects for the Group, which may potentially include the imposition of material

financial penalties, cannot be anticipated. For this reason, the Bank has not recognized any provisions in relation to the potential imposition of financial penalties.

- Banco Santander, S.A. was sued in a legal proceeding in which the plaintiff alleges that the Bank breached his contract as CEO of the institution. In the lawsuit, the claimant mainly requested a declaratory ruling that upholds the existence, validity and effectiveness of such contract and its enforcement together with the payment of certain amounts. If the main request is not granted, the claimant sought a compensation for a total amount of approximately EUR 112 million or, an alternative relief for other minor amounts. Banco Santander, S.A. answered to the legal action stating that the conditions to which the appointment of that position was subject to were not met; that the executive services contract required by law was not concluded; and that in any case, the parties could terminate the contract without any justified cause. On 17 May 2021, the plaintiff reduced his claims for compensation to EUR 61.9 million.

On 9 December 2021, the Court upheld the claim and ordered the Bank to compensate the claimant in the amount of EUR 67.8 million. By court order of 13 January 2022, the Court corrected and supplemented its judgment, reducing the total amount to be paid by the Bank to EUR 51.4 million and clarifying the part of this amount (buy out) was to be paid under the terms of the offer letter, i.e., entirely in Banco Santander shares, within the deferral period for this type of remuneration at the plaintiff's former employer and subject to the performance metrics or parameters of the plan in force at the Bank, which was that of 2018. As explained in note 5 of the report, the degree of performance of these objectives was 33.3%.

The Bank filed an appeal against the judgment before the Madrid Court of Appeal, which was opposed by the plaintiff. At the same time, the plaintiff filed an application for provisional enforcement of the judgment in the first instance court. A court order was issued ordering enforcement of the judgment, and the Bank deposited in the court bank account the full amount provisionally awarded to the claimant, including interest, for an approximate sum of EUR. 35.5 million, within the voluntary compliance period.

On 6 February 2023, Banco Santander was notified of the judgment of 20 January 2023 by which the Madrid Court of Appeal partially upheld the appeal filed by the Bank. The judgment has reduced the amount to be paid by EUR 8 million, which, to the extent that this amount was already paid in the provisional partial enforcement of the judgement of first instance court, must be returned to the Bank together with other amounts for interest, which the appeal judgement also rejects.

The Bank has submitted a brief requesting a supplement to the Madrid Court of Appeal's judgment, as it understands that it has not ruled on some substantial allegations over the merits of the case made in the Bank's appeal. The Bank will file an extraordinary appeal for procedural infringement and an appeal in cassation against the Madrid Court of Appeal's judgment before Spanish Supreme Court. Existing provisions cover the estimated risk of loss.

- Universalpay Entidad de Pago, S.L. has filed a lawsuit against Banco Santander, S.A. for breach of the marketing alliance agreement (MAA) and claim payment (EUR 1,050 million). The MAA was originally entered into by Banco Popular and its purpose is the rendering of acquiring services (point of sale payment terminals) for businesses in the Spanish market. The lawsuit was mainly based on the potential breach of clause 6 of the MAA, which establishes certain obligations of exclusivity, non-competition and customer referral. On 16 December 2022, the Court ruled in favour of the Bank and dismissed the plaintiff's claim in its entirety. The decision has been appealed.

Taking into account the decision at first instance and following the analysis carried out by the Bank's external lawyers, with the best information available to date, it is considered that no provision needs to be registered.

- CHF Polish Mortgage Loans: On 3 October 2019, the CJEU rendered its decision in relation to a judicial proceeding against an unrelated bank in Poland considering that certain contractual clauses in CHF-Indexed loan agreements were abusive. The CJEU has left to Polish courts the decision on whether the whole contract can be maintained once the abusive terms have been removed, which should in turn decide whether the effects of the annulment of the contract are prejudicial to the consumer. In case of maintenance of the contract, the court may only integrate the contract with subsidiary provisions of national law and decide, in accordance with those provisions, on the applicable rate.

- In 2021, the Supreme Court was expected to take a position regarding the key issues in disputes concerning loans based on foreign currency, clarifying the discrepancies and unifying case law. The Supreme Court met several times, with the last session taking place on 2 September 2021. However, the resolution was not adopted and instead, the Supreme Court referred questions to the CJEU on constitutional issues of the Polish judiciary system. No new date for consideration of the issue has been set and no comprehensive decision by the Supreme Court of the issue is expected in the near future. In the absence of a comprehensive position of the Supreme Court, it is difficult to expect a full unification of judicial decisions, and decisions of the Supreme Court and CJEU issued on particular issues may be important for shaping further case law on CHF matters.

At the date of the Group's consolidated financial statements, it is not possible to predict the Supreme Court's and CJEU decisions on individual cases. Santander Bank Polska and Santander Consumer Bank Poland estimate legal risk using a model which considers different possible outcomes and regularly monitor court rulings on foreign currency loans to verify changes in case law practice.

As of 31 December 2022, Santander Bank Polska S.A. and Santander Consumer Bank S.A. maintain a portfolio of mortgages denominated in or indexed to CHF for an approximate gross amount of PLN 8,393.7 million (EUR 1,791.8 million). As of 1 January 2022, in accordance with IFRS 9 and based on the new best available information, the accounting methodology was adapted so that the gross carrying amount of mortgage loans denominated and indexed in foreign currencies is reduced by the amount in which the estimated cash flows are not expected to cover the gross amount of loans, including as a result of legal controversies relating to these loans. In the absence of exposure or insufficient gross exposure, a provision according to IAS 37 is recorded.

As of 31 December 2022, the total value of adjustment to gross carrying amount in accordance with IFRS9 as well as provisions recorded under IAS37, amount to PLN 3,557.3 million (EUR 759.4 million) of which PLN 3,136.3 million (EUR 669.5 million) corresponds to adjustment to gross carrying amount under IFRS 9 and PLN 421 million (EUR 89.9 million) to provisions recognized in accordance with IAS 37. Throughout 2022, the adjustment to gross carrying amount in accordance with IFRS9 amounted to PLN 1,283.3 million (EUR 274 million), the additional provisions under IAS37 amounted to PLN 236.8 million (EUR 50.6 million) and other costs related to the dispute amounted to PLN 218.1 million (EUR 46.6 million).

These provisions represent the best estimate as at 31 December 2022. Santander Bank Polska and Santander Consumer Bank Poland will continue to monitor and assess appropriateness of those provisions.

In December 2020, the Chairman of the Polish Financial Supervision Authority ("KNF") presented a proposal for voluntary settlements between banks and borrowers under which CHF loans would be retrospectively settled as PLN loans bearing an interest rate based on WIBOR plus margin. The Bank has been testing such settlements in relation to different customer groups in parallel with own settlement solutions. The results of the current tests have been incorporated into the provision calculation model.

On February 16, 2023, the CJEU General Advocate ("AG") issued his opinion in case no. C-520/21 pending before the CJEU, where it considers that Directive 93/13/EEC does not oppose national legislative provisions, or the national jurisprudence that interprets them, that allow the consumer to exercise claims that go beyond the reimbursement of the loan instalments disbursed under the mortgage loan contract that is declared null and the payment of default interest at the legal rate accrued from the date of the payment request. However, it corresponds to the Polish courts to verify, in the light of their national law, whether consumers have the right to exercise this type of claim and, where appropriate, rule on its admissibility. With regard to banks, the opinion of the AG is that the Directive prevents a bank from exercising claims against a consumer that go beyond the repayment of the principal of the loan granted declared null and the payment of default interest at the legal rate accrued from the date of the payment request. The opinion is non-binding, so it does not definitively resolve these issues, which will be decided in the CJEU ruling that is expected in 2023. At the date of the consolidated annual accounts, it is not possible to predict a reliable estimate of the potential impact for the Group if the CJEU assumed the opinion of the AG, since this would also depend on the criterion adopted by the national courts.

On 17 February 2023, the KNF has issued a statement in which upholds in full the opinion expressed by the Chairman of the KNF before the CJEU on 12 October 2022, disagreeing with the conclusions of the AG.

- Banco Santander Mexico. Dispute regarding a testamentary trust constituted in 1994 by Mr. Roberto Garza Sada in Banca Serfin (currently Santander Mexico) in favor of his four sons in which he affected shares of Alfa, S.A.B. de C.V. (respectively, "Alfa" and the "Trust"). During 1999, Mr. Roberto Garza Sada instructed Santander México

in its capacity as trustee to transfer 36,700,000 shares from the Trust's assets to his sons and daughters and himself. These instructions were ratified in 2004 by Mr. Roberto Garza Sada before a Notary Public.

Mr. Roberto Garza Sada passed away on 14 August 2010 and subsequently, in 2012, his daughters filed a complaint against Santander Mexico alleging it had been negligent in its trustee role. The lawsuit was dismissed at first instance in April 2017 and on appeal in 2018. In May 2018, the plaintiffs filed an appeal (recurso de amparo) before the First Collegiate Court of the Fourth Circuit based in Nuevo León, which ruled in favor of the plaintiffs on 7 May 2021, annulling the 2018 appeal judgment and condemning Santander Mexico to the petitions claimed, consisting of the recovery of the amount of 36,700,000 Alfa shares, together with dividends, interest and damages.

Santander Mexico has filed various constitutional review and appeals against the recurso de amparo referred to above, which have been dismissed by the Supreme Court of Justice of the Nation. As of this date, an amparo review filed by the Bank is pending to be resolved in the Collegiate Courts in the State of Nuevo León, thus the judgment is not final. On 29 June 2022, Santander México, within the framework of the amparo review filed by the Bank, requested the First Collegiate Court in Civil Matters of the Fourth Circuit of Nuevo León the recusal of two of the three Magistrates who rendered against Santander Mexico, which has been resolved in favour of Santander Mexico. Plaintiffs have requested the recusal of the third Magistrate who ruled with a dissenting vote against the recurso de amparo referred above.

Santander México believes that the actions taken should prevail and reverse the decision against it. The impact of a potential unfavorable resolution for Santander México will be determined in a subsequent proceeding and will also depend on the additional actions that Santander México may take in its defense, so it is not possible to determine it at this time. At the current stage of the proceedings, the provisions recorded are considered to be sufficient to cover the risks deriving from this claim.

- URO Property Holdings, SOCIMI SA on 16 February 2022, legal proceedings were commenced in the Commercial Court of London against Uro Property Holdings SOCIMI SA ("Uro"), a subsidiary of Banco Santander, S.A., by BNP Paribas Trust Corporation UK Limited ("BNP") in its capacity as trustee on behalf of certain bondholders and beneficiaries of security rights. The litigation concerns certain terms of a financing granted to Uro which was supported by a bond issue in 2015. The claimant seeks a declaration by the Court and a monetary award against Uro, in connection with an additional premium above the nominal value of the financing repayment as a consequence of Uro having lost its status as SOCIMI (Sociedad Anónima Cotizada de Inversión Inmobiliaria), such loss causing the prepayment of the bond issue and, in the opinion of the claimant BNP, also the obligation to pay the additional premium by Uro. Uro denies being liable to pay that additional premium and filed its defense statement and announced a counterclaim against the claimant. The trial hearing has not been scheduled yet. Furthermore, Uro filed a summary judgement application for BNP's claim to be dismissed before trial. The Commercial Court dismissed the application and Uro is seeking permission to appeal this decision. It is estimated that the maximum loss associated with this possible contingency, amounts to approximately EUR 250 million.
- Banco Santander and the other Group companies are subject to claims and, therefore, are party to certain legal proceedings incidental to the normal course of their business including those in connection with lending activities, relationships with employees and other commercial or tax matters additional to those referred to here.

With the information available to it, the Bank considers that, at 31 December 2022, it had reliably estimated the obligations associated with each proceeding and had recognized, where necessary, sufficient provisions to cover reasonably any liabilities that may arise as a result of these tax and legal risks. Disputes in which provisions have been registered but are not disclosed is justified on the basis that it would be prejudicial to the proper defense of the Group and the Bank. Subject to the qualifications made, it also believes that any liability arising from such claims and proceedings will not have, overall, a material adverse effect on the Group's and the Bank's business, financial position, or results of operations.

24. Tax matters

a) Consolidated Tax Group

Pursuant to current legislation, the Consolidated Tax Group includes Banco Santander, S.A. (as the parent) and the Spanish subsidiaries that meet the requirements provided for in Spanish legislation regulating the taxation of the consolidated profits of corporate groups (as the controlled entities).

b) Years open for review by the tax authorities

In June and November 2021 Spanish tax authorities formalized acts with agreement, conformity and non-conformity relating to the corporate income tax financial years 2012 to 2015. The adjustments signed in conformity and with agreement had not impact on results and, in relation to the concepts signed in disconformity both in this year and in previous years (corporate income tax 2003 to 2011), Banco Santander, S.A., as the Parent of the Consolidated Tax Group, considers, in accordance with the advice of its external lawyers, that the adjustments made should not have a significant impact on the financial statements, as there are sound arguments as proof in the appeals filed against them pending at the National Appellate Court (tax years 2003 to 2011) and Central Economic Administrative Court (tax years 2012-2015). Consequently, no provision has been recorded for this concept. It should also be noted that, in those cases where it has been considered appropriate, the mechanisms available to avoid international double taxation have been used. At the date of approval of these accounts, the Corporate Income Tax and other taxes audit for periods 2017 to 2019 are ongoing, and subsequent years up to and including 2022, are subject to review.

Because of the possible different interpretations which can be made of the tax regulations, the outcome of the tax audits of the rest of years subject to review might give rise to contingent tax liabilities which cannot be objectively quantified. However, the Group and the Bank's tax advisers consider that it is unlikely that such tax liabilities will materialize, and that in any event the tax charge arising therefrom would not materially affect the Bank's financial statements.

c) Reconciliation

The reconciliation between the income tax expense at the applicable tax rate (30%) and the income tax expense recorded (in EUR millions) is shown below:

EUR million	2022	2021
Profit before taxes	7,964	3,864
Corporate tax at the applicable rate of 30%	2,389	1,159
Dividends and capital gains	(2,431)	(1,454)
Impairment of non-deductible shares	154	(240)
Remaining permanent differences and others	(69)	467
Expense/(Incomes) taxes recorded	43	(68)

d) Tax recognized in equity

Regardless of the income tax incurred in profit and loss accounts, Banco Santander has passed on the net worth the following amounts during 2022 and 2021:

EUR million	Amounts receivable/ (Amounts payable)	
	2022	2021
Fair value changes of debt instruments measured at fair value with changes in other comprehensive income	98	156
Equity instruments valued at fair value with changes in other comprehensive income	3	(4)
Cash flow hedges	126	(44)
Other valuation adjustments (note 25)	(101)	19
Total	126	127

e) Deferred taxes

The balance under the heading 'Deferred tax assets' of the balance sheets includes the debtor balances against the Public Treasury for Advance Tax; in turn, the balance under the heading 'Deferred tax liabilities' includes the liabilities corresponding to the different deferred taxes of Banco Santander.

In accordance with the Basel III legal framework introduced into European law through Directive 2013/36 (CRD IV) and EU Regulation 575/2013 on prudential requirements for credit institutions and investment firms (CRR), and subsequently amended by Regulation (EU) 2019/876 of the European Parliament and of the Council, deferred tax assets whose utilisation does not depend on the realisation of future profits (hereinafter referred to as monetizable tax assets) and which were generated before 23 November 2016, should not be deducted from regulatory capital.

The following are the breakdown of tax assets and liabilities as of December 31, 2022 and 2021:

EUR million	2022	2021
Tax assets:	11,220	9,622
Current ^A	2,977	1,003
Deferred	8,243	8,619
<i>Of which</i>		
<i>Relating to pensions</i>	2,920 ^{A, B}	3,540 ^{A, B}
<i>Relating to allowances for loan losses</i>	3,002 ^{A, B}	3,023 ^{A, B}
<i>Relating to deductions and negative tax bases</i>	778	632
Tax liabilities:	1,796	1,697
<i>Of which, deferred tax liabilities</i>	1,634	1,521

- A. The increase in current tax assets corresponds mainly to the installment payments made to the Corporation Tax account for the year 2022.
- B. Banco Popular Español, S.A.U. considered that part of its monetizable assets were converted into credit against the Tax Administration in 2017 Income Tax return, as the circumstances which determined such conversion were met at the end of that year (EUR 995 million). The Spanish tax authorities have expressly confirmed the nature of these assets as monetizable, but they considered that conditions for conversion were not met at the end of 2017, without prejudice to the conversion in future years. The Tax Administration position is being discussed at the Courts. Besides, due to losses incurred in 2020, the Consolidated Tax Group in Spain converted EUR 642 million of monetizable tax assets into credit against the Tax Administration in its corporate income tax return.

At the end of the fiscal year, deferred taxes, both assets and liabilities, are reviewed in order to verify whether adjustments are necessary to be made in accordance with the results of the analyses carried out.

These analyses take into account all the positive and negative evidence of the recoverability of such assets, including (i) the results generated in previous years, (ii) the projections of results, (iii) the estimate of the reversal of the various temporary differences depending on their nature and (iv) the period and limits established in current legislation for the recovery of the various deferred tax assets, thus concluding on Banco Santander's ability to recover its deferred tax assets.

The results projections used in this analysis are based on the financial budgets approved by both the local bureaux of the respective units and by Banco Santander managers. Grupo Santander budget estimation process is common for all units, including the Bank. The Grupo Santander management prepares its financial budgets based on the following key assumptions.

- a. Microeconomic variables of the entities that make up the tax group at each location: consideration is taken of the existing balance sheet structure, the mix of products offered and the commercial strategy at any time defined by the local authorities in this regard based on the competition, regulatory and market environment.

- b. Macroeconomic variables: The estimated growth is based on the evolution of the economic environment considering the expected developments in the Gross Domestic Product of each location and the forecasts on behaviour of interest rates, inflation and exchange rates. This data is provided by Grupo Santander's Studies Service, and based on external sources of information.

In addition, Grupo Santander performs retrospective reviews (backtesting) on the variables projected in the past. The differential performance of these variables with respect to the actual market data is considered in the estimated projections for each financial year. Thus, in relation to Spain, the deviations identified by Management in recent years are due to non-recurring events that are not related to the business's operations, such as the impacts for the first application of new applicable regulations, the costs incurred for accelerating restructuring plans and the changing effect of the current macroeconomic environment.

Finally, and given the degree of uncertainty of the assumptions regarding those variables, Grupo Santander conducts a sensitivity analysis of the most significant ones used in the analysis of the recoverability of deferred tax assets, considering reasonable changes in the key assumptions upon which the projections of results of each tax entity or group and the estimate of the reversal of the various temporary differences. In relation to Spain, the sensitivity analysis consisted of adjusting 50 basis points for growth (gross domestic product) and adjusting 50 basis points for inflation. Following this analysis, the maximum recovery period of deferred tax assets recorded at 31 December 2022 is maintained for 15 years.

In addition, the Spanish Tax Group, of which Banco Santander, S.A. is the dominant entity, has not recognized deferred tax assets in respect of tax losses, investment deductions and other incentives amounting to approximately EUR 10,700 million, of which EUR 400 million are subject, among other requirements, to time limits.

f) Regulatory changes

In Spain in 2020, the General State Budget Law for 2021 was approved, which, among other tax measures, established the non-deductibility in the Corporation Tax of the management expenses of capital holdings whose dividends or capital gains are exempt. of taxes, setting the amount of these non-deductible expenses at 5% of the dividend or positive income obtained. In 2021, the General State Budget Law for 2022 was approved, which establishes a minimum tax rate of 15% (18% for financial entities) on the tax base in Corporation Tax.

In addition, Law 38/2022 was approved during 2022, which establishes a non-tax asset tax benefit payable by credit institutions and financial credit institutions in 2023 and 2024, the amount of which will be 4.8% of the sum of net interest income and net fee and commission income for the previous year derived from the activity carried out in Spain. The payment obligation will arise on the first day of each year (see Note 1.j). The aforementioned Law also establishes a 50% limitation on the inclusion of individual tax losses in the taxable income of the Consolidated Tax Group. This limitation is only expected to be in force in 2023, and a period of 10 years is set for the reversal of this positive adjustment.

g) Other information

In compliance with the disclosure requirement established in the listing rules instrument 2005 published by the UK Financial Conduct Authority, it is hereby stated that shareholders of the Bank resident in the United Kingdom will be entitled to a tax credit for taxes paid abroad in respect of withholdings that the Bank has to pay on the dividends to be paid to such shareholders if the total income of the dividend exceeds the amount of exempt dividends of GBP 2,000 for the year 2022/23. The shareholders of the Bank resident in the United Kingdom who hold their ownership interest in the Bank through Santander Nominee Service will be informed directly of the amount thus withheld and of any other data they may require to complete their tax returns in the United Kingdom. The other shareholders of the Bank resident in the United Kingdom should contact their bank or securities broker.

Banco Santander, S.A., is part of the Large Business Forum and has adhered to the Code of Good Tax Practices in Spain since 2010, actively participating in the cooperative compliance programmes being developed by the tax administration.

25. Other comprehensive income

The balances of 'Other comprehensive income' include the amounts, net of the related tax effect, of the adjustments to assets and liabilities recognised in equity through the statement of recognised income and expense. The amounts arising from subsidiaries are presented, on a line by line basis, in the appropriate items according to their nature.

Respect to items that may be reclassified to profit or loss, the statement of recognised income and expense includes changes in other comprehensive income as follows:

- Revaluation gains (losses): includes the amount of the income, net of the expenses incurred in the year, recognised directly in equity. The amounts recognised in equity in the year remain under this item, even if in the same year they are transferred to the income statement or to the initial carrying amount of the assets or liabilities or are reclassified to another line item.
- Amounts transferred to income statement: includes the amount of the revaluation gains and losses previously recognised in equity, even in the same year, which are recognised in the income statement.
- Amounts transferred to initial carrying amount of hedged items: includes the amount of the revaluation gains and losses previously recognised in equity, even in the same year, which are recognised in the initial carrying amount of assets or liabilities as a result of cash flow hedges.
- Other reclassifications: includes the amount of the transfers made in the year between the various valuation adjustment items.

a) Breakdown of Other accumulated comprehensive income - Items that will not be reclassified in results and Items that can be classified in results

EUR million

	2022	2021
Other accumulated comprehensive income	(2,530)	(1,802)
Items that will not be reclassified in results	(2,062)	(1,858)
Actuarial gains and losses on defined benefit pension plans	(1,133)	(1,329)
Non-current assets held for sale	—	—
Other recognized income and expense of investments in subsidiaries, joint ventures and associates	—	—
Rest of valuation adjustments	—	—
Changes in the fair value of equity instruments measured at fair value through other comprehensive income	(908)	(468)
Ineffectiveness of fair value hedges of equity instruments measured at fair value with changes in other comprehensive income	—	—
Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedged item)	289	271
Changes in the fair value of equity instruments measured at fair value through other comprehensive income (hedging instrument)	(289)	(271)
Changes in the fair value of financial liabilities at fair value through profit or loss attributable to changes in credit risk	(21)	(61)
Items that can be classified in results	(468)	56
Hedges of net investments in foreign operations (effective portion)	—	—
Exchange differences	—	—
Cash flow hedges (effective portion)	(381)	(87)
Changes in the fair value of debt instruments measured at fair value through changes in other comprehensive income	(87)	143
Hedging instruments (items not designated)	—	—
Non-current assets held for sale	—	—

b) Other accumulated comprehensive income - Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans

'Other comprehensive income – Items not reclassified to profit or loss – Actuarial gains or (-) losses on defined benefit pension plans' include the actuarial gains and losses and the return on plan assets, less the administrative expenses and taxes inherent to the plan, and any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset).

Its variation is shown in the statement of recognised income and expense.

c) Other accumulated comprehensive income - Items that will not be reclassified in results - Changes in the fair value of equity instruments measured at fair value with changes in other comprehensive income.

Includes the net amount of unrealized fair value changes of equity instruments at fair value with changes in other comprehensive income.

The following is a breakdown of the composition of the balance as of 31 December 2022 and 2021 under 'Other accumulated comprehensive income - Items that will not be reclassified to profit or loss - Changes in the fair value of equity instruments measured at fair value with changes in other global result' (see note 8):

EUR million

	2022			Fair value	2021			Fair value
	Capital gains by valuation	Capital losses by valuation	Net gains/ losses by valuation		Capital gains by valuation	Capital losses by valuation	Net gains/ losses by valuation	
Equity instruments	48	(956)	(908)	1,268	178	(646)	(468)	1,705

Since the entry into force of Bank of Spain Circular 4/2017, no impairment analysis is performed on equity instruments measured at fair value through other comprehensive income. Bank of Spain Circular 4/2017 eliminates the need to estimate the impairment of this type of equity instruments and the reclassification to profit or loss of gains and losses on derecognition of these assets, which are recognised at fair value through equity.

d) Other accumulated comprehensive income - Items that may be reclassified to profit or loss - Hedging derivatives - Cash flow hedges (Effective portion)

'Other comprehensive income - Items that may be reclassified to profit or loss - Cash flow hedges' includes the gains or losses attributable to hedging instruments that qualify as effective hedges. These amounts will remain under this heading until they are recognized in the income statement in the periods in which the hedged items affect it (see note 11).

e) Other accumulated comprehensive income - Items that may be reclassified to profit or loss - Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income

Includes the net amount of unrealized changes in the fair value of assets classified as items that can be reclassified in results 'Changes in the fair value of debt instruments measured at fair value with changes in other comprehensive income' (see note 7).

Below is a breakdown of the balance composition as of December 31, 2022 and 2021 of 'Other accumulated global income - Items that can be reclassified in results - Changes in the fair value of the instruments of debt valued at fair value with changes in other comprehensive income' depending on the type of instrument:

EUR million

	2022			Fair value	2021			Fair value
	Revaluation gains	Revaluation losses	Net revaluation gains/(losses)		Revaluation gains	Revaluation losses	Net revaluation gains/(losses)	
Debt instruments	7	(94)	(87)	4,120	172	(29)	143	9,394

As of December 31, 2022 and 2021, the handicaps recorded in the 'Other cumulative comprehensive income - Elements that can be reclassified into profit or loss - Changes in the fair value of debt instruments measured at fair value through other comprehensive income' are not significant.

26. Shareholders' equity

The changes in 'Shareholders' equity' are presented in the statement of changes in total equity. Significant information on certain items of 'Shareholders' equity' and the changes therein in 2022 are set forth below.

27. Issued capital

a) Changes

Banco Santander's share capital at 31 December 2021 consisted of EUR 8,670 million, represented by 17,340,641,302 shares of EUR 0.50 of nominal value each and all of them of a unique class and series.

On 1 April 2022, there was a capital reduction amounting to EUR 129,965,136.50 through the redemption of 259,930,273 shares, corresponding to the share buyback program carried out in 2021.

Likewise, on 28 June 2022, Banco Santander decreased its capital by an amount of EUR 143,154,722.50 through the redemption of 286,309,445 shares, corresponding to the share buyback program carried out during the first half of 2022.

Both operations have not entailed the return of contributions to the shareholders as Banco Santander was the owner of the redeemed shares.

Therefore, Banco Santander's share capital at 31 December 2022 consisted of EUR 8,397 million, represented by 16,794,401,584 shares of EUR 0.50 of nominal value each and all of them of a unique class and series. It includes 340,406,572 shares corresponding to the first 2022 share buyback program (see note 1j).

Banco Santander's shares are listed on the Spanish Stock Market Interconnection System and on the New York, London, Mexico and Warsaw Stock Exchanges, and all of them have the same features and rights. Santander shares are listed on the London Stock Exchange under Crest Depository Interest (CDI), each CDI representing one Bank's share. They are also listed on the New York Stock Exchange under American Depository Receipts (BDR), each BDR representing one share. During 2019 and 2018 the number of markets where the Bank is listed was reduced; the Bank's shares was delisted from Buenos Aires, Milan, Lisboa and São Paulo's markets.

As of 31 December 2022, Norges Bank was registered with the CNMV with a direct significant shareholding of 3.006% of voting shares of Banco Santander (3% is the commonly lowest threshold provided under Spanish law to disclose a significant holding in a listed company), as it had announced on 5 May 2022. Even though at 31 December 2022, certain custodians appeared in our shareholder registry as holding more than 3% of our share capital, we understand that those shares were held in custody on behalf of other investors, none of whom exceeded that threshold individually. These custodians were State Street Bank (14.23%), Chase Nominees Limited (6.88%), The Bank of New York Mellon Corporation (4.82%), Citibank New York (3.90%), BNP (3.28%) and EC Nominees Limited (3.04%).

At 31 December 2022, neither Banco Santander's shareholder registry nor the CNMV's registry showed any shareholder residing in a non-cooperative jurisdiction with a shareholding equal to, or greater than, 1% of our share capital (which is the other threshold applicable under Spanish regulations).

b) Other considerations

Under Spanish law, only shareholders at the general meeting have the authority to increase share capital. However, they may delegate the authority to approve or execute capital increases to the board of directors. Banco Santander's Bylaws are fully aligned with Spanish law and do not establish any different conditions for share capital increases.

At 31 December 2022 the shares of the following companies were listed on official stock markets: Banco Santander Argentina S.A.; Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México; Banco Santander - Chile; Banco Santander (Brasil) S.A., Santander Bank Polska S.A. and Getnet Adquirência e Serviços para Meios de Pagamento S.A. - Instituição de Pagamento.

At 31 December 2022 the number of Banco Santander shares owned by third parties and managed by Group management companies (mainly portfolio, collective investment undertaking and pension fund managers) or jointly managed was 50 million shares, which represented 0.30% of Banco Santander's share capital (45 million shares, representing 0.26% of the share capital in 2021). In addition, the number of Banco Santander shares owned by third parties and received as security was 232 million shares (equal to 1.38% of the Bank's share capital).

28. Share premium

Share premium includes the amount paid up by the Bank's shareholders in capital issues in excess of the par value.

The Corporate Enterprises Act expressly permits the use of the share premium account balance to increase capital at the entities at which it is recognised and does not establish any specific restrictions as to its use.

The change in the balance of share premium corresponds to the capital increases detailed in note 27.a).

The decreased produced in 2021 for an amount of EUR 4,034 million was the consequence of applying the result obtained by Banco Santander during the financial year 2020, consisting of losses of EUR 3,557 million, as reflected in the consolidated statements of changes in total equity, and the charge of the dividend for the fiscal year 2020 for an amount of EUR 477 million (see note 27).

The decreased produced in 2022 by an amount of EUR 1,433 million has been the consequence of the difference between the purchase value of the redeemed shares (EUR 1,706 million) and the par value of said shares (EUR 273 million) (see note 4.a and consolidated statements of changes in total equity) as a consequence of the capital decreases described in note 31.a.

Likewise, in accordance with the applicable legislation, a reserve has been provided for amortized capital charged to the issue premium for an amount equal to the nominal value of said amortized shares (EUR 273 million).

29. Accumulated retained earnings

a) Definitions

The balance of 'Equity - Accumulated gains and Other reserves' includes the net amount of the accumulated results (profits or losses) recognised in previous years through the income statement which in the profit distribution were allocated in equity, the expenses of own equity instrument issues, the differences between the amount for which the treasury shares are sold and their acquisition price, as well as the net amount of the results accumulated in previous years, generated by the result of non-current assets held for sale, recognised through the income statement.

b) Breakdown

The detail of 'Shareholders' equity - reserves' at 31 December 2022 and 2021 is as follows:

EUR million		
	2022	2021
Restricted reserves	2,798	2,543
Legal reserve ^A	1,734	1,734
Own shares	737	755
Revaluation reserve Royal Decree-Law 7/1996	43	43
Reserve for retired capital	284	11
Unrestricted reserves	7,917	6,123
Voluntary reserves	7,917	6,123
Total	10,715	8,666

A. The board of directors has proposed to the general shareholders' meeting the reclassification of the excess that the amount of the balance of the legal reserve account shows over the figure that is equivalent to 20% of the resulting share capital after the executed capital reductions, to be included in the voluntary reserves account.

i. Legal reserve

Under the Consolidated Spanish Corporate Enterprises Act, 10% of net profit for each year must be transferred to the legal reserve. These transfers must be made until the balance of this reserve reaches 20% of the share capital. The legal reserve can be used to increase capital provided that the remaining reserve balance does not fall below 10% of the increased share capital amount.

During the 2022 and 2021 financial years, Banco Santander has not allocated any amount to Legal Reserve (see note 28).

The amount of the Legal Reserve complied with the percentage of 20% of the share capital figure as of December 31, 2022.

ii. Reserve for equity shares

According to the Consolidated Text of the Corporate Enterprises Act, an unavailable reserve equivalent to the amount for which Banco Santander's shares owned by subsidiaries are recorded. This reservation shall be freely available when the circumstances which have obliged its constitution disappear. In addition, this reserve covers the outstanding balance of loans granted by the Group with Banco Santander's share guarantee and the amount equivalent to the credits granted by the Group companies to third parties for the acquisition of own shares.

iii. Revaluation reserve Royal Decree Law 7/1996, of 7 June

The balance of Revaluation reserve Royal Decree-Law 7/1996 can be used, free of tax, to increase share capital. From 1 January 2007, the balance of this account can be taken to unrestricted reserves, provided that the monetary surplus has been realised. The surplus will be

deemed to have been realised in respect of the portion on which depreciation has been taken for accounting purposes or when the revalued assets have been transferred or derecognised.

If the balance of this reserve were used in a manner other than that provided for in Royal Decree law 7/1996, of 7 June, it would be subject to taxation.

iv. Voluntary Reserve

During the 2022 financial year there has been an increase in voluntary reserves amounting EUR 1,794 million; which correspond to an increase in voluntary reserves from the application of the result of the financial year 2021 for EUR 2,227 million, a decrease of EUR 18 million due to the constitution of reserves for own shares, a decrease of EUR 413 million due to the interests on the PPCC (see note 21), a decrease of EUR 7 million due to losses on the sale of equity instruments valued at fair value charged to other accumulated comprehensive income and a decrease of EUR 13 million due to transfers between equity items and other concepts.

30. Other equity instruments and own shares

a) Equity instruments issued not capital and other equity instruments

It includes the amount corresponding to compound financial instruments with a nature of net worth, the increase in staff remuneration, and other items not recorded in other items of own funds.

On July 13, 2017, Banco Santander and Banco Popular Español, S.A.U. (hereinafter, Banco Popular) communicated that they had decided to launch a commercial action with the purpose of building loyalty among retail customers of their networks affected by the resolution of Banco Popular (the 'Loyalty Action').

Under the Loyalty Action, customers who met certain conditions and have been affected by Banco Popular's decision could receive, without disbursement by their part, marketable securities issued by Banco Santander for a nominal amount equivalent to the investment in shares or in certain bonds subordinates of Banco Popular (with certain limits) of which they held at the date of Banco Popular's resolution. In order to avail itself of such action, it was necessary for the client to waive legal action against the Group.

The Loyalty Action would be carried out by providing the customer with contingently amortizable perpetual obligations ('Loyalty Bonds') of Banco Santander, S.A. Loyalty Bonds will accrue a cash coupon, discretionary, non-cumulative, payable for completed quarters.

This issuance was made by Banco Santander, S.A. on 8 September 2017 for a nominal amount of EUR 981 million, fully subscribed by Banco Popular Español, S.A.U. As at 31 December 2022, the cost recorded under the heading 'Equity instruments' issued other than capital on Banco Santander balance sheet amounts to EUR 688 million (EUR 658 million as at 31 December 2021).

Loyalty Bonds are perpetual securities; however, they may be fully amortized at the will of Banco Santander, S.A., with prior authorization from the European Central Bank, on any of the dates of payment of the coupon, seven years after its issuance.

b) Own shares

'Shareholders' equity - Own shares' includes the amount of equity instruments held by Banco Santander.

Transactions involving own 'Equity instruments', including their issuance and cancellation, are recognised directly in equity, and no profit or loss may be recognised on these transactions. The costs of any transaction involving own equity instruments are deducted directly from equity, net of any related tax effect.

The Bank's shares owned by the consolidated companies accounted for 1.451% of issued share capital at 31 December 2022 (December 31, 2021 1.60%)

During the 2022 financial year, 638,526,258 Bank shares have been acquired at an average price of EUR 2.893 per share, of which 286,309,445 correspond to the share repurchase program carried out during the first half of 2022 and 220,942,806 shares correspond to the new buy-back program started on November 22. Likewise, 546,239,718 shares (note 27) have been redeemed and 131,274,007 shares have been transferred (of which 36,700,000 shares correspond to two donations that Banco Santander has made to Fundación Banco Santander) at an average price of EUR 2.81 per share (excluding in the calculation of the average price transmissions made by Banco Santander in the aforementioned donations).

In 2021, the average price per share of the Bank was EUR 3.16 per share and the average transfer price EUR 3.09 per share. Of the shares acquired in the period, 259,930,273 shares (1.499% of the issued share capital) are from the First Share Repurchase Program at a weighted average price of EUR 3.24.

31. Memorandum items

Memorandum items relate to balances representing rights, obligations and other legal situations that in the future may have an impact on net assets, as well as any other balances needed to reflect all transactions even though they may not impinge on its net assets.

a) Guarantees and contingent commitments granted

Guarantees include transactions for which an entity secures obligations of a third party arising from financial guarantees granted by the entity or other types of contracts. 'Contingent liabilities' include all transactions under which an entity guarantees the obligations of a third party and which result from financial guarantees granted by the entity or from other types of contract. The detail is as follows:

EUR million	2022	2021
Loans commitment granted	122,374	111,410
Available in lines of credit	122,374	111,246
Deposits in the future	—	164
Financial guarantees granted	11,956	10,489
Financial guarantees	190	179
Credit derivatives sold	11,766	10,310
Other commitments granted	71,948	59,421
Irrevocable documentary credits	4,628	3,330
Other guarantees and guarantees granted	36,725	29,971
Other	30,595	26,120
<i>Of which:</i>		
<i>Subscribed securities pending disbursement</i>	<i>1</i>	<i>1</i>
<i>Conventional asset acquisition contracts</i>	<i>10,123</i>	<i>6,265</i>
<i>Other contingent commitments</i>	<i>20,471</i>	<i>19,854</i>
Total Other guarantees and commitments	206,278	181,320

The breakdown at December 31, 2022 of off-balance sheet exposures and allowance fund (see note 23) by impairment phase under Bank of Spain Circular 4/2017 are EUR 201,654 million and EUR 55 million in phase 1, EUR 3,700 million and EUR 83 million in phase 2 and EUR 924 million and EUR 82 million in phase 3, respectively. In addition the breakdown at December 31, 2021 of exposures and the allowance fund were EUR 175,871 million and EUR 48 million in phase 1, EUR 4,403 million and EUR 60 million in phase 2 and EUR 1,046 million and EUR 82 million in phase 3, respectively.

A significant part of these amounts will mature without any payment obligation material for the Bank; therefore, the aggregate balance of these commitments cannot be considered as a real future need for financing or liquidity to be granted to third parties by Banco Santander.

Income from guarantee instruments is recognized under 'Fee and commission income' in the income statements and is calculated by applying the rate established in the related contract to the nominal amount of the guarantee.

i. Loan commitments granted

Firm commitments to provide credit under pre-established conditions and terms, except for those that meet the definition of derivatives because they may be settled in cash or through the delivery or issuance of another financial instrument. They include those available in lines of credit and forward deposits.

ii. Financial guarantees granted

Include financial guarantee contracts such as financial guarantees, credit derivatives sold, derivative risks contracted on behalf of third parties and others.

iii. Other commitments granted

Other contingent liabilities include all commitments that could give rise to the recognition of financial assets not included in the above items, such as technical guarantees and guarantees for the import and export of goods and services.

b) Other information

i. Assets advanced as collateral

In addition to collateral assets, there are assets owned by Banco Santander which guarantee both transactions carried out by the Bank or by third parties and various contingent liabilities and liabilities over which the assignee has the right, by contract or custom, to re-transfer and pledge them.

The carrying value of Banco Santander's financial assets delivered as collateral for such contingent and assimilated liabilities or liabilities is the following:

EUR million	2022	2021
Financial assets held for trading	26,730	22,440
<i>Of which</i>	<i>—</i>	<i>—</i>
<i>Public debt Public Sector Agencies</i>	<i>5,300</i>	<i>3,785</i>
<i>Fix rent instruments</i>	<i>13,551</i>	<i>9,284</i>
<i>Equity instruments</i>	<i>7,879</i>	<i>9,371</i>
Non-trading financial assets mandatorily at fair value through profit or loss	627	154
Financial assets at fair value through other comprehensive income	1,517	2,348
Financial assets at amortized cost	6,019	1,513
Total	34,893	26,455

32. Hedging derivatives

Banco Santander, within its financial risk management strategy, and in order to reduce asymmetries in the accounting treatment of its operations, enters into hedging derivatives on interest, exchange rate, credit risk or variation of stock prices, depending on the nature of the risk covered.

Based on its objective, Banco Santander classifies its hedges in the following categories:

- Cash flow hedges: cover the exposure to the variation of the cash flows associated with an asset, liability or a highly probable forecast transaction. This cover the variable-rate issues in foreign currencies, fixed-rate issues in non-local currency, variable-rate interbank financing and variable-rate assets (bonds, commercial loans, mortgages, etc.).
- Fair value hedges: cover the exposure to the variation in the fair value of assets or liabilities, attributable to an identified and hedged risk. This covers the interest risk of assets or liabilities (bonds, loans, bills, issues, deposits, etc.) with coupons or fixed interest rates, interests in entities, issues in foreign currencies and deposits or other fixed rate liabilities.
- Hedging of net investments abroad: cover the exchange rate risk of the investments in subsidiaries domiciled in a country with a different currency from the functional one of the Bank.

Due to the replacement of the current rates by the alternative rates defined in the note 49 of this report, in the Bank of Spain Circular 6/2021 on reference interest rates (IBOR Reform Phase I and II)', the nominal amount of hedging instruments corresponding to the hedging relationships directly affected by the uncertainties related to the IBOR reforms is shown below. The percentage of the nominal amount of derivatives affected with a maturity date after the transition date of the reform represents 10.44% of the total hedging derivatives:

EUR million		USD LIBOR
Total hedging instruments affected		
Fair value hedges		12,506
<i>Interest rate risk</i>		11,546
<i>Interest and exchange rate risk</i>		960
Cash flow hedges		—
<i>Interest rate risk</i>		—
TOTAL		12,506
Post-transition date agreement		
Fair value hedges		10,384
<i>Interest rate risk</i>		9,424
<i>Interest and exchange rate risk</i>		960
Cash flow hedges		—
<i>Interest rate risk</i>		—
TOTAL		10,384

As for the hedged items directly affected by the uncertainties related to the IBOR reforms, their nominal amount is shown below, which represents of the total notional amount hedged:

EUR million		USD LIBOR
Total hedge items directly affected		
Fair value hedges		—
<i>Interest rate risk</i>		—
Cash flow hedges		88
<i>Interest rate risk</i>		88
TOTAL		88
Post-transition date agreement		
Fair value hedges		—
<i>Interest rate risk</i>		—
Cash flow hedges		88
<i>Interest rate risk</i>		88
TOTAL		88

The details of the coverage derivatives of Banco Santander, S.A. according to the type of coverage, the risk they cover and the product, can be found in the following table:

EUR million

	31 December 2022				Balance sheet items
	Notional Value	Carrying amount		Changes in fair value used for calculating hedge ineffectiveness	
		Assets	Liabilities		
Fair Value Hedges	47,626	1,181	(2,563)	(2,065)	
Interest rate risk	37,575	879	(2,323)	(1,872)	Hedging derivatives
<i>Of which:</i>					
Interest Rate Swap	37,220	873	(2,321)	(1,870)	
Exchange rate risk	3,214	137	(24)	(36)	Hedging derivatives
<i>Of which:</i>					
Fx forward	3,214	137	(24)	(36)	
Interest rate and exchange risk	6,781	165	(216)	(158)	Hedging derivatives
<i>Of which:</i>					
Interest Rate Swap	905	4	(80)	(79)	
Currency Swap	5,876	160	(136)	(79)	
Credit Risk	56	—	—	1	Hedging derivatives
<i>Of which:</i>					
CDS	56	—	—	1	
Cash flow Hedges	31,267	70	(563)	(420)	
Interest rate risk	28,200	1	(462)	(443)	Hedging derivatives
<i>Of which:</i>					
Interest Rate Swap	28,200	1	(462)	(443)	
Exchange rate risk	132	—	(3)	(3)	Hedging derivatives
<i>Of which:</i>					
Fx forward	132	—	(3)	(3)	
Interest rate and exchange risk	2,235	69	(97)	25	Hedging derivatives
<i>Of which:</i>					
Currency exchange	2,171	69	(90)	30	
Inflation rate risk	700	—	(1)	1	Hedging derivatives
<i>Of which</i>					
Interest Rate Swap	—	—	—	—	Hedging derivatives
Floor	350	—	(1)	1	Hedging derivatives
Net Investments hedges abroad	20,570	199	(829)	(2,432)	
Exchange rate risk	20,570	199	(829)	(2,432)	Hedging derivatives
<i>Of which:</i>					
Fx forward	20,570	199	(829)	(2,432)	
Total	99,463	1,450	(3,955)	(4,917)	

EUR million

	31 December 2021				Balance sheet line items
	Notional Value	Carrying amount		Changes in fair value used for calculating hedge ineffectiveness	
		Assets	Liabilities		
Fair value hedges	55,470	1,379	(1,141)	(618)	
Interest rate risk	36,099	1,143	(581)	(610)	
<i>Of which:</i>					
<i>Interest Rate Swap</i>	35,745	1,136	(580)	(608)	<i>Hedging derivatives</i>
Exchange rate risk	13,073	1	(416)	22	
<i>Of which:</i>					
<i>Fx forward</i>	13,073	1	(416)	22	<i>Hedging derivatives</i>
Interest rate and exchange rate risk	6,125	235	(142)	(31)	
<i>Of which:</i>					
<i>Interest Rate Swap</i>	1,650	12	(9)	(7)	<i>Hedging derivatives</i>
<i>Currency Swap</i>	4,475	223	(133)	(24)	<i>Hedging derivatives</i>
Credit risk	173	—	(2)	1	
<i>Of which:</i>					
<i>CDS</i>	173	—	(2)	1	<i>Hedging derivatives</i>
Cash flow hedges	51,218	74	(328)	146	
Interest rate risk	47,721	12	(111)	145	
<i>Of which:</i>					
<i>Interest rate swap</i>	45,441	12	(33)	(36)	<i>Hedging derivatives</i>
Exchange rate risk	85	—	—	—	
<i>Of which:</i>					
<i>Fx forward</i>	85	—	—	—	<i>Hedging derivatives</i>
Interest rate and exchange rate risk	3,412	62	(217)	1	
<i>Of which:</i>					
<i>Currency swap</i>	3,348	61	(215)	3	<i>Hedging derivatives</i>
Net investment hedges abroad	23,357	195	(607)	(894)	
Exchange rate risk	23,357	195	(607)	(894)	
<i>Of which:</i>					
<i>Fx forward</i>	23,357	195	(607)	(894)	<i>Hedging derivatives</i>
Total	130,045	1,648	(2,076)	(1,366)	

Banco Santander covers the risks of its balance sheet in a variety of ways. On the one hand, documented as fair value hedges, it covers the interest rate, foreign currency and credit risk of fixed-income portfolios at a fixed rate (REPOs are included in this category). Resulting, in an exposure to changes in their fair value due to variations in market conditions based on the various risks hedged, which has an impact on Banco Santander's income statement. To mitigate these risks, Banco Santander contracts derivatives, mainly Interest Rate Swaps, Cross Currency Swaps, Cap&floors, Forex Forward y Credit Default Swaps.

On the other hand, the interest and exchange rate risk of loans granted to corporate clients at a fixed rate is generally covered. These hedges, are carried out through Interest Rate Swaps, Cross Currency Swaps and exchange rate derivatives (Forex Swaps and Forex Forward).

In addition, Banco Santander, S.A. manages the interest and exchange risk of debt issues in its various categories (issuing covered bonds, perpetual, subordinated and senior bond) and in different currencies, denominated at fixed rates, and therefore subject to changes in their fair value. These issues are covered through Interest Rate Swaps, Cross Currency Swaps or a mix of both by applying differentiated fair value hedging strategies for interest rate risk and cash flow hedging strategies to hedge foreign exchange risk.

The methodology used by Banco Santander to measure the effectiveness of fair value hedges is based on comparing the market values of the hedged items (based on the objective risk of the hedge) and of the hedging instruments in order to analyse whether the changes in the market value of the hedged items are offset by the market value of the hedging instruments, thereby mitigating the hedged risk and minimizing volatility in the income statement. Prospectively, the same analysis is performed, measuring the theoretical market values in the event of parallel variations in the market curves of a positive basis point.

There is a macro hedge of structured loans in which the interest rate risk of fixed-rate loans (mortgage, personal or with other guarantees) granted to legal entities in commercial or corporate banking and wealth clients in the medium-long term is hedged. This hedge is instrumented as a macro hedge of fair value, the main hedging instruments being Interest Rate Swap and Cap&floors. In case of total or partial cancellation or early repayment, the customer is obliged to pay/receive the cost/income of the cancellation of the interest rate risk hedge managed by the Bank.

Regarding cash flow hedges, the objective is to hedge the cash flow exposure to changes in interest rates and exchange rates.

For retrospective purposes, the hypothetical derivative methodology is used to measure effectiveness. By means of this methodology, the hedged risk is modelled as a derivative instrument -not real-, created exclusively for the purpose of measuring the effectiveness of the hedge, and which must comply with the fact that its main characteristics coincide with the critical terms of the hedged item throughout the period for which the hedging relationship is designated. This hypothetical derivative does not incorporate characteristics that are exclusive to the hedging instrument. Additionally, it is worth mentioning that any risk component not associated with the hedged objective risk and effectively documented at the beginning of the hedge is excluded for the purpose of calculating the effectiveness. The market value of the hypothetical derivative that replicates the hedged item is compared with the market value of the hedging instrument, verifying that the hedged risk is effectively mitigated and that the impact on the income statement due to potential ineffectiveness is residual.

Prospectively, the variations in the market values of the hedging instrument and the hedged item (represented by the hypothetical derivative) are measured in the event of parallel shifts of a positive basis point in the affected market curves.

There is another macro-hedge, this time of cash flows, the purpose of which is to actively manage the risk-free interest rate risk (excluding credit risk) of a portion of the floating rate assets of Banco Santander, S.A., through the arrangement of interest rate derivatives whereby the bank exchanges floating rate interest flows for others at a fixed rate agreed at the time the transactions are arranged. The items affected by the Macro-hedging have been designated as those in which their cash flows are exposed to interest rate risk, specifically the floating rate mortgages of the Banco Santander, S.A. network referenced to Euribor 12 Months or Euribor Mortgage, with annual renewal of rates, classified as sound risk and which do not have a contractual floor (or, if not, this floor is not activated). The hedged position affecting the Macro Cash Flow Hedge at the present time is EUR 28,200 million.

Regarding net foreign investments hedges, basically, they are allocated in Banco Santander, S.A. and Santander Consumer Finance Group. Grupo Santander assumes as a priority risk management objective to minimize -to the limit determined by the Group's Financial Management- the impact on the calculation of the capital ratio of its permanent investments included within the Group's consolidation perimeter, and whose shares or equity interests are legally denominated in a currency other than that of the Group's parent company. For this purpose, financial instruments (generally derivatives) are contracted to hedge the impact on the capital ratio of changes in forward exchange rates. Grupo Santander mainly hedges the risk for the following currencies: BRL, CLP, MXN, CAD, COP, CNY, GBP, CHF, NOK, USD, and PLN. The instruments used to hedge the risk of these investments are Forex Swaps, Forex Forward and Spot Currency purchases/sales.

For this type of hedges, ineffectiveness scenarios are considered to be of low probability, given that the hedging instrument is designated considering the position determined and the spot rate at which the position is located.

Additionally, the profile information of maturities and the price/average rate for Banco Santander is shown:

EUR million

	31 December 2022					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges	2,194	2,194	5,521	27,920	9,797	47,626
Interest rate risk						
Interest rate instruments						
Nominal	1,032	1,248	2,348	24,115	8,809	37,552
Average fixed interest rate (%) GBP	—	2.04	2.04	1.86	2.04	
Average fixed interest rate (%) EUR	0.57	(0.41)	0.28	2.40	1.67	
Average fixed interest rate (%) CZK	—	—	—	1.65	—	
Average fixed interest rate (%) NOK	—	—	—	—	2.33	
Average fixed interest rate (%) AUD	—	1.07	—	—	—	
Average fixed interest rate (%) CHF	—	—	—	0.53	—	
Average fixed interest rate (%) JPY	—	—	—	0.46	—	
Average fixed interest rate (%) RON	—	—	—	3.61	—	
Average fixed interest rate (%) USD	2.89	3.12	3.83	3.18	3.37	
Exchange rate risk						
Exchange rate instruments						
Nominal	250	899	2,064	—	—	3,213
GBP/EUR average exchange rate	—	—	0.88	—	—	
USD/EUR average exchange rate	1.04	—	0.99	—	—	
COP/USD average exchange rate	—	—	—	—	—	
PEN/USD average exchange rate	—	—	—	—	—	
AUD/EUR average exchange rate	—	1.59	—	—	—	
SAR/EUR average exchange rate	—	—	—	—	—	
CNY/EUR average exchange rate	7.17	7.25	7.16	—	—	
JPY/EUR average exchange rate	—	—	—	—	—	
MXN/EUR average exchange rate	—	21.53	—	—	—	
Interest rate and exchange risk						
Instruments of exchange rate and interest						
Nominal	912	38	1,101	3,767	988	6,806
Average fixed interest rate (%) AUD/EUR	4.00	—	—	4.80	3.82	
Average fixed interest rate (%) EUR/USD	—	—	—	(0.14)	—	
Average fixed interest rate (%) CZK/EUR	—	—	0.86	—	—	
Average fixed interest rate (%) EUR/COP	—	—	—	—	—	
Average fixed interest rate (%) RON/EUR	—	4.52	—	5.13	—	
Average fixed interest rate (%) HKD/EUR	—	—	—	2.58	—	
Average fixed interest rate (%) JPY/EUR	0.57	—	—	1.44	1.36	
Average fixed interest rate (%) NOK/EUR	—	—	—	3.01	3.76	
Average fixed interest rate (%) CHF/EUR	—	—	—	1.24	—	
Average fixed interest rate (%) USD/CLP	—	—	—	3.45	—	
Average fixed interest rate (%) USD/COP	—	—	15.45	13.61	7.15	
Average fixed interest rate (%) EUR/GBP	—	5.17	—	—	—	
Average fixed interest rate (%) NZD/EUR	—	—	—	—	—	
Average fixed interest rate (%) USD/MXN	—	—	12.98	—	—	
AUD/EUR average exchange rate	1.50	—	—	1.50	1.55	
NZD/EUR average exchange rate	—	—	—	—	1.67	

EUR million

	31 December 2022					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
<i>CZK/EUR average exchange rate</i>	—	—	25.41	25.68	—	
<i>EUR/GBP average exchange rate</i>	—	1.16	—	—	—	
<i>EUR/COP average exchange rate</i>	—	—	—	—	—	
<i>EUR/USD average exchange rate</i>	—	—	—	0.94	—	
<i>HKD/EUR average exchange rate</i>	—	—	—	8.85	—	
<i>JPY/EUR average exchange rate</i>	133.84	—	—	130.23	118.18	
<i>MXN/EUR average exchange rate</i>	—	—	—	—	—	
<i>NOK/EUR average exchange rate</i>	—	—	—	9.49	9.69	
<i>RON/EUR average exchange rate</i>	—	4.75	—	4.84	4.93	
<i>CHF/EUR average exchange rate</i>	—	—	1.09	1.11	—	
<i>USD/CLP average exchange rate</i>	—	—	—	—	—	
<i>USD/COP average exchange rate</i>	—	—	—	—	—	
<i>USD/MXN average exchange rate</i>	—	—	0.05	—	—	
Credit risk						
<i>Credit Risk Instruments</i>						
<i>Nominal</i>	—	9	8	38	—	55
Cash flow hedges	2,261	4,525	12,846	11,451	184	31,267
Interest rate and exchange rate risk						
<i>Interest rate and exchange instruments</i>						
<i>Nominal</i>	—	3	597	1,451	184	2,235
<i>Average fixed interest rate (%) AUD/EUR</i>	—	—	—	0.30	—	
<i>Average fixed interest rate (%) USD/COP</i>	—	—	15.40	—	—	
<i>Average fixed interest rate (%) EUR/PEN</i>	—	—	6.50	—	—	
<i>Average fixed interest rate (%) EUR/AUD</i>	—	3.21	—	—	—	
<i>EUR / PEN average exchange rate</i>	—	—	0.25	—	—	
<i>EUR / USD average exchange rate</i>	—	—	—	—	—	
<i>AUD / EUR average exchange rate</i>	—	—	—	1.60	1.56	
<i>RON / EUR average exchange rate</i>	—	—	—	4.89	—	
<i>JPY / EUR average exchange rate</i>	—	—	—	120.57	—	
<i>CHF / EUR average exchange rate</i>	—	—	—	1.10	—	
<i>EUR / GBP average exchange rate</i>	—	—	1.08	1.17	—	
<i>NOK / EUR average exchange rate</i>	—	—	—	—	10.24	
<i>CZK / EUR average exchange rate</i>	—	—	—	26.13	—	
<i>EUR / AUD average exchange rate</i>	—	0.65	—	—	—	
Interest rate risk						
<i>Interest Rate Swaps</i>						
<i>Nominal</i>	2,250	4,500	11,450	10,000	—	28,200
<i>Average fixed interest rate (%) EUR</i>	(0.43)	(0.40)	(0.35)	(0.01)	—	
<i>Average fixed interest rate (%) USD</i>	—	—	—	—	—	
<i>Average fixed interest rate (%) AUD</i>	—	—	—	—	—	
<i>Bond Forward Instruments</i>						
<i>Nominal</i>	—	—	—	—	—	
Inflation rate risk						
<i>Interest Rate Swaps</i>						
<i>Nominal</i>	—	—	700	—	—	700
<i>Average fixed interest rate (%) EUR</i>	—	—	0.32	—	—	
Exchange rate risk						

EUR million

	31 December 2022					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
<i>FX Swap</i>						
Nominal	11	22	99	—	—	132
GBP/EUR average exchange rate	1.16	1.15	1.14	—	—	
Net investment hedges abroad	2,020	4,711	13,839	—	—	20,570
<i>Exchange rate risk</i>						
<i>Exchange rate instruments</i>						
Nominal	2,020	4,711	13,839	—	—	20,570
BRL / EUR average exchange rate	6.55	5.80	5.87	—	—	
CLP / EUR average exchange rate	953.55	955.79	994.11	—	—	
COP / EUR average exchange rate	—	4,935.12		—	—	
GBP / EUR average exchange rate	0.87	0.87	0.88	—	—	
MXN / EUR average exchange rate	25.13	23.97	22.16	—	—	
PLN / EUR average exchange rate	4.83	4.84	4.99	—	—	
Total	6,475	11,430	32,206	39,371	9,981	99,463

EUR million

	31 December 2021					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
Fair value hedges	633	4,584	13,475	25,468	11,310	55,470
Interest rate risk						
Interest rate instruments						
Nominal	14	1,822	3,038	21,507	10,031	36,412
Average fixed interest rate (%) GBP	—	—	—	2.14	1.75	
Average fixed interest rate (%) EUR	3.86	0.99	(0.03)	1.21	1.53	
Average fixed interest rate (%) CHF	—	—	—	0.83	0.40	
Average fixed interest rate (%) JPY	—	—	—	0.46	—	
Average fixed interest rate (%) RON	—	—	—	4.21	3.20	
Average fixed interest rate (%) USD	4.75	1.45	3.46	2.74	3.37	
Exchange rate risk						
Exchange rate instruments						
Nominal	503	1,634	10,350	586	—	13,073
GBP / EUR average exchange rate	—	0.88	0.86	0.88	—	
USD / EUR average exchange rate	1.19	1.17	1.18	—	—	
COP / USD average exchange rate	—	—	—	—	—	
PEN / USD average exchange rate	—	4.00	—	—	—	
AUD / EUR average exchange rate	—	—	—	—	—	
SAR / EUR average exchange rate	—	—	—	—	—	
CNY / EUR average exchange rate	7.86	7.72	7.41	—	—	
JPY / EUR average exchange rate	132.69	130.74	—	—	—	
Interest rate and exchange risk						
Instruments of exchange rate and interest						
Nominal	116	1,109	53	3,255	1,279	5,812
Average fixed interest rate (%) AUD/EUR	—	—	—	4.00	4.66	
Average fixed interest rate (%) EUR/USD	—	—	—	(0.14)	—	
Average fixed interest rate (%) CZK/EUR	—	—	—	0.86	—	
Average fixed interest rate (%) EUR/COP	—	—	—	—	—	
Average fixed interest rate (%) RON/EUR	—	—	—	4.85	—	
Average fixed interest rate (%) HKD/EUR	—	—	—	2.58	—	
Average fixed interest rate (%) JPY/EUR	—	—	—	0.73	1.14	
Average fixed interest rate (%) NOK/EUR	—	—	—	—	3.61	
Average fixed interest rate (%) CHF/EUR	—	—	—	0.76	1.24	
Average fixed interest rate (%) USD/CLP	—	—	—	3.45	—	
Average fixed interest rate (%) USD/COP	—	5.14	9.47	6.79	7.15	
AUD/EUR average exchange rate	—	—	—	1.50	1.53	
COP/USD average exchange rate	—	—	—	—	1.67	
CZK/EUR average exchange rate	—	—	—	25.51	—	
EUR/GBP average exchange rate	—	1.18	—	—	—	
EUR/COP average exchange rate	—	—	—	—	—	
EUR/USD average exchange rate	—	—	—	0.89	—	
HKD/EUR average exchange rate	—	—	—	8.78	—	
JPY/EUR average exchange rate	—	—	—	132.97	126.60	
MXN/EUR average exchange rate	—	—	14.70	—	—	

EUR million

	31 December 2021					Total
	Up to one month	One to three months	Three months to one year	One year to five years	More than five years	
<i>NOK/EUR average exchange rate</i>	—	—	—	—	9.61	
<i>RON/EUR average exchange rate</i>	—	—	—	4.82	4.93	
<i>CHF/EUR average exchange rate</i>	—	—	—	1.09	1.11	
<i>USD/CLP average exchange rate</i>	—	—	—	—	—	
<i>USD/COP average exchange rate</i>	—	—	—	—	—	
<i>USD/MXN average exchange rate</i>	—	—	—	0.05	—	
Credit risk						
<i>Credit Risk Instruments</i>						
<i>Nominal</i>	—	19	34	120	—	173
Cash flow hedges	4,279	9	6,360	40,162	408	51,218
Interest rate and exchange rate risk						
<i>Interest rate and exchange instruments</i>						
<i>Nominal</i>	—	9	1,169	1,848	408	3,434
<i>EUR / GBP average exchange rate</i>	—	—	1.10	1.11	—	
<i>EUR / USD average exchange rate</i>	—	—	—	0.88	—	
<i>AUD / EUR average exchange rate</i>	—	—	—	1.60	1.56	
<i>RON / EUR average exchange rate</i>	—	—	—	4.89	—	
<i>JPY / EUR average exchange rate</i>	—	—	—	120.57	—	
<i>CHF / EUR average exchange rate</i>	—	—	—	—	1.10	
Interest rate risk						
<i>Interest Rate Swaps</i>						
<i>Nominal</i>	4,279	—	5,191	38,314	—	47,784
<i>Average fixed interest rate (%) EUR</i>	—	—	(0.47)	(0.26)	—	
<i>Bond Forward Instruments</i>						
<i>Nominal</i>	—	—	—	—	—	—
Net investment hedges abroad	560	1,397	11,280	10,120	—	23,357
Exchange rate risk						
<i>Exchange rate instruments</i>						
<i>Nominal</i>	560	1,397	11,280	10,120	—	23,357
<i>BRL / EUR average exchange rate</i>	6.66	6.76	6.84	—	—	
<i>CLP / EUR average exchange rate</i>	943.35	929.69	949.61	—	—	
<i>COP / EUR average exchange rate</i>	—	—	4,539	—	—	
<i>GBP / EUR average exchange rate</i>	0.85	0.86	0.85	0.88	—	
<i>MXN / EUR average exchange rate</i>	25.54	25.33	25.19	—	—	
<i>PLN / EUR average exchange rate</i>	4.59	4.58	4.63	—	—	
Total	5,472	5,990	31,115	75,750	11,718	130,045

Regarding the hedged items, in the following table we have the detail of the type of coverage, the risk that is covered and what products are being covered as of December 31, 2022 and 2021, mainly they are loaned deposits, financial and corporate bonds and corporate repos:

EUR million

	31 December 2022						
	Amount in books of the item covered		Cumulative amount of fair value adjustments on the covered line		Change in the fair value of the item covered for inefficiency assessment	Cash flow hedge reserve / foreign currency conversion	
	Assets	Liabilities	Assets	Liabilities		Coverage continues	Discontinuous coverage
Fair value hedges	13,021	29,812	(597)	(1,834)	2,051	—	—
Interest rate risk	10,237	26,865	(306)	(1,711)	1,881	—	—
Exchange rate risk	2,189	—	(284)	—	16	—	—
Interest rate and exchange rate risk	453	2,947	(7)	(123)	156	—	—
Credit risk	142	—	—	—	(2)	—	—
Cash flow hedges	—	—	—	—	420	(542)	(3)
Interest rate risk	—	—	—	—	443	(557)	(3)
Exchange rate risk	—	—	—	—	3	(3)	—
Interest rate and exchange rate risk	—	—	—	—	(25)	17	—
Inflation rate risk	—	—	—	—	(1)	1	—
Net investment hedges abroad	20,570	—	2,432	—	2,432	—	—
Exchange rate risk	20,570	—	2,432	—	2,432	—	—
Total	33,591	29,812	1,835	(1,834)	4,903	(542)	(3)

EUR million

	31 December 2021						
	Amount in books of the item covered		Cumulative amount of fair value adjustments on the covered line		Change in the fair value of the item covered for inefficiency assessment	Cash flow hedge reserve / foreign currency conversion	
	Assets	Liabilities	Assets	Liabilities		Coverage continues	Discontinuous coverage
Fair value hedges	22,469	27,060	(232)	575	590	—	—
Interest rate risk	8,769	24,188	65	551	613	—	—
Exchange rate risk	11,972	—	(282)	—	(48)	—	—
Interest rate and exchange rate risk	1,549	2,872	(17)	24	27	—	—
Credit risk	179	—	2	—	(2)	—	—
Cash flow hedges	—	—	—	—	(146)	(109)	(16)
Interest rate risk	—	—	—	—	(145)	(101)	(16)
Interest rate and exchange rate risk	—	—	—	—	(1)	(8)	—
Net investment hedges abroad	23,357	—	894	—	894	—	—
Exchange rate risk	23,357	—	894	—	894	—	—
Total	45,826	27,060	662	575	1,338	(109)	(16)

The cumulative amount of adjustments of the fair value hedging instruments that remain in the balance for hedges items that are no longer adjusted by profit and loss of coverage as at 31 December 2022 is EUR 46 million (EUR 115 million in 2021).

The following table contains information regarding the effectiveness of the hedging relationships designated by Banco Santander, as well as the impacts on profit or loss and other comprehensive income as of 31 December 2022 and 2021:

EUR million

	31 December 2022				
	Earnings / (losses) recognized in Other accumulated global income	Coverage inefficiency recognized in the income statement	Line of the income statement that includes ineffective coverage	Reclassified amount of reserves to the income statement due to:	
				Covered transaction that affects the income statement	Line of the income statement that includes reclassified amounts
Fair value hedges	—	(15)		—	
Interest rate risk	—	7	Gain or losses of financial assets/liabilities	—	N/A
Exchange rate risk	—	(20)	Gain or losses of financial assets/liabilities	—	N/A
Interest and Exchange rate risk	—	(1)	Gain or losses of financial assets/liabilities	—	N/A
Credit risk	—	(1)	N/A	—	N/A
Cash flow hedges	(420)	—		85	
Interest rate risk	(443)	—	Gain or losses of financial assets/liabilities	46	Net interest income/ Gains or losses of financial assets/liabilities
Exchange rate risk	(3)	—	Gain or losses of financial assets/liabilities	—	Net interest income/ Gains or losses of financial assets/liabilities
Interest rate and exchange rate risk	25	—	Gain or losses of financial assets/liabilities	10	Net interest income/ Gains or losses of financial assets/liabilities
Inflation rate risk	1	—	Gain or losses of financial assets/liabilities	29	Net interest income/ Gains or losses of financial assets/liabilities
Total	(420)	(15)		85	

EUR million

			31 December 2021		
	Earnings / (losses) recognized in Other accumulated global income	Coverage inefficiency recognized in the income statement	Line of the income statement that includes ineffective coverage	Reclassified amount of reserves to the income statement due to:	
				Covered transaction that affects the income statement	Line of the income statement that includes reclassified amounts
Fair value hedges	—	(28)		—	
Interest rate risk	—	4	Gains or losses of financial assets/liabilities	—	N/A
Exchange rate risk	—	(27)	Gains or losses of financial assets/liabilities	—	N/A
Interest and Exchange rate risk	—	(5)	Gains or losses of financial assets/liabilities	—	N/A
Credit risk	—	—	N/A	—	N/A
Cash flow hedges	146	—		(7)	
Interest rate risk	145	—	Gains or losses of financial assets/liabilities	(32)	Net interest income/Gains or losses of financial assets/liabilities
Interest rate and exchange rate risk	1	—	Gains or losses of financial assets/liabilities	25	Net interest income/Gains or losses of financial assets/liabilities
Total	146	(28)		(7)	

The following table shows a reconciliation of each component of equity and an analysis of other comprehensive income in relation to hedge accounting at 31 December 2022 and 2021:

EUR million	2022	2021
Balance at the end of the previous year	(87)	(189)
Amount recognized in Other accumulated global income		
Cash flow hedges	(420)	146
Interest rate risk and interest rate and exchange rate risk	(420)	146
<i>Changes in equity by discharge at P&L</i>	85	(6)
<i>Remains of equity movements</i>	(505)	152
Taxes	126	(44)
Balance at year end	(381)	(87)

33. Off-balance-sheet funds under management

As of 31 December 2022, Banco Santander held off-balance-sheet funds under management, namely investment funds and assets under management, amounting to EUR 82,446 million (31 December 2021, EUR 88,123 million). marketed but not held under management amounted to EUR 22,907 million (31 December 2021, EUR 25,172 million).

34. Interest income

Interest and similar income in the accompanying income statements comprises the interest accruing in the year on all financial assets with an implicit or explicit return, calculated by applying the effective interest method, irrespective of measurement at fair value, and the rectifications of income as a result of hedge accounting. Interest is recognized gross, without deducting any tax withheld originally.

The detail of the main items of interest and similar income earned in 2022 and 2021 is as follows:

	2022	2021
EUR million		
Derivatives - Trading	32	—
Of which: Interest income derived from economic hedges	32	—
Debt instruments	1,337	723
Central Banks	12	3
Public sector	437	190
Credit entities	559	316
Other financial companies	267	178
Non-financial companies	62	36
Loans and advances	7,157	4,811
Central Banks	28	25
Public sector	182	122
Credit entities	423	156
Other financial companies	1,546	580
Non-financial companies	3,548	2,634
Households	1,430	1,294
Other assets	1,086	77
Of which, insurance contracts linked to pensions (note 23.c)	17	12
Deposits	449	727
Central Banks	259	618
Public sector	4	12
Credit entities	158	64
Other financial companies	21	22
Non-financial companies	7	11
Households	—	—
Hedging derivatives - Interest rate risk	45	38
Other financial liabilities	5	19
Debt securities issued	45	10
Total	10,156	6,405

Most of the interest and similar income was generated by Banco Santander's financial assets that are measured either at amortized cost or at fair value through Other comprehensive income.

35. Interest expense

Interest expense and similar charges in the accompanying income statements includes the interest accruing in the year on all financial liabilities with an implicit or explicit return, including remuneration in kind, calculated by applying the effective interest method, irrespective of measurement at fair value; the rectifications of cost as a result of hedge accounting; and the interest cost attributable to provisions recorded for pensions.

The detail of the main items of interest expense and similar charges accrued in 2022 and 2021 is as follows:

	2022	2021
EUR million		
Derivatives - Trading	138	41
Of which: interest income from derivatives in economic hedges	138	41
Debt securities Issued	2,251	1,432
Debt securities	68	66
Central Banks	—	—
Public sector	40	46
Credit entities	18	13
Other financial companies	9	6
Non-financial companies	1	1
Loans and advances	304	479
Central Banks	118	239
Public sector	4	1
Credit entities	139	162
Other financial companies	38	72
Non-financial companies	5	5
Households	—	—
Deposits	2,595	689
Central Banks	124	12
Public sector	179	156
Credit entities	541	220
Other financial companies	1,100	239
Non-financial companies	581	54
Households	70	8
Other financial liabilities	313	197
Hedging derivatives - Interest rate risk	218	(154)
Pensions and other obligations of defined post-employment benefits (note 23)	71	35
Others	—	—
Total	5,958	2,785

Most of the interest expense and similar charges was generated by Banco Santander's financial liabilities that are measured at amortized cost.

36. Dividend income

'Dividend income' includes the dividends and payments on equity instruments out of profits generated by investees after the acquisition of the equity interest.

The detail of income from equity instruments is as follows:

EUR million	2022	2021
Financial assets held for trading	355	355
Non-trading financial assets mandatorily at fair value through profit or loss	11	7
Financial assets at fair value through other comprehensive income	57	55
Investments in subsidiaries, jointly controlled entities and associates	8,743	5,072
Group entities	8,460	4,765
Associates	283	307
Total	9,166	5,489

Investments in subsidiaries, jointly controlled entities and associates

The detail of the main items of interest expense and similar charges accrued in 2022 and 2021 is as follows:

EUR million	2022	2021
Detail of the companies:		
SANTANDER HOLDINGS USA, Inc.	4,101	423
SANTANDER TOTTA, SGPS, S.A.	1,208	32
SANTANDER UK GROUP HOLDINGS PLC	908	1,229
SANTANDER CONSUMER FINANCE, S.A.	652	1,876
GRUPO FINANCIERO SANTANDER MÉXICO, S.A. de C.V.	634	153
BANCO SANTANDER MEXICO, S.A., INSTITUCIÓN DE BANCA MÚLTIPLE, GRUPO FINANCIERO SANTANDER MÉXICO	179	33
ZURICH SANTANDER INSURANCE AMÉRICA, S.L.	160	230
MERLIN PROPERTIES, SOCIMI, S.A.	107	15
SANTANDER INVESTMENT, S.A.	107	70
SANTANDER UK GROUP HOLDINGS PLC (AT1)	98	72
SANTANDER FINTECH LIMITED	77	—
SANTANDER CONSUMER FINANCE, S.A. (AT1)	73	73
TEATINOS SIGLO XXI INVERSIONES S.A.	69	49
BANCO SANTANDER S.A. (Uruguay)	50	33
SANTANDER FACTORING Y CONFIRMING, S.A. UNIPERSONAL, E.F.C	49	—
SANTANDER BANK POLSKA S.A.	39	33
SANTANDER CHILE HOLDING S.A.	32	41
PEREDA GESTION, S.A.	28	—
BANCO SANTANDER PERÚ S.A.	20	—
SANTANDER TOTTA, SGPS, S.A. (AT1)	20	28
BANCO SANTANDER ARGENTINA S.A.	18	—
SANTANDER GLOBAL TECHNOLOGY AND OPERATIONS, S.L. UNIPERSONAL	16	14
CNP SANTANDER INSURANCE LIFE DESIGNATED ACTIVITY COMPANY	15	60
SAM INVESTMENT HOLDINGS, S.L.	14	32
SANTANDER TOWARZYSTWO FUNDUSZY INWESTYCYJNYCH S.A.	12	13
SANTANDER LEASE, S.A. E.F.C.	11	—
SOCUR S.A.	10	18
AVIACION TRITON, A.I.E.	10	—
SANTANDER HOLDING INTERNACIONAL, S.A.	—	500
Other companies	26	45
Total	8,743	5,072

37. Commission income

Fee and commission income comprise the amount of all fees and commissions accruing in favour of Banco Santander in the year, except those that form an integral part of the effective interest rate on financial instruments.

The detail of fee and commission income in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Collection and payment services:		
Current Accounts	305	374
Credit and debit cards	184	155
Transfers and other payment orders	100	91
Other commission income in connection with payment services	76	67
	665	687
Marketing of non-banking financial products:		
Collective Investment	496	512
Insurance	270	281
Other	1	1
	767	794
Securities services:		
Securities underwriting and placement	123	125
Transfer orders	17	18
Other	93	72
	233	215
Clearing and settlement	66	74
Asset management	120	88
Custody	72	75
Structured finance	286	266
Loan granted commitments granted	343	283
Financial granted guarantees granted	246	223
Other:		
Foreign currency exchange	126	100
Other concepts	335	314
	461	414
Total	3,259	3,119

38. Commission expense

Fee and commission expense show the amount of all fees and commissions paid or payable by Banco Santander in the year, except those that form an integral part of the effective interest rate on financial instruments.

The detail of fee and commission expense in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Clearing and settlement	32	71
Loan commitments received	—	—
Financial guarantees received	117	100
Custody	—	—
Other A	453	370
Total	602	541

^AOther Includes mainly commissions paid for financial and mediation services, as well as credit cards.

39. Gains or losses on financial assets and liabilities

The following information is presented below regarding the gains or losses on financial assets or liabilities:

a) Breakdown

The detail, by classification of the related instrument, of Gains/losses on financial assets and liabilities in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Gains or losses on financial assets and liabilities not measured at fair value through profit or loss, net	75	318
Financial assets at amortized cost	(27)	19
Other financial assets and liabilities	102	299
Of which, debt instruments	102	286
Of which, equity instruments	—	—
Gains or losses on financial assets and liabilities held for trading, net ^A	412	175
Gains or losses on non-trading financial assets and liabilities mandatory at fair value through profit or loss	498	(45)
Gains or losses on financial assets and liabilities measured at fair value through profit or loss, net ^A	106	38
Gains or losses from hedge accounting, net	(15)	(28)
Total	1,076	458

A. Includes the net income obtained from transactions with debt securities, capital instruments, derivatives and short positions included in this portfolio when the Banco Santander jointly manages its risk in those instruments.

b) Financial assets and liabilities at fair value through profit or loss

The detail of the amount of the asset balances is as follows:

EUR million	2022	2021
Loans and receivables	29,934	29,239
Central Banks	1,933	1,118
Credit institutions	10,741	10,425
Customers	17,260	17,696
Debt instruments ^A	18,796	15,054
Equity instruments	10,491	15,527
Derivatives	54,456	42,023
Total	113,677	101,843

A. Include EUR 14,509 million related to Spanish and foreign government debt securities at 31 December 2022 (31 December 2021, EUR 10,307 million).

The foregoing table shows the maximum credit risk exposure of these assets at 31 December 2022 and 2021, respectively, Banco Santander mitigates and reduces this exposure as follows.

With respect to derivatives, Banco Santander has entered into framework agreements with a large number of credit institutions and customers for the netting-off of asset positions and the provision of collateral for non-payment.

Loans and receivable to credit institutions and loans and receivable to 'customers' included reverse repos amounting to EUR 39,201 million at 31 December 2022 (31 December 2021: EUR 28,219 million).

In addition, assets amounting to EUR 919 million have a mortgage guarantee at 31 December 2022 (31 December 2021: EUR 1,134 million).

At 31 December 2022 and 2021, the amount of the change in the year in the fair value of financial assets at fair value through profit or loss attributable to variations in their credit risk (spread) was not material.

The detail of the amount of the liability balances is as follows:

EUR million	2022	2021
Deposits	58,273	19,796
Central Banks	6,005	651
Credit Institutions	11,109	6,785
Customers	41,159	12,360
Marketable debt instruments	89	—
Short positions	14,453	9,244
Derivatives	52,126	40,672
Total	124,941	69,712

At 31 December 2022 and 2021, the amount of the change in the fair value of financial liabilities at fair value through profit or loss attributable to changes in their credit risk during the year is not material.

40. Exchange differences, net

This chapter basically includes the results obtained in the purchase and sale of currencies, the differences that arise when converting monetary items in foreign currency to functional currency and those from non-monetary assets in foreign currency at the time of disposal.

The detail of 'Exchange differences (net)' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Exchange differences, net	(877)	(205)

Banco Santander manages the currencies to which it is exposed together with the arrangement of derivative instruments and, accordingly, the changes in this line item should be analyzed together with those recognized under Gains/losses on financial assets and liabilities (see note 39).

41. Other operating income and other operating expenses

The detail of 'Other operating income' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Exploitation of real estate investments and operating leases	252	256
Others	199	185
Total	451	441

The detail of 'Other operating expenses' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Contribution to Deposit Guarantee Fund (note 1.h)	(258)	(225)
Contribution to Resolution Fund ^A (note 1.h)	(314)	(307)
Other operating expenses	(318)	(362)
Total	(890)	(894)

A. Includes the expense incurred by contribution to the National Resolution Fund and to the Single Resolution Fund.

42. Staff costs

a) Breakdown

The detail of 'Staff costs' in 2022 and 2021 is as follows:

EUR million	2022			2021		
	Of which, in Spain	Of which, foreign branches	Total	Of which, in Spain	Of which, foreign branches	Total
Wages and salaries	1,708	433	2,141	1,728	323	2,051
Social security costs	325	46	371	343	33	376
Additions to provisions for defined benefit pension plans (note 23)	2	—	2	5	—	5
Contributions to defined contribution pension funds	73	15	88	67	10	77
Equity-instrument-based remuneration	—	—	—	—	—	—
Other staff costs	167	27	194	169	29	198
Total	2,275	521	2,796	2,312	395	2,707

b) Headcount

The average number of employees at the Bank, by professional category, is as follows:

Average number of employees	2022	2021
Executive and Senior management	17	19
Other line personnel	21,872	23,343
Staff at branches abroad	1,521	1,150
Total	23,410	24,512

The number of employees, as of December 31, 2022 and December 31, 2021, is 23,788 and 23,311, respectively.

The functional breakdown, by gender, at 31 December 2022 is as follows:

	Breakdown by gender			
	Executives		Other line personnel	
	Men	Women	Men	Women
Breakdown by gender	75 %	25 %	50 %	50 %

The labour relations between employees and the various Group companies and, therefore, the Bank are governed by the related collective agreements or similar regulations.

The number of employees with disabilities greater than or equal to 33%, distributed by professional categories at December 31, 2022 and 2021, is as follows:

	2022	2021
Senior management	—	—
Other management	29	27
Other staff	415	280
Total	444	307

The average number of employees of Banco Santander with a disability greater than or equal to 33%, during the year 2022 was 331 (288 at 2021).

c) Share-based payments

The main share-based payments granted by the Group in force at 31 December, 2022, 2021 and 2020 are described below.

i. Bank

The variable remuneration policy for the Bank's executive directors and certain executive personnel of the Bank and of other Group companies includes Bank share-based payments, the implementation of which requires, in conformity with the law and the Bank's Bylaws, specific resolutions to be adopted by the general meeting.

Were it necessary or advisable for legal, regulatory or other similar reasons, the delivery mechanisms described below may be adapted in specific cases without altering the maximum number of shares linked to the plan or the essential conditions to which the delivery thereof is subject.

These adaptations may involve replacing the delivery of shares with the delivery of cash amounts of an equal value.

The plans that include share-based payments are as follows: (i) Deferred and Conditional Variable Remuneration Plan; (ii) Deferred Multiyear Objectives Variable Remuneration Plan; (iii) Digital Transformation Award and (iv) Digital Transformation Award 2022. The characteristics of the plans are set forth below:

Deferred variable remuneration systems

Deferred variable remuneration systems	Description and plan beneficiaries	Conditions	Calculation Base
(i) Deferred and conditional variable remuneration plan (2015, 2016, 2017, 2018, 2019, 2020, 2021 and 2022)	<p>The purpose of these cycles is to defer a portion of the variable remuneration of the beneficiaries over a period of three years for the sixth cycles, over three or five years for the fifth, seventh, eighth, ninth, tenth and eleventh cycles, and over four or five years for the twelfth cycle, for it to be paid, where appropriate, in cash and in Santander shares. The other portion of the variable remuneration is also to be paid in cash and Santander shares, upon commencement of the cycles, in accordance with the rules set forth below.</p> <p>Beneficiaries:</p> <ul style="list-style-type: none"> • Executive directors and certain executives (including senior management) and employees who assume risk, who perform control functions or receive an overall remuneration which puts them on the same remuneration level as senior executives and employees who assume risks (fifth cycle) • In the case of the sixth, seventh, eighth, ninth, tenth, eleventh and twelfth cycle, the beneficiaries are Material Risk Takers (Identified staff) that are not beneficiaries of the Deferred Multiyear Objectives Variable Remuneration Plan. 	<p>For the fifth and sixth cycles (2015 to 2016), the accrual of the deferred compensation is conditioned, in addition to the requirement that the beneficiary remains in the Group's employ, with the exceptions included in the plan regulations on none of the following circumstances existing during the period prior to each delivery, pursuant to the provisions set forth in each case in the plan regulations:</p> <ol style="list-style-type: none"> i. Poor financial performance of the Group. ii. breach by the beneficiary of internal regulations, including, in particular, those relating to risks. iii. material restatement of the Group's consolidated financial statements, except when it is required pursuant to a change in accounting standards. iv. Significant changes in the Group's economic capital or risk profile <p>In the case of the seventh, eighth, ninth, tenth, eleventh and twelfth cycles (2017 to 2021), the accrual of deferred compensation is conditioned, in addition to the permanence of the beneficiary in the Group, with the exceptions contained in the plan's regulations, to non-occurrence of a poor performance of the entity as a whole or of a specific division or area of the entity or of the exposures generated by the personnel:</p> <ol style="list-style-type: none"> v. significant failures in risk management by the entity, or by a business unit or risk control unit. vi. the increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures. vii. Regulatory sanctions or judicial sentences for events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity. viii. Irregular behaviours, whether individual or collective, considering in particular the negative effects derived from the marketing of inappropriate products and the responsibilities of the persons or bodies that made those decisions. 	<p>Fifth cycle (2015):</p> <ul style="list-style-type: none"> • Executive directors and members of the Identified Staff with total variable remuneration higher than 2.6 million euros: 40% paid immediately and 60% deferred over 5 years deferral period. • Division managers, country heads (of countries which represent at least 1% of Group's economic capital), other executives of the Group with a similar profile and members of the Identified Staff with total variable remuneration between 1.7 million euros (1.8 million in fourth cycle) and 2.6 million euros: 50% paid immediately and 50% deferred over 5 years (fifth cycle) • Other beneficiaries: 60% paid immediately and 40% deferred over 3 years. <p>Sixth cycle (2016):</p> <ul style="list-style-type: none"> • 60% of bonus will be paid immediately and 40% deferred over a three years period. <p>Seventh, eighth, ninth, tenth and eleventh cycle (2017, 2018, 2019, 2020 and 2021):</p> <ul style="list-style-type: none"> • Beneficiaries of these plans with target total variable remuneration higher or equal to 2.7 million euros: 40% paid immediately and 60% deferred over 5 years • Beneficiaries of these plans with target total variable remuneration between 1.7 million euros and 2.7 million euros: 50% paid immediately and 50% paid over 5 years • Other beneficiaries of these plans: 60% paid immediately and 40% deferred over 3 years. <p>Twelfth cycle (2022):</p> <ul style="list-style-type: none"> • Beneficiaries of these plans with target total variable remuneration higher or equal to 2.7 million euros: 40% paid immediately and 60% deferred over 5 years • Beneficiaries of these plans with target total variable remuneration between 1.7 million euros and 2.7 million euros: 50% paid immediately and 50% paid over 5 years • Other beneficiaries of these plans: 60% paid immediately and 40% deferred over 4 years .

Deferred variable remuneration systems

	Description and plan beneficiaries	Conditions	Calculation Base
(ii) Deferred Multiyear Objectives Variable Remuneration Plan (2016, 2017, 2018, 2019, 2020, 2021 and 2022)	<p>The aim is simplifying the remuneration structure, improving the ex ante risk adjustment and increasing the impact of the long-term objectives on the Group's most relevant roles. The purpose of these cycles is to defer a portion of the variable remuneration of the beneficiaries over a period of three or five years (four or five years for the seventh cycle) for it to be paid, where appropriate, in cash and in Santander shares; the other portion of the variable remuneration is also to be paid in cash and Santander shares (regarding the instruments part, executive directors in the seventh cycle have the opportunity to choose all in share options or half in share options and half in shares), upon commencement of the cycles, in accordance with the rules set forth below. The accrual of the last third of the deferral (in the case of 3 years deferral), the last 2 fourths (in the case of 4 years deferral) and the last three fifths (in the case of 5 years deferral) is also subject to long-term objectives.</p> <p>Beneficiaries Executive directors, senior managers and certain executives of the Group's first lines of responsibility.</p>	<p>In 2016 the accrual is conditioned, in addition to the permanence of the beneficiary in the Group, with the exceptions contained in the plan's regulations, to non-occurrence of the following circumstances during the period prior to each of the deliveries in the terms set forth in each case in the plan's regulations:</p> <ol style="list-style-type: none"> Poor performance of the Group. breach by the beneficiary of the internal regulations, including in particular that relating to risks. material restatement of the Group's consolidated financial statements, except when appropriate under a change in accounting regulations. Significant changes in the Group's economic capital or risk profile. <p>In 2017, 2018, 2019, 2020 and 2021 the accrual is conditioned, in addition to the beneficiary's permanence in the Group, with the exceptions contained in the plan's regulations, to the non-occurrence of poor financial performance from the entity as a whole or of a specific division or area thereof or of the exposures generated by the personnel, taking into account the following factors:</p> <ol style="list-style-type: none"> Significant failures in risk management committed by the entity, or by a business unit or risk control unit. the increase suffered by the entity or by a business unit of its capital needs, not foreseen at the time of generation of the exposures. Regulatory sanctions or court rulings for events that could be attributable to the unit or the personnel responsible for those. Also, the breach of internal codes of conduct of the entity. Irregular behaviours, whether individual or collective, considering in particular negative effects derived from the marketing of inappropriate products and responsibilities of persons or bodies that made those decisions. <p>Paid half in cash and half in shares. In the seventh cycle, and only for executive directors: half in cash and 25% in share options and 25% in shares (unless the director chooses to receive options only).</p> <p>The maximum number of shares to be delivered is calculated by taking into account the weighted average daily volume of weighted average prices for the fifteen trading sessions prior to the previous Friday (excluding) on the date on which the board decides the bonus for the Executive directors of the Bank.</p>	<p>First cycle (2016):</p> <ul style="list-style-type: none"> Executive directors and members of the Identified Staff with total variable remuneration higher than or equal to 2.7 million euros: 40% paid immediately and 60% deferred over a 5 years period. Senior managers, country heads of countries representing at least 1% of the Group's capital and other members of the identified staff whose total variable remuneration is between 1.7 million and 2.7 million euros: 50% paid immediately and 50% deferred over a 5 years period. Other beneficiaries: 60% paid immediately and 40% deferred over a 3 years period. <p>The second, third, fourth, fifth and sixth cycles (2017, 2018, 2019, 2020 and 2021 respectively) are under the aforementioned deferral rules, except that the variable remuneration considered is the target for each executive and not the actual award.</p> <p>In 2016 the metrics for the deferred portion subject to long-term objectives (last third or last three fifths, respectively, for the cases of three years and five years deferrals) are:</p> <ul style="list-style-type: none"> Earnings per share (EPS) growth in 2018 over 2015. Relative Total Shareholder Return (TSR) in the 2016-2018 period measured against a group of credit institutions. Compliance with the fully-loaded common equity tier 1 ("CET1") ratio target for financial year 2018. Compliance with Grupo Santander's underlying return on risk-weighted assets ("RoRWA") growth target for financial year 2018 compared to financial year 2015. <p>In the second, third, fourth fifth and sixth cycle (2017, 2018, 2019, 2020 and 2021) the metrics for the deferred portion subject to long-term objectives (last third or last three fifths, respectively, for the cases of three years and five years deferrals) are:</p> <ul style="list-style-type: none"> EPS growth in 2019, 2020, 2021, 2022 and 2023 (over 2016, 2017, 2018, 2019 and 2020, for each respective cycle) Relative Total Shareholder Return (TSR) measured against a group of 17 credit institutions (second and third cycles) in the periods 2017-2019 and 2018-2019, respectively, and against a group of 9 entities (fourth, fifth and sixth cycle) for the 2019-2021, 2020-2022 and 2010-2023 period. Compliance with the fully-loaded common equity tier 1 ("CET1") ratio target for financial years 2019, 2020, 2021, 2022 and 2023, respectively. <p>In the seventh cycle (2022), the metrics for the deferred portion subject to long-term objectives (two last fourths and last three fifths, for the cases of four years and five years deferrals) are:</p> <ul style="list-style-type: none"> Banco Santander's consolidated Return on tangible equity (RoTE) target in 2024. Relative Total Shareholder Return (TSR) measured against a group of 9 credit institutions for the period 2022-2024. Five ESG metrics linked to our public targets of our Responsible Banking agenda.

Deferred variable remuneration systems

	Description and plan beneficiaries	Conditions	Calculation Base
(iii) Digital Transformation Award (2019, 2020 and 2021)	<p>The 2019, 2020 and 2021 Digital Transformation Incentive (the "Digital Incentive") is a variable remuneration system that includes the delivery of Santander shares and share options.</p> <p>The aim of the Digital Incentive is to attract and retain the critical skill sets to support and accelerate the digital transformation of the Group. By means of this program, the Group offers a remuneration element which is competitive with the remuneration systems offered by other market operators who also compete for digital talent.</p> <p>The number of beneficiaries is limited to a maximum of 250 employees and the total amount of the incentive is limited to 30 million euros.</p>	<p>The funding of this incentive is subject to meeting important milestones that are aligned with the Group's digital roadmap and have been approved by the board of directors, taking into account the digitalization strategy of the Group, with the aim of becoming the best open, responsible global financial services platform.</p> <p>Performance of 2019 incentive was measured based on achievement of the following milestones: (i) Launch of a Global Trade Services (GTS) platform; (ii) launch of a Global Merchant Services (GMS) platform; (iii) migration of our fully digital bank, OpenBank, to a "next generation" platform and launch in 3 markets; (iv) extension of SuperDigital in Brazil to at least one other country; (v) and launch of our international payments app based on blockchain Pago FX to non-Santander customers.</p> <p>The milestones for the 2020 Digital Transformation Award were: (i) rolling out the global merchant services (GMS) platform in 3 new geographies, enhancing the platform functionality and achieving volume targets for transactions and participating merchants; (ii) doing the commercial rollout of the global trade services (GTS) platform in 8 new geographies, enhancing platform functionality, and achieving volume targets for on-boarded clients and monthly active users; (iii) launching OpenBank in a new market and migrating the retail banking infrastructure to "new-mode" bank; (iv) launch the global platform SuperDigital in at least 4 countries, driving target active user growth; (v) deploying machine learning across pre-defined markets for 4 priority use cases, rolling out Conversion Rate Optimization (Digital marketing) for at least 40 sales programs, delivering profit targets, and driving reduction of agent handled calls in contact centers; (vi) successfully implementing initiatives related to on-board and identity services, common API (application programming interface) layer, payment hubs, mobile app for SMEs and virtual assistant services; and (vii) launching the PagoFX global platform in at least 4 countries.</p> <p>The milestones for 2021 were: (i) in relation to Pago Nxt Consumer payment platform: implementation of Superdigital platform in seven countries, acquisition of over 1.5 million active customer base and accelerating growth through B2B (business to business) and B2B2C (business to business to customer) partnerships, acquiring more than 50% of the new customers through these channels, which are more cost-effective; (ii) in relation to Digital Consumer Bank: launching online API for checkout lending in the European Union and completion of controllable items for Openbank launch in USA; (iii) in relation to One Santander strategy: implementation in Europe of One Common Mobile Experience and, specifically, implementation of Europe ONE app for individual customers in at least three of the four countries by December 2021; and be among the three-top rated entities in terms of Mobile NetPromoter Score (Mobile NPS) in at least two of the four countries by December 2021; (iv) In relation to cloud adoption: host 75% of migratable virtual machines on cloud technology (either public cloud or OHE) by December 2021. For these purposes, mainframes, physical servers and servers with non-x86 operating systems will be considered non-migratable.</p>	<p>The Digital Incentive is structured 50% in Santander shares and 50% in options over Santander shares, taking into account the fair value of the option at the moment in which they are granted. For Material Risk Takers subject to five years deferrals, the Digital Incentive (shares and options over shares) shall be delivered in thirds, on the third, fourth and fifth anniversary from their granting. For Material Risk Takers subject to three years deferrals and employees not subject to deferrals, delivery shall be done on the third anniversary from their granting.</p> <p>Any delivery of shares, either directly or via exercise of options over shares, will be subject generally to the Group's general <i>malus & clawback</i> provisions as described in the Group's remuneration policy and to the continuity of the beneficiary within the Group Santander. In this regard, the board may define specific rules for non-Identified Staff.</p> <p>Vested share options can be exercised until maturity, with all options lapsing after ten years (for granting the 2019 incentive) and eight years (for granting the 2020 and 2021 incentive).</p> <p>The total achievement for 2021 Digital Incentive was 77.5% (85% en 2020 and 83% en 2019).</p>

Deferred variable remuneration systems

	Description and plan beneficiaries	Conditions	Calculation base
(iv) Digital Transformation Award (2022)	<p>The board of directors approved the 2022 Digital Transformation Incentive. It is a variable remuneration scheme splits in two different blocks:</p> <ul style="list-style-type: none"> • The first one, with the same mechanism than previous years, that delivers Santander shares and share options if the group hits major milestones on its digital roadmap. This is aimed at a group of up to 250 (is limited to 30 million euros) employees whose functions are deemed essential to Santander's growth. • And the second one, which delivers PagoNxt, S.L. RSUs and premium priced options (PPOs), and is aimed at up to 50 employees (and limited to 15 million euros) whose roles are considered key to PagoNxt's success. <p>The aim of the Digital Incentive is to attract and retain the critical skill sets to support and accelerate the digital transformation of the Group. By means of this program, the Group offers a remuneration element which is competitive with the remuneration systems offered by other market operators who also compete for digital talent.</p>	<p>Performance of the first block of the incentive shall be measured based on achievement of the following milestones:</p> <ol style="list-style-type: none"> Edelweiss: Our Santander future retail architecture EDELWEISS will mean moving from our current Core centric banking architecture towards a Customer and Data-Centric Core supported by lean Record Processing engines. Simplification: Speed up the simplification of our technology platform and business model by Reducing the total number of applications in production and reducing number of products in the regions. Agile: Agile ways of working enable a better and faster reaction to customers' needs and is based on a value-driven delivery that increases efficiency by reducing time-to-market and development costs, and increasing quality. People working in Agile are more collaborative, engaged, empowered and creative. In Digital Consumer Bank: <ol style="list-style-type: none"> To create the BNPL platform connected to at least one merchant in Netherlands and Germany, and to make sure the platform is ready to connect in Spain. To support the definition of Openbank US's IT digital strategy and achieve 2022 milestones in it. To have the new leasing platform connected to dealers in Italy. To expand the Wabi B2B online business to Germany. To execute the first B2B deal with an Original Equipment Manufacturer or mobility player in at least one country. To expand coches.com business and platform to Portugal. <p>And in regard to the second block of digital incentive: the consolidation of PagoNxt Core Perimeter.</p>	<p>The first block of the Digital Incentive is structured 50% in Santander shares and 50% in options over Santander shares, taking into account the fair value of the option at the moment in which they are granted. For Material Risk Takers subject to five years deferrals, the Digital Incentive (shares and options over shares) shall be delivered in thirds, on the third, fourth and fifth anniversary from their granting. For Material Risk Takers subject to three years deferrals and employees not subject to deferrals, delivery shall be done on the third anniversary from their granting.</p> <p>Any delivery of shares, either directly or via exercise of options over shares, will be subject generally to the Group's general <i>malus</i> & <i>clawback</i> provisions as described in the Group's remuneration policy and to the continuity of the beneficiary within the Grupo Santander. In this regard, the board may define specific rules for non-identified Staff.</p> <p>Vested share options can be exercised until maturity, with all options lapsing after ten years .</p> <p>The total achievement for 2022 Digital Incentive was 96.5%.</p> <p>The second block of Digital Incentive is structured in restricted stock units (RSUs) and premium priced Options (PPOs) of PagoNxt, S.L. in a percentage determined by the internal category of the beneficiary. The total achievement for 2022 was 100%.</p>

iii. Fair value

The fair value of the performance share plans was calculated as follows:

- Deferred variable compensation plan linked to multi-year objectives 2020, 2021 and 2022:

The Group calculates at the grant date the fair value of the plan based on the valuation report of an independent expert, Willis Towers Watson. According to the design of the plan for 2021 and 2022 and the levels of achievement of similar plans in comparable entities, it has been considered that the fair value is 70%.

43. Other general administrative expenses

a) Breakdown

The detail of Other general administrative expenses in the accompanying income statements for 2022 and 2021 is as follows:

EUR million	2022	2021
Technology and systems	695	705
Fixtures and supplies	190	207
Other administrative expenses	574	619
Technical reports	165	180
Advertising	90	88
Per diems and travel expenses	41	16
Surveillance and cash courier services	36	37
Communications	7	9
Taxes other than income tax	65	79
Insurance premiums	24	26
Total	1,887	1,966

b) Technical reports and other

Technical reports includes the fees paid by the various Group companies (detailed in the accompanying appendices) for the services provided by their respective auditors, the detail being as follows:

EUR million	2022 ^A	2021 ^A
Audit	113.4	104.6
Audit-related services	6.4	6.0
Tax services	0.5	0.7
All other	4.8	2.4
Total	125.1	113.7

A. Of those corresponding to Banco Santander, SA, EUR 30.7 million, EUR 1.8 million, EUR 0 million and EUR 2.4 million, respectively, as of December 31, 2022 (EUR 30.6 million, EUR 2.3 million, EUR 0 million and EUR 0.5 million, respectively, as of December 31, 2021); and Branches of Banco Santander, SA, EUR 2.5 million, EUR 0 million, EUR 0 million and EUR 0.1 million, respectively, as of December 31, 2022 (EUR 2.5 million, EUR 0.1 million, EUR 0 million and EUR 0 million, respectively as of December 31, 2021).

The 'Audit' heading mainly includes audit fees for the individual and consolidated financial statements of Banco Santander and its subsidiaries of which PwC is the statutory auditor; for interim consolidated financial statements of Banco Santander; for integrated audits prepared in order to file Form 20-F for the annual report with the SEC in the US regarding required entities; the internal control audit (SOx) for required Group's entities; the limited review of the financial statements; and the

regulatory auditor's reports on Grupo Santander's geographies.

The main fees under 'Audit-related services' include, comfort letters, verifying financial and non-financial information (as required by regulators), and other reviews of documents that, due to their nature, the external auditor provides to be submitted to domestic or foreign authorities.

The fees included under the heading 'Tax services' mainly related to tax compliance and advisory services provided to Group companies outside Spain, which are permitted in accordance with independence regulations; none were for tax planning advice.

The 'Audit' heading includes the fees for the year's audit, regardless of the date the audit was completed. Any subsequent adjustments, which are not significant, and for purposes of comparison, are shown in this note for each year. The fees corresponding to the rest of the services are shown by when the audit committee approved them.

The services commissioned from the Group's auditors meet the independence requirements under applicable European and Spanish law, the SEC rules and the Public Company Accounting Oversight Board (PCAOB), applicable to the Group, and they did not involve in any case the performance of any work that is incompatible with the auditor's role.

Lastly, the Group commissioned services from audit firms other than PwC amounting to EUR 185.5 million in 2022 (EUR 263.8 million in 2021).

c) Number of branches

The number of offices at 31 December 2022 and 2021 is as follows:

Number of branches	Group	
	2022	2021
Spain	1,966	1,998
Group	7,053	7,231
Total	9,019	9,229

Number of branches	Of which, Banco Santander	
	2022	2021
Spain	1,908	1,916
International	10	9
Total	1,918	1,925

44. Impairment or reversal of the impairment of investments in joint ventures and associates

The detail of 'Impairment losses on other assets (net)' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million

	2022	2021
Investments in subsidiaries, joint ventures or associates (note 13)	(512)	800
Total	(512)	800

45. Gains or losses on non-financial assets and investments, net

The detail of 'Gains/(losses) on disposal of assets not classified as non-current assets held for sale' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million

	2022	2021
On disposal of tangible assets	2	4
On disposal of investments in subsidiaries, jointly controlled entities and associates	5	(4)
Total	7	—

46. Gains or losses on non-current assets held for sale not classified as discontinued operations

The detail of 'Gains/(losses) on non-current assets held for sale not classified as discontinued operations' in the accompanying income statements for 2022 and 2021 is as follows:

EUR million

	2022	2021
Impairment of non-current assets held for sale (note 12)	(68)	(70)
Gain / (loss) on disposal	28	20
Total	(40)	(50)

47. Related parties

The parties related to Banco Santander are deemed to include, in addition to its subsidiaries, associates and jointly controlled entities, Banco Santander's key management personnel (the members of its Board of Directors and the executive vice presidents, together with their close family members) and the entities over which the key management personnel may exercise significant influence or control.

Following is a detail of the transactions performed by Banco Santander with its related parties at 31 December 2022 and 2021, distinguishing between group entities, joint venture entities and associated entities, members of Banco Santander's board of directors, Banco Santander's executive vice presidents, and other related parties. Related party transactions were made on terms equivalent to those that prevail in arm's-length transactions or, when this was not the case, the related compensation in kind was recognized.

EUR million

	2022			
	Subsidiaries, associates and jointly controlled entities	Members of the Board of Directors ^A	Executive vice presidents ^A	Other related parties ^A
Assets	153,372	—	13	455
Equity instruments	94,698	—	—	—
Debt instruments	15,851	—	—	—
Loans and advances	42,823	—	13	455
<i>From which: impaired financial assets</i>	330	—	—	—
Liabilities	24,099	11	11	109
Deposits credit institution and clients	22,712	11	11	109
Marketable debt securities	1,387	—	—	—
Income statement	10,314	—	—	2
Interest and similar income	968	—	—	1
Interest expense and similar charges	(244)	—	—	—
Interest from equity instruments	8,745	—	—	—
Gains / (Losses) on financial instruments and other	750	—	—	—
Fee and commission income	89	—	—	1
Fee and commission expense	6	—	—	—
Other	501,498	2	2	79
Contingent liabilities	6,758	1	1	23
Contingent commitments	8,255	1	1	13
Financial instruments - derivatives	486,485	—	—	43

A. Includes transactions carried out with both Banco Santander and with other entities of Grupo Santander.

EUR million

	2021			
	Subsidiaries, associates and jointly controlled entities	Members of the board of directors ^A	Executive vice presidents ^A	Other related parties ^A
Assets	150,489	—	14	384
Equity instruments	88,997	—	—	—
Debt instruments	14,352	—	—	—
Loans and advances	47,140	—	14	384
<i>From which: impaired financial assets</i>	270	—	—	—
Liabilities	24,498	8	11	197
Deposits credit institution and clients	24,277	8	11	197
Marketable debt securities	221	—	—	—
Income statement	6,551	—	—	1
Interest and similar income	715	—	—	1
Interest expense and similar charges	(80)	—	—	—
Interest from equity instruments	5,072	—	—	—
Gains / (Losses) on financial instruments and other	781	—	—	—
Fee and commission income	86	—	—	—
Fee and commission expense	(23)	—	—	—
Other	471,034	2	2	76
Contingent liabilities	6,447	1	1	17
Contingent commitments	5,371	1	1	13
Financial instruments - derivatives	459,216	—	—	46

A. Includes transactions carried out with both Banco Santander and with other entities of Grupo Santander.

Additionally, the above-mentioned breakdown shows pension insurance contracts with Grupo Santander insurance companies amounting to EUR 209 million on December 31 of 2022 (EUR 232 million on December 31 of 2021).

48. Other disclosures

a) Residual maturity periods

The detail, by maturity, of the balances of certain items in the balance sheets as of 31 December 2022 and 2021 is as follows:

EUR million

	31 December 2022						Total
	On demand	Within 1 month	1 to 3 months	3 to 12 months	1 to 5 years	More than 5 years	
Assets							
Cash, cash balances at central banks and other demand deposits	130,083	—	—	—	—	—	130,083
Financial assets at fair value with changes in other comprehensive income							
Representative values of debt	—	690	1,154	331	816	1,129	4,120
Financial assets at amortized cost							
Representative values of debt	—	100	150	1,344	12,775	25,813	40,182
Loans and advances							
Central banks	—	25	—	69	—	—	94
Credit institutions	211	20,947	2,812	3,576	6,043	1,478	35,067
	8,763	52,608	22,620	38,599	86,492	93,722	302,804
	139,057	74,370	26,736	43,919	106,126	122,142	512,350
Liabilities:							
Financial liabilities at amortized cost							
Deposits							
Central banks	—	908	1,597	5,749	7,474	—	15,728
Credit institutions	12,847	15,643	3,670	1,740	7,117	592	41,609
Customer deposits	286,017	32,505	11,054	11,754	3,461	1,084	345,875
Marketable debt securities	—	7,027	12,314	17,145	48,473	41,010	125,969
Other financial liabilities	8,080	2,880	4	394	677	463	12,498
	306,944	58,963	28,639	36,782	67,202	43,149	541,679
Difference (assets less liabilities)	(167,887)	15,407	(1,903)	7,137	38,924	78,993	(29,329)

EUR million

	2021						Total
	On demand	Within 1 month	1 to 3 months	3 to 12 months	1 to 5 years	More than 5 years	
Assets:							
Cash, cash balances at Central Banks and other deposits on demand	91,736	—	—	—	—	—	91,736
Financial assets at fair value through other comprehensive income							
Representative values of debt	—	653	600	278	2,278	5,585	9,394
Financial assets at amortized cost							
Loans and advances	—	236	360	451	6,225	9,936	17,208
Loans and advances							
Central banks	—	25	—	1	—	—	26
Credits institutions	212	15,859	2,048	6,949	7,056	2,960	35,084
Customers	5,701	37,915	17,853	32,304	70,133	122,829	286,735
	97,649	54,688	20,861	39,983	85,692	141,310	440,183
Liabilities:							
Financial liabilities at amortized cost							
Deposits							
Central banks	64	1,215	850	144	62,376	—	64,649
Credit institutions	25,263	1,880	2,052	606	3,469	1,992	35,262
Customer	270,745	4,023	5,251	8,867	5,256	2,101	296,243
Debt securities issued	—	5,323	9,028	8,580	33,145	48,018	104,094
Other financial liabilities	3,370	980	109	3,784	893	888	10,024
	299,442	13,421	17,290	21,981	105,139	52,999	510,272
Difference (assets less liabilities)	(201,793)	41,267	3,571	18,002	(19,447)	88,311	(70,089)

b) Equivalent euro value of assets and liabilities

The detail of the main foreign currency balances in the balance sheets as of 31 December 2022 and 2021, based on the nature of the related items, is as follows:

Countervalue in EUR million

	2022	2021
Assets	231,109	183,507
Cash, cash balances at central banks and other deposits on demand	44,073	13,775
Financial assets held for trading	35,337	32,947
Non-trading financial assets mandatorily at fair value through profit or loss	1,562	1,279
Financial assets designated at fair value through profit or loss	137	293
Financial assets at fair value through other comprehensive income	5,211	4,785
Financial assets at amortized cost	102,078	90,011
Hedging derivatives	283	668
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	—	—
Investments	41,984	39,492
Tangible assets	17	16
Intangible assets	9	4
Tax assets	90	99
Other assets	328	138
Non-current assets held-for-sale	—	—
Liabilities	186,057	114,567
Financial liabilities held for trading	27,286	23,869
Financial liabilities designated at fair value through profit or loss	17,391	5,888
Financial liabilities at amortized cost	138,895	83,923
Hedging derivatives	1,671	391
Changes in the fair value of hedged items in portfolio hedges of interest risk rate	—	—
Provisions	130	120
Tax liabilities	43	21
Refundable equity on demand	—	—
Other liabilities	641	355
Liabilities associated with non-current assets held-for-sale	—	—

c) Fair value of financial assets and liabilities not measured at fair value

Financial assets are measured at fair value in the accompanying balance sheets, except for loans and receivables under a business model whose objective is to collect the flows of principal and interest, equity instruments whose market value cannot be estimated reliably and derivatives that have these instruments as their underlying and are settled by delivery thereof.

Similarly, financial liabilities except for financial liabilities held for trading, those measured at fair value and derivatives having equity instruments whose market value cannot be estimated reliably as their underlying-are measured at amortized cost in the accompanying balance sheets.

The following is a comparison between the value of Grupo Santander's financial instruments valued using other criteria rather than fair value and their corresponding fair value at year-end:

Financial assets and liabilities measured at other than fair value

The fair value of financial instruments measured at amortized cost as of 31 December 2022 was as follows:

- a. The fair value of debt securities is 2.25% lower than the carrying amount.
- b. The fair value of the loans and advances is 1.58% lower than the carrying amount.
- c. The fair value of deposits is 0.23% lower than the carrying amount.
- d. The fair value of marketable debt securities is 6.74% lower than the carrying amount.

Set forth below are the main valuation methods and inputs used in the estimates made at 31 December 2022 to determine the fair values of the financial assets and liabilities recognized at cost detailed above:

- Loans and receivables: The fair value has been estimated using the present cost method, the estimation has considered factors such as the expected maturity of the portfolio, market interest rates, spreads of new concession of operations, or market spreads – If these were available.
- Held to maturity portfolio: The fair value has been determined based on market prices for those instruments.
- Financial liabilities at amortized cost:
 - a. The fair value of deposits at Central Banks has been assimilated to their carrying amount because they are mainly short-term balances.
 - b. Credit Institutions: Fair value has been obtained using the present value technique by applying interest rates and market spreads.
 - c. Customer deposits: Fair value has been estimated using the present value technique. The estimation has considered factors such as the expected maturity of the operations and the current financing cost of Grupo Santander in similar operations. On demand accounts are not valued.
 - d. Marketable debt securities: Fair value has been determined based on market prices for these instruments, when available, or using the present value technique, by applying interest rates and market spreads.

Additionally, the fair value of Cash, Cash Balances at central banks and other deposits on demand has been assimilated to its carrying amount, mainly because of short-term balances.

49. Risk management

a) Risk principles and culture

The principles on which Grupo and Banco Santander's risk management and control are based are detailed below. They take into account regulatory requirements, best market practices and are mandatory:

1. All employees are risk managers who must understand the risks associated with their functions and not assume risks that will exceed the Bank's risk appetite or have an unknown impact.
 2. Senior managers must make sure the Bank keeps its risk profile within risk appetite, with consistent risk conduct, action, communications, and oversight of our risk culture.
 3. Independent risk management and control functions, according to the three lines of defence model of Grupo and Banco Santander.
 4. Grupo and Banco Santander take a forward-looking, comprehensive approach towards all businesses and risk types.
 5. Grupo and Banco Santander keep thorough and timely reporting to properly pinpoint, assess, manage and disclose risks.
1. Key risk types

Grupo and Banco Santander's risks categorization ensures effective risk management, control and reporting. The risk framework distinguishes these risk types:

- Credit risk relates to financial loss arising from the default or credit quality deterioration of a customer or counterparty, to which Grupo and Banco Santander have directly provided credit or assumed a contractual obligation.
- Market risk results from changes in interest rates, exchange rates, equities, commodities and other market factors, and from their effect on profit or capital. It includes the structural risk relates to market movements or balance sheets behaviour will change the value or profit generation of assets or liabilities in the banking book.
- Liquidity risk occurs if liquid financial resources are insufficient or too costly to obtain in order to meet liabilities when they fall due.
- Capital risk is the risk that arises from the possibility of having an inadequate quantity or quality of capital to meet internal business objectives, regulatory requirements or market expectations in the area of structural risk.

Grupo and Banco Santander also take into account, on an ongoing basis in its management of the risk function, operational (includes fraud, technological, cyber, legal and conduct risks), financial crime (includes, among others, money laundering, terrorism financing, violation of international sanctions, corruption, bribery and tax evasion), model, structural (includes risks associated with insurance and pensions), reputational and strategic risks.

Besides, environmental and climate-related risk drivers are considered as factors that could impact the existing risks in the medium-to-long-term. These elements include, on the one hand, those derived from the physical effects of climate change, generated by one-off events as well as by chronic changes in the environment and, on the other hand, those derived from the process of transition to a development model with lower emissions, including legislative, technological or behaviour of economic agents changes.

Climate change and environmental risk could affect other risks in different time horizons on account of physical damage, as well as factors relating to the transition to a more sustainable economy, such as legislative reform, technology and economic agents. Given the nature of its operations, the Group has no environment-related liabilities, expenses, assets or contingencies of a material relevance to its consolidated equity, financial situation and results.

Most exposures in sectors potentially affected by climate change risk are with wholesale clients, whose preliminary reviews, credit approval and credit ratings take such risk into account. Customers' ratings determine the parameters for calculating loan loss (typically in terms of probability of default or "PD"). Thus, when climate factors are relevant, in conjunction with other elements of analysis, they have an impact on the loan loss calculations which support capital and provisions.

The Group and the Bank also passed the recent regulatory climate stress tests, which had been classified as learning exercises for the industry. Results showed that the Group's and therefore the Bank's coverage for potential losses would be sufficient in view of portfolio maturity over time.

Therefore, based on the best information available at the time these annual financial statements were prepared, the Group and the Bank see no additional environmental or climate change risk having a substantial impact on its equity, financial situation and results in 2022.

Still, this matter is constantly changing, and, like other banks, the Group and the Bank are working on developing more methodologies to better measure potential loan loss in line with new management needs, best practice, and regulators' and supervisors' requirements.

2. Risk and compliance governance

Grupo and Banco Santander robust risk and compliance governance structure allows us to conduct effective oversight in line with our risk appetite. Grupo and Banco Santander stand on three lines of defence, a structure of committees and strong Group-subsiary relations, guided by our risk culture, Risk Pro.

2.1 Lines of defence

Grupo and Banco Santander's model of three lines of defence effectively manages and controls risks:

- First line: formed by business and support areas, which are primarily accountable for managing the risk exposure they originate, recognizes, measures, monitors and reports on risks according to risk management policies, models and procedures. Risk origination must be consistent with the approved risk appetite and related limits.
- Second line: formed by risk and compliance & conduct functions, independently oversees and challenges risk management at the first line of defence to make sure Grupo Santander keeps risks within risk appetite approved by senior management and promote Risk Pro in the Group and the Bank.
- Third line: Internal audit function, is fully independent to give the board and senior managers assurance of high-quality and efficient risk governance and management to preserve our value, solvency and reputation.

Risk, compliance & conduct, and internal audit are sufficiently separate and autonomous functions, with direct access to the board and its committees.

2.2 Risk committee structure

The board of directors has final oversight of risk management and compliance promoting a sound risk culture and reviewing and approving risk appetite and frameworks, with support from its risk, regulation and compliance committee and its executive committee. The Group and the Bank's risk governance keeps risk control and risk-taking areas separate.

The Group chief risk officer (Group CRO), who leads the application and execution of risk strategy and promotes proper risk culture, is in charge of overseeing all risks and challenging and advising business lines on risk management.

The Group chief compliance officer (Group CCO), who handles compliance risk and leads the application and execution of the compliance and conduct risk strategy and provides the Group CRO with a complete overview on the situation of risks being monitored.

The Group CRO and the Group CCO report directly to both the risk supervision, regulation and compliance committee and the board of directors.

The executive risk, risk control and compliance and conduct committees are executive committees with powers delegated from the board.

Furthermore, risk functions have forums and regular meetings to manage and control the risks within their purview. Executive committees also delegate some duties to subordinate forums.

Their responsibilities include:

- Inform the Group CRO, the Group CCO, the risk control committee and the compliance and conduct committee if risks are being managed within risk appetite;
- Regularly monitor each key risk type; and
- Overseeing measures to meet supervisors and auditors' expectations.

Besides, Grupo and Banco Santander, in order to establish an adequate control environment for the management of each risk types, the Risk and Compliance and Conduct functions have effective internal regulation to create the right environment to manage and control all risks.

Grupo and Banco Santander can also implement extra governance measures for special situations, as it did with Brexit and the covid-19 crisis. Since the beginning of the war in Ukraine, Santander has strengthened the monitoring of all risks, with special attention to the situation in Poland, monitoring of macroeconomic performance, vulnerable sectors/customers, cybersecurity, among other. In addition, the compliance team have continuously reviewed the application of the sanctions. Santander has no presence in, or hardly any direct exposure to, Russia and Ukraine. Our special situations governance enabled the Group and the Bank to remain resilient against the consequences of the war in Ukraine.

2.3 The Group's relationship with subsidiaries

Grupo Santander subsidiaries have a model for managing risk, compliance and conduct that is consistent with the frameworks approved by the group's board of directors, which they adhere to through their own boards and can only adapt to higher standards according to local law and regulation.

Furthermore, the Group's aggregate oversight area advises and validates subsidiaries on internal regulation and operations. This reinforces a common risk management model across Santander.

In 2022, Grupo Santander continued to build on our Group-subsidiaries' model through a regional approach, benefiting from the Group's global scale to find synergy for standard operations and platforms; to streamline

processes; and tighten control mechanisms to grow our business.

The Group CRO, the Group CCO and regional heads of risk are involved in appointing, setting objectives for, reviewing and compensating their country-unit counterparts to promote proper risk management. Each subsidiary CRO/CCO interacts regularly with the regional head of risk, the Group CRO and the Group CCO in regional or country control meetings.

Local and global risk and compliance areas also meet to address special matters. Country and regional units work closely to effectively strengthen group-subsidiary relations through these common initiatives:

- Restructuring based on subsidiary benchmarks, strategic vision, and advanced risk management infrastructures and practices.
- Exchange of best practices that will strengthen processes, drive innovation and result in a quantitative impact.
- Search for talent in risk and compliance teams with internal mobility through the global risk talent programme and strong succession plans.

3. Management processes and tools

Grupo and Banco Santander have these effective risk management processes and tools:

3.1 Risk appetite and structure of limits

Risk appetite is the aggregate level and types of risk that Grupo Santander deems prudent for our business strategy, even in unforeseen circumstances. In Grupo and Banco Santander, these principles influence risk appetite:

- Risk appetite is part of the board's duties. It prepares the risk appetite statement (RAS) for the whole Group and the Banks every year. In a cascading down process, each subsidiary's board also sets its own risk appetite.
- Comprehensiveness and forward-looking approach. The Bank's appetite includes of all material risks that Santander are exposed to and defines our target risk profile for the current and medium term with a forward-looking view considering stress scenarios.
- Common standards and embedding in the day-to-day risk management. Common standards and embedding in the day-to-day risk management. The Group and the Bank share the same risk appetite model, which sets common requirements for processes, metrics, governance bodies, controls and standards.. It also ensures an effective and traceable embedding of our appetite into more granular management policies and limits across the Group's subsidiaries, and therefore the Bank.

- Continuous adaptation to market best practices, regulatory requirements and supervisors' expectations.
- Aligning with business plans and strategy. The risk appetite is a key point of reference for strategic and business planning. Grupo Santander The Group and the Bank verify that the three-year strategic plans, the annual budget and capital and liquidity planning are within the limits set in the RAS before Santander approves them.

Grupo and Banco Santander's risk appetite and business model rest on the following elements:

- A medium-low, predictable target risk profile, centred on retail and commercial banking, internationally diversified operations and a strong market share;
- Stable, recurrent earnings and shareholder remuneration, sustained by a sound base of capital, liquidity and sources of funding;
- Autonomous subsidiaries that are self-sufficient in terms of capital and liquidity to ensure their risk profiles won't compromise the Group and the Bank's solvency;
- An independent Risk function and a senior management actively engaged in supporting a robust control environment and risk culture; and
- A conduct model that protects our customers and our Simple, Personal and Fair culture.

The risk appetite is expressed through qualitative statements and limits on metrics representative of the bank's risk profile at present and under stress. Those metrics cover all risk types according to our corporate risk framework. Grupo Santander articulates them in five axes that provide the Bank with a holistic view of all risks it incurs in the development of its business model. These five axes are applicable to all Santander's key risk types, and comprise:

- P&L volatility: Control of P&L volatility of business plan under baseline and stressed conditions (aligned with ICAAP stress test)
- Solvency: Control of capital ratios under baseline and stressed scenarios (aligned with ICAAP)
- Liquidity: Control of liquidity ratios under base and stress scenarios (aligned with ILAAP)
- Concentration: Control of credit concentration on top clients, portfolios and industries
- Non financial: Control on non financial risks aimed to minimize events which could lead to financial loss, operative, technological, legal and regulatory breaches, conduct issues or reputational damage.

b) Credit risk

1. Introduction to the credit risk treatment

Credit risk is the risk of financial loss due to the failure to pay or impaired credit of a customer or counterparty. Grupo and Banco Santander have financed or maintains a contractual obligation with. It includes counterparty risk, country risk and sovereign risk. It is the Bank's most significant risk in terms of exposure and capital consumption.

Credit risk management

Grupo and Banco Santander take a holistic view of the credit risk cycle, including the transaction, the customer and the portfolio, in order to identify, analyse, control and decide on credit risk.

Credit risk identification facilitates active and effective portfolio management and control. Grupo and Banco Santander classify external and internal risk in each business to adopt any corrective or mitigating measures through:

1.1. Planning

Grupo and Banco Santander's planning helps to set business targets and draw up action plans within our risk appetite statement.

Strategic commercial plans (SCP) are a management and control tool the business and risk areas prepare for Grupo and Banco Santander's credit portfolios. They determine commercial strategies, risk policies, resources and infrastructure, ensuring a holistic view of the portfolios.

They provide managers with an updated view of portfolio credit quality to measure credit risk, run internal controls to regularly monitor credit strategy detect significant risk deviation and potential impacts, and take corrective action.

They are suited to the Grupo and the Bank's risk appetite and subsidiaries' capital targets, having been reviewed and pre-approved by senior managers before Group management revises and validates them.

1.2. Risk assessment and credit rating

Risk approval generally depends on the applicant's ability to repay the debt, regardless of any collateral or personal guarantees the Bank requires. Grupo and Banco Santander reviews their regular sources of income, including funds and net cash flows from any businesses.

Grupo and Banco Santander monitor credit rating drivers to calibrate the decisions and ratings that the Group's and the Bank's credit quality assessment models determine. Risk management uses these ratings for many things like applying approval limits, pre-approvals, monitoring risk, and policies on pricing credit.

The Group and the Bank then use rating models to measure ability to pay. Depending on each segment, credit rating drivers can be

- Rating: from mathematical algorithms that have a quantitative model based on balance sheet ratios or macroeconomic variables, and a qualitative module supplemented by the credit analyst's expert judgement. It is used for SCIB, corporate, institutional and SME segments (with individualised treatment).
- Scoring: system of automatic evaluation of loan applications. It automatically assigns customers an individual score retail on which the subsequent decision is based. It is used for SME segments without an assigned analyst.

Grupo and Banco Santander's parameter estimation models, based on econometric models of past defaults and losses, calculate economic and regulatory capital as well as Bank of Spain circular 4/2017 provisions for each customer portfolio.

Grupo and Banco Santander regularly monitors and evaluates models' suitability, predictive capacity, performance, granularity, and compliance with policy, among other factors. Grupo and Banco Santander review ratings with the latest financial and other relevant information to assess credit risk due to depreciation caused by customers' lower creditworthiness and manage credit portfolios according to the risk appetite and profile target set out in SCPs, with exposure limits adjusted to an acceptable level for each portfolio and counterparty and for new loan originations.

Grupo and Banco Santander use SCPs to manage credit portfolios, defining limits for each of them and for new originations, in line with the Group and the Banks's credit risk appetite and its target risk profile. Transposing the risk appetite to portfolio management strengthens controls over our credit portfolios.

Grupo and Banco Santander's limits, pre-classifications and pre-approvals processes, which are highly automated and digitalized, determine the risk Grupo and Banco Santander can assume with each customer. Limits are approved by the executive risk committee (or delegated committees) and should reflect a transaction's expected risk-return. The Group and the Bank also uses risk-based pricing tools to make sure portfolio growth is sustainable.

Grupo and Banco Santander apply various limits models to each segment:

- Large corporate groups are subject to a pre-classification model based on a system for measuring and monitoring economic capital. Pre-classification models express the level of risk Grupo and Banco Santander are willing to assume in transactions with customers/groups.
- Corporates and institutions that meet certain requirements (strong relationships, rating, etc.) are subject to a simpler pre-classification model that sets a recommended risk level for each customer. Transactions above certain limits or with special characteristics could require approval from a senior credit analyst or a committee.

Transactions with large corporates, corporates and institutions above certain limits or with special characteristics could require approval from a senior credit analyst or a committee.

- For individual customers and SMEs with low turnover, Grupo Santander manages large volumes of credit transactions with automatic decision models to classify customers and transactions.

1.3. Scenario analysis

Grupo and Banco Santander's scenario analyses determine the potential risks in its credit portfolios and provide a better understanding of our portfolios' performance under various macroeconomic conditions.

They allow us to anticipate management strategies that will avoid future deviations from defined plans and targets. They simulate the impact of alternative scenarios in portfolios' credit parameters (PD, LGD) and expected credit losses. Grupo Santander compares findings with portfolios' credit profile indicators to find the right measures for managers to take. Credit risk management of portfolios and SCPs incorporate scenario analyses.

1.4. Monitoring

Regularly monitoring business performance and comparing it to pre-defined plans is key to our management of risk. Grupo and Banco Santander's holistic monitoring of customers helps detect impacts on risk performance and credit quality early.

The monitoring process considers projections on the performance of the operations and their characteristics, in addition to any variation in their classification. Anticipation and preventive monitoring uses transactional data sources and advanced analytics (early warning engine) which determines specific actions at the client level, based on the assigned monitoring classification.

Monitoring is performed by local and global risk teams and is based on customer segmentation:

- For SCIB, monitoring is initially a function of business managers and risk analysts which provide an up-to-date view of customers' credit quality to predict a potential customer's deterioration.
- For commercial banking, institutions and SMEs assigned a credit analyst, Grupo and Banco Santander track customers requiring closer monitoring and review their ratings based on relevant indicators.
- Monitoring of individual customers, businesses and smaller SMEs follows a system of automatic alerts to detect shifts in portfolios' performance.

Monitoring uses the Santander Customer Assessment Note (SCAN) tool. Grupo and Banco Santander fully rolled it out in our subsidiaries in 2019. It helps set individual monitoring levels and frequencies, policies, and actions for customers based on credit quality and particular circumstances.

In addition to monitoring customer credit quality, Grupo and Banco Santander defines control procedures to analyse portfolios and performance, as well as any deviations from planning or approved alert levels.

1.5. Credit risk mitigation techniques

Grupo and Banco Santander generally approves risk according to a borrower's ability to make due payment, regardless of any additional collateral or personal guarantees Santander may require to modulate exposure.

To determine ability to pay, the Group and the Bank analyse funds or cash flows from businesses or other regular income, not including guarantors or loan collateral which are always considered as a secondary means of recourse.

In general, guarantees are to reinforce a credit transaction and mitigate a loss if the borrower defaults. The Group and the Bank techniques to mitigate credit risk cover various types of customer and product. Some are for specific transactions (e.g. property) or a series of transactions (e.g. derivatives netting and collateral). The Group and the Bank groups them by personal guarantees (with a solvent guarantor), collateral (mainly in primary residence mortgages) and hedges with credit derivatives.

The correct acceptance of these mitigation techniques is established by ensuring their legal enforceability in all jurisdictions. The entire process is subject to internal control and effective monitoring of the valuation of the guarantees, especially mortgages.

1.6. Collections & recoveries management

Collections & recoveries, an important area in risk management, develops a global management strategy based on local economic conditions, business models and other recovery-related particulars, with a full approach and general action lines for our subsidiaries. Recovery management follows regulatory requirements set out in the EBA Guidelines on the management of non-performing and forborne exposures.

For effective and efficient recoveries management, the area segments customers based on certain aspects, using new digital channels that help create value in Collections & Recoveries. It follows hi-tech, digital procedures to handle large groups of similar customer profiles and products; but it also adapts management for customers who need an assigned manager and tailored approach.

Collections & Recoveries splits recoveries into four phases: arrears/early delinquency, default, write-offs and foreclosed assets. To recover debt, the Group and the Bank always seek alternatives to court action, like forbearance and other arrears management techniques.

Grupo and Banco Santander also review debt instruments individually and treat them as write-offs (even when they're not past due) if the Group and the Bank sees signs of irreversible impairment that suggest recovery to be remote. Though this may lead us to cancel all or part of the gross carrying amount, the Group and the Bank never interrupt negotiations and legal proceedings to recover debt.

In markets where the real estate risk exposure is high, Grupo and Banco Santander can take action to quickly dispose of assets, like selling off portfolios or foreclosed assets with efficient sales instruments to recover as many on-balance-sheet assets as possible.

2. Main aggregates and variations

Following are the main aggregates relating to credit risk from our activities with customers:

Main credit risk performance metrics from activity with customers^A

December data

	Credit risk with customers (EUR million) ^B		Credit impaired loans (EUR million)		NPL ratio (%)	
	2022	2021	2022	2021	2022	2021
Europe	639,996	636,123	15,186	19,822	0.02	0.03
Spain	293,197	283,953	9,598	13,403	0.03	0.05
UK	253,455	262,869	3,059	3,766	0.01	0.01
Portugal	41,755	41,941	1,247	1,442	0.03	0.03
Poland	33,350	33,497	1,268	1,210	0.04	0.04
North America	185,614	149,792	5,629	3,632	0.03	0.02
US	140,452	112,808	4,571	2,624	0.03	0.02
Mexico	45,107	36,984	1,047	1,009	0.02	0.03
South America	167,348	141,874	10,381	6,387	0.06	0.05
Brazil	101,801	85,702	7,705	4,182	0.08	0.05
Chile	47,811	41,479	2,384	1,838	0.05	0.04
Argentina	5,844	5,481	122	198	0.02	0.04
Digital Consumer Bank	125,339	116,989	2,583	2,490	0.02	0.02
Corporate Centre	5,824	6,337	894	903	0.15	0.14
Total Group	1,124,121	1,051,115	34,673	33,234	0.03	0.03

A. Management perimeter according to the reported segments

B. Includes gross lending to customers, guarantees and documentary credits.

Key figures by geographic region are described below at 31 December 2022:

- Europe: The NPL ratio fell 75 bps to 2.37% from 2021 because impaired loans decreased significantly in the UK, and in Spain and Portugal due to the NPL portfolio sales.
- North America: The NPL ratio increased 61 bps to 3.03% from 2021, mainly due to increases at SC USA motivated by the new definition of default.
- South America: The NPL ratio rose 170 bp from 2021 to 6.20%, due to increases in Brazil (mainly due to the retail unsecured portfolio performance and a single name in SCIB) and Chile, offset by the decrease in Argentina.
- Digital Consumer Bank: The NPL ratio decreased 7 bps to 2.06%, despite the decrease in automobile financing.

All support measures (moratoria) that the Group and the Bank took in response to the covid-19 pandemic have expired, with positive behaviour thanks to economic recovery in 2021, and improved sanitary-health environment in our main geographies. Government liquidity programmes also remained in force in 2022, of which 77% of total credit granted was in Spain (77% was secured by the Instituto de Crédito Oficial - ICO), and

12% of total credit was in the UK, with 98% government-secured.

In the case of delinquent operations with ICO guarantee, the transfer of the overdue guaranteed amounts will take place as the guarantee is executed, regardless of whether the guarantor is subrogated to the right to receive said amounts, according to the regulation of these guarantees. The derecognition of the transferred guaranteed amounts will entail the recognition, at its fair value, of a collection right against the guarantor.

In addition, the Group and the Bank are following the measures launched by the governments of Spain, Portugal and Poland, aimed at relieving the mortgage payment burden for vulnerable customers after the increase in interest rates.

Information on the estimation of impairment losses

The calculation of credit risk provisions is performed at financial asset level, estimating potential credit losses through the difference between the expected cash flows and the contractual cash flows, ensuring that the results are adequate considering the status of the transaction, economic conditions and available forward-looking information.

The Bank of Spain circular 4/2017 impairment model applies to financial assets valued at amortized cost; debt instruments valued at fair value with changes in other

comprehensive income; leasing receivables; and commitments and guarantees not valued at fair value.

The portfolio of financial instruments subject to the Bank of Spain circular 4/2017 has three credit risk categories (or stages) according to the status of each instrument in relation to its level of credit risk:

- Stage 1: financial instruments with no significant increase in risk since initial recognition – the impairment provision reflects expected credit losses from defaults over the twelve months from the reporting date.
- Stage 2: financial instruments with a significant credit risk increase since initial recognition but no materialized impairment event – the impairment provision reflects expected losses from defaults over the financial instrument's residual life.
- Stage 3: financial instruments with true signs of impairment as a result of one or more events resulting in a loss – the impairment provision reflects expected losses for credit risk over the instrument's expected residual life.

The classification of financial instrument in the Bank of Spain circular 4/2017 stages is carried out in accordance with the guidelines through the risk management policies of the Bank, which are consistent with the Group's policies.

Estimation of expected loss

Grupo and Banco Santander calculate impairment losses using parameters (mainly EAD, PD, LGD and discount rate) based on internal models, the stage in which each financial asset is classified, and regulatory and management expertise. Far from being a simple adaptation, the Bank defined and validated them according to specific requirements of Bank of Spain Circular 4/2017 and other guidelines by regulators, supervisors and other international organizations (EBA, NCAs, BIS, GPPC, etc.), such as forward-looking information, point-in-time (PIT) vision, multiple scenarios, calculation of losses for the entire life of the transaction through lifetime PD, etc.

Determination of significant increase in credit risk

In order to determine the classification in stage 2, the Group and the Bank assess whether there has been a significant increase in credit risk (SICR) since the initial recognition of the transactions, considering a series of common principles throughout the Bank that guarantee that all financial instruments are subject to this assessment, which considers the particularities of each portfolio and type of product on the basis of various quantitative and qualitative indicators. Furthermore, transactions are subject to the expert judgement of the analysts, who set the thresholds under an effective integration in management and implemented according to the approved governance.

The criteria thresholds used by the Bank are based on a series of principles, and develop a set of techniques. The principles are as follows:

- Universality: all financial instruments subject to a credit rating must be assessed for their possible SICR.
- Proportionality: the definition of the SICR must take into account the particularities of each portfolio.
- Materiality: its implementation must be also consistent with the relevance of each portfolio so as not to incur in unnecessary costs or efforts.
- Holistic vision: the approach selected must be a combination of the most relevant credit risk aspects (e.g. quantitative and qualitative).
- Application of IFRS 9 and Bank of Spain Circular 4/2017: the approach must take into consideration IFRS 9 and Bank of Spain Circular 4/2017 characteristics, focusing on a comparison with credit risk at initial recognition, as well as considering forward-looking information.
- Risk management integration: the criteria must be consistent with those metrics considered in the day-to-day risk management.
- Documentation: Appropriate documentation must be prepared.

The techniques are summarised below:

- Stability of stage 2: in the absence of significant changes in the portfolios credit quality, the volume of assets in stage 2 should maintain a certain stability as a whole.
- Economic reasonableness: at transaction level, stage 2 is expected to be a transitional rating for exposures that could eventually move to a deteriorating credit status at some point or stage 3, as well as for exposures that have suffered credit deterioration and whose credit quality is improving and returns to stage 1.
- Predictive power: it is expected that the SICR definition avoids, as far as possible, direct migrations from stage 1 to stage 3 without having been previously classified in stage 2.
- Time in stage 2: it is expected that the exposures do not remain categorized as stage 2 for an excessive time.

The application of the aforementioned techniques, conclude in the setting of one or several thresholds for each portfolio in each geography. Likewise, these thresholds are subject to a regular review by means of calibration tests, which may entail updating the thresholds types or their values.

Identifying a significant increase in credit risk: when classifying financial instruments under stage 2, Banco Santander considers:

- Quantitative criteria: Banco Santander reviews and quantifies changes in the risk of default during their expected life based on their credit risk level on initial recognition.
- To recognize significant changes so instruments can be classified in stage 2, each subsidiary set quantitative thresholds for its portfolios based on Santander's guidelines for consistent interpretation across all our footprint.

Of those quantitative thresholds, Banco Santander considers two: the relative threshold, which shows the difference in credit quality since the transaction was approved as a percentage of change; and the absolute threshold, which calculates the total difference in credit quality. All subsidiaries apply them (with different values) in the same manner. The use of one or both depends on portfolio type and other aspects, such as the starting point for average credit quality.

- Qualitative criteria: Several indicators aligned with ordinary credit risk management indicators (e.g. past due for over 30 days, forbearance, etc.). Each subsidiary defined these criteria for its portfolios. The Bank supplements these qualitative criteria with expert opinions.

When the presumption of a significant deterioration of credit risk is removed, due to a sufficient improvement of the credit quality, the obligor can be re-classified to Stage 1, without any probationary period in Stage 2.

- Definition of default: Grupo and Banco Santander incorporated the new definition to provisions calculation according to the EBA's guidelines; the Bank is also considering applying it to prudential framework. In addition, the default definition and stage 3 have been aligned.

This definition considers the following criteria to classify exposures as stage 3: financial instruments with one or more payments more than 90 consecutive days past due, representing at least 1% of the client's total exposure or the identification of other criteria demonstrating, even in the absence of defaults, that it is unlikely that the counterparty is unlikely to meet all of its financial obligations.

The Group and the Bank apply the default criteria to all exposures of the impaired client. Where an obligor belongs to a group, the default criteria may also be applied to all exposures of the group.

The default classification is maintained during the 3-month test period following the disappearance of all default indicators described above, and this period is

extended to one year for forbearances that have been classified as default.

- Expected life of financial instruments: Grupo and Banco Santander estimate the expected life of financial instruments according to their contractual terms (e.g. prepayments, duration, purchase options, etc.).

The contractual period (including extension options) is the maximum time frame for measuring the expected credit loss. If financial instruments have an undefined maturity period and available balance (e.g. credit cards), the Group and the Bank estimates their expected life based on the total exposure period and effective management practices to mitigate exposure.

The context and monitoring of the expected credit loss was analysed and reviewed during the health crisis by covid-19, and was reinforced with collective analysis, monitoring of government measures, monitoring of the evolution of the Group and the Bank's customers, as well as remedial management actions if necessary. In terms of classification, Grupo and Banco Santander have maintained the criteria and thresholds for classification applied prior to the start of the pandemic, eliminating regulatory criteria of the effect of moratorium classification as they have expired, as well as the collective analyses associated with these groups of loans.

Regarding moratorium measures, a rigorous identification and periodic monitoring of the credit quality of the clients and their payment behaviour have been carried out and, through a specific individual or collective evaluation, the timely detection of the significant increase in credit risk.

At the end of December 2022 the credit risk provisions not included any special measures or adjustments in relation to health crisis by covid-19.

1. Forward-looking vision

To estimate expected losses, Grupo and Banco Santander require a great deal of expert analysis as well as past, present and future data. The Group and the Bank quantify expected losses from credit events using an unbiased, weighted consideration of up to five future scenarios that could affect our ability to collect contractual cash flows. These scenarios take into account the time value of money, the relevant information available about past events and current conditions, and projections of macroeconomic factors that are considered important to estimate this amount (e.g. GDP, house prices, rate of unemployment, among others).

Grupo and Banco Santander use forward-looking information in internal management and regulatory processes under several scenarios. The Bank's guidelines and governance ensure synergy and consistency between these different processes.

2. Additional elements

Additional elements will be required when necessary because they have not been captured under the two previous elements. This has included, among others, the analysis of sectors most affected if their impacts are not sufficiently captured by the macroeconomic scenarios. Also collective analysis techniques, when the potential impairment in a group of clients cannot be identified individually.

With the elements indicated above, Grupo and Banco Santander have evaluated the evolution of the credit quality of its customers, for the purposes of their classification in Grupo Santander financial statements.

Management overlays

During the 2022, the Group has used, through its process of updating forward looking information and recalibration of parameters, the overlay related to government support measures in various countries that the Group had established as of December 31, 2021 for an amount of 1,232 millions of euros. At the end of 2022, Grupo Santander has EUR 1,471 million as management overlays that include, among others, those destined to cover the uncertainties resulting from the war in Ukraine and the current macroeconomic context.

Exposure and impaired losses

Then, considering the most relevant units of the Group (United Kingdom, Spain, United States, Brazil, also Chile, Mexico, Portugal, Poland, Argentina and Santander Consumer Finance), which represent approximately 96% of the total Group's provisions. The table below shows the impairment losses associated with each stage as of 31 December 2022, 2021 and 2020. In addition, depending on the transactions credit quality, the exposure is divided into four categories according to Standard & Poor's rating scale:

Exposure and impairment losses by stage

EUR million				
2022				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	172,440	1,506	—	173,946
From A+ to BB	394,084	10,601	—	404,685
From BB- to B-	272,456	32,653	—	305,109
CCC and below	11,799	21,436	32,608	65,843
Total exposure^B	850,779	66,196	32,608	949,583
Impairment losses^C	3,807	5,195	13,852	22,854

Exposure and impairment losses by stage

EUR million				
2021				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	188,434	1,844	—	190,278
From A+ to BB	377,008	11,954	—	388,962
From BB- to B-	233,779	44,292	—	278,071
CCC and below	3,746	11,878	30,711	46,335
Total exposure^B	802,967	69,968	30,711	903,646
Impairment losses^C	4,149	5,103	12,873	22,125

A. Detail of credit quality ratings calculated for Group management purposes.

B. Total exposure includes loan balances (drawn amounts) and off balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.

C. Includes provisions for undrawn authorized lines (loan commitments).

The remaining units that form the totality of the Group exposure, contributed EUR 123,796 million in stage 1; EUR 2,902 million in stage 2, and EUR 2,064 million in stage 3 (in 2021 EUR 102,631 million in stage 1; EUR 1,870 million in stage 2, and EUR 2,522 million in stage 3), and impairment losses of EUR 147 million in stage 1; EUR 123 million for stage 2, and EUR 294 million in stage 3 (in 2021, EUR 408 million, EUR 322 million and EUR 841 million in stage 1, stage 2 and stage 3, respectively).

The remaining exposure, including all financial instruments not included before, amounts to EUR 538,364 million (EUR 349,228 million in 2021) and it includes all undrawn authorized lines (loan commitments).

As of 31 December 2022, the Group had EUR 322 million net of provisions (EUR 420 million and EUR 497 million at 31 December 2021) of purchased credit-impaired assets, which relate mainly to the business combinations carried out by the Group.

Regarding the evolution of credit risk provisions, Grupo and Banco Santander, in collaboration with the main geographical areas, monitors them by carrying out sensitivity analyses considering changes in macroeconomic scenarios and main variables that have an impact on the financial assets distribution in the different stages and calculating credit risk provisions.

Additionally, based on consistent macroeconomic scenarios, Grupo and Banco Santander also perform stress tests and sensitivity analysis in a regular basis, such as ICAAP, strategic plans, budgets and recovery and resolution plans. In this sense, a prospective view of the sensitivity of each of the Group's loan portfolio is created in relation to the possible deviation from the base scenario, considering both the macroeconomic developments in different scenarios and the three year evolution of the business. These tests include potentially adverse and favourable scenarios.

3.Detail of the main geographical areas

Following is the risk information relating to the geography of Grupo España portfolio in terms of exposure and risk allowances.

This information includes sensitivity analysis, consisting on simulations of +/-100 bp in the main macroeconomic variables. A set of specific and complete scenarios is used in each geography, where different shocks that affect both the reference variable as well as the rest of the parameters is simulated. These shocks collect mainly the most relevant risks and may be originated by productivity, tax, wages or exchange and interest rates factors.

Sensitivity is measured as the average variation on expected loss corresponding to the aforementioned movement of +/-100 bp. Following a conservative approach, the negative movements take into account one additional standard deviation in order to reflect the potential higher variability of losses.

3.1. Spain

Portfolio overview

Santander España's credit risk totalled EUR 293,197 million (26% of Grupo Santander's total). It is appropriately diversified among products and customer segments.

The macroeconomic outlook is marked by an environment of high uncertainty, where there are also factors that have an opposite influence. Positive factors, such as the reactivation of tourism after the end of the pandemic was declared together with a better than expected macro economic performance, and negative factors such as high inflation and the rise in interest rates that will affect the purchasing power of families.

In this context, the activity had a different behaviour between segments, since it grew significantly in consumer credit and large corporates, but it remained stable in mortgages and decreased significantly in SMEs, as customer positions were maintained in the support and liquidity programs (financing lines of the Official Credit Institute - ICO) without having to require new financing.

Total credit risk increased 3.3% from December 2021. The ICO loans that were granted as a result of the pandemic (EUR 25,428 million) maintain a high weight in this segment.

The credit portfolio's NPL ratio was 3.27%, 145 lower than in December 2021. This better overall portfolio performance was driven by customer support programmes, the regularization of several restructured positions and portfolio sales.

The NPL coverage ratio remained at 51%. The cost of credit was reduced to 0.61% (-31 bps vs. December 2021).

Information on the estimation of impairment losses

The detail of Santander Spain exposure and impairment losses associated with each of the stages at 31 December, 2022, 2021 and 2020, is shown below. In addition, the exposure is divided in four tranches of the Standard & Poor's rating scale, according to their current credit quality:

Exposure and impairment losses by stage

EUR million				
2022				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	37,133	447	—	37,580
From A+ to BB	107,667	282	—	107,949
From BB- to B-	46,296	6,388	—	52,684
CCC and below	253	5,234	8,893	14,380
Total exposure^B	191,349	12,351	8,893	212,593
Impairment losses^C	507	666	3,472	4,645

Exposure and impairment losses by stage

EUR million				
2021				
Credit quality ^A	Stage 1	Stage 2	Stage 3	Total
From AAA to AA-	43,978	352	—	44,330
From A+ to BB	109,142	555	—	109,697
From BB- to B-	33,104	11,716	—	44,820
CCC and below	129	3,024	12,761	15,914
Total exposure^B	186,353	15,647	12,761	214,761
Impairment losses^C	422	580	5,005	6,007

- Detail of credit quality ratings calculated for Group management purposes. Excluding the SCIB branches business
- Total exposure includes loan balances (drawn amounts) and off balance (letters of credit + guarantees) and excludes REPOs, FV portfolio, trading portfolio and undrawn commitments.
- Includes provisions for undrawn authorized lines (loan commitments).

From the information detailed above, Banco Santander, S.A. reaches a total gross exposure of EUR 342,681 million in the heading of financial assets at amortized cost (see note 6 and 10) and EUR 122,374 million in loan commitments granted for off-balance sheet exposures (see note 31) Impairment losses amount to EUR 4.716 and EUR 220 million, respectively. (The amount of losses due to impairment of off-balance sheet exposures includes the coverage of financial guarantees and other commitments granted in addition to the aforementioned loan commitments).

For the estimation of the expected losses, the prospective information is taken into account. Specifically, Santander Spain considers three macroeconomic scenarios, which are updated periodically. The projected evolution for a period of five years of the main macroeconomic indicators used by Santander Spain for estimating expected losses as of 2022, is presented below:

Variables	2023-2027		
	Pessimistic scenario	Base scenario	Optimistic scenario
Interest rate	2.6 %	2.3 %	2.0 %
Unemployment rate	16.6 %	12.2 %	10.7 %
Housing price change	2.3 %	3.3 %	3.8 %
GDP growth	0.5 %	2.0 %	3.3 %

Each macroeconomic scenarios is associated with a given weight. As for its allocation, Santander Spain associates the Base scenario with the highest weight, while associating the lower weights to the most extreme scenarios:

	2022	2021
Pessimistic scenario	30%	30%
Base scenario	40%	40%
Optimistic scenario 1	30%	30%

The sensitivity analysis of the main portfolios expected loss to variations of +/-100 bp for the macroeconomic variables used in the construction of the scenarios is as follows:

	Change in Provision		
	Mortgages	Corporates	Others
GDP Growth			
-100 bp	10.9 %	4.7 %	3.9 %
100 bp	(5.4)%	(2.9)%	(2.7)%
Housing price change			
-100 bp	4.4 %	2.6 %	3.4 %
100 bp	(3.6)%	(2.0)%	(2.3)%

In relation to the previously mentioned management overlays, Spain has constituted EUR 274 million.

With regards to the stage 2 classification determination, the quantitative criteria applied in Santander Spain are based on identifying whether an increase in the PD for the expected lifetime of the transaction when compared to the one at its origination is greater than an absolute threshold. The threshold established is different for each portfolio based on the transactions characteristics, considering that a transaction is above this threshold when the PD for the life of the transaction increases by a certain quantity over the initial recognized PD. The values of these thresholds depend on their calibration, carried out periodically as indicated in the preceding paragraphs, which currently ranges from 25% to 1%, depending on the type of product and estimated sensitivity. Regarding the relative threshold, all operations that exceed 200% belonging to customers with good credit quality (internal rating greater than 4) will be classified in stage 2 if they also exceed the absolute threshold. On the other hand, those customer contracts with a worse credit quality will be classified in stage 2 if it exceeds the relative threshold or the absolute threshold.

In the case of non-retail portfolios, Santander Spain uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting absolute thresholds for the different rating bands that depend on each portfolio characteristics. A SICR implies changes in the rating value between 0.1 and 4, depending on the portfolio and the estimated sensitivity (from lower to higher credit quality, the rating range goes from 1 to 9.3).

In addition, for each portfolio, a series of specific qualitative criteria are defined indicating that the exposure experienced a significant increase in credit risk, regardless of the evolution of its PD since the time of initial recognition. Santander Spain, among other criteria, considers that an operation presents a significant increase in credit risk when positions have been past due for more than 30 days. These criteria depend on the risk management practices of each portfolio.

Residential mortgage portfolio

Residential mortgages in Spain, including Santander Consumer Finance business, amounted to EUR 63,688 million in 2022 (EUR 62,324 million in 2021) 99.55% of which have a mortgage guarantee (99% in 2021).

EUR million

	2022			
	Santander Group Spain		Of Which, Banco Santander, S.A.	
	Gross amount	Of which: impaired	Gross amount	Of which: Non-performing
Home purchase loans to families	63,688	1,088	62,472	1,032
<i>Without mortgage guarantee</i>	288	24	289	24
<i>With mortgage guarantee</i>	63,400	1,064	62,183	1,008

EUR million

	2021			
	Santander Group Spain		Of Which, Banco Santander, S.A.	
	Gross amount	Of which: impaired	Gross amount	Of which: Non-performing
Home purchase loans to families	62,324	1,860	60,947	1,798
<i>Without mortgage guarantee</i>	419	115	418	115
<i>With mortgage guarantee</i>	61,905	1,745	60,529	1,683

The mortgage portfolio for the acquisition of homes in Spain is characterised by its medium-low risk profile, which limits expectations of any potential additional impairment:

- Principal is repaid on all mortgages from the start.
- Early repayment is common so the average life of the transaction is well below that of the contract.
- High quality of collateral, concentrated almost exclusively in financing for first homes.
- The average affordability rate stood at 26% (27% in 2021).
- The 93% of the portfolio has a LTV below 80% calculated as total risk/latest available house appraisal.

Breakdown of the credit with mortgage guarantee to households for house acquisition, according to the percentage that the total risk represents on the amount of the latest available valuation (loan to value):

EUR million

	2022					Total
	Loan to value ratio					
	Less than or equal to 40%	More than 40% and less than 60%	More than 60% and less than 80%	More than 80% and less than or equal to 100%	More than 100%	
Santander Group						
Gross amount	17,877	20,617	20,225	3,294	1,387	63,400
Of which impaired	132	192	220	181	339	1,064
Of which, Banco Santander, S.A.						
Gross amount	17,577	20,302	20,007	3,125	1,172	62,183
Of which, impaired	128	183	209	172	316	1,008

In November 2022, Royal Decree-Law 19/2022 was published, which establishes a Code of Good Practices in response to the rise in interest rates on mortgage loans for primary residences and Royal Decree-Law 6/2012 of protection measures for mortgage debtors without resources. The entity is analysing the plausible impact based on different adherence hypotheses. The code of good practices is focused on extending the term of the operations (aids ranging between 2 and 7 years of extension).

Corporate & SME financing

Credit risk with SME and corporates in commercial banking amounted to EUR 112,255 million, 2.3% lower than in December 2021, mainly due to the fall in the portfolio of SMEs of 4.3%. This is Santander Spain's main lending segment, accounting for 39% of the total, at the level of CIB portfolio, which in 2022 has come to include branches in Europe.

Most of the portfolio corresponds to clients who have been assigned a credit analyst, who performs continuous management of said clients during all phases of the risk cycle.

The portfolio is broadly diversified and not concentrated by sector of activity. 2021 was a year of stability in the portfolio figures after the significant growth in 2020 due to the liquidity support programmes (ICO), which after the initial grace period have begun to be amortised.

The portfolio's NPL ratio stood at 5.79% in December 2022. The NPL ratio decreased by 171 bps compared to December 2021, due to a reduction in the delinquency stock in SMEs, due to the proactive management of delinquent positions with the support of portfolio sales.

Real estate activity

Santander has specialized teams that are in charge of managing real estate business production and risk areas that cover the entire life cycle of these operations.

The changes in gross property development loans to customers were as follows:

EUR million	2022	2021
Balance at beginning of year	2,625	2,871
Foreclosed assets	—	(1)
Reductions*	(295)	(230)
Written-off assets	(3)	(15)
Balance at end of year	2,327	2,625

The NPL ratio of this portfolio ended the year at 4.04% (compared with 5.07% and 6.13% at December 2021 and 2020, respectively) due to the decrease of non-performing assets in the troubled loan portfolio and, in particular, to the sharp reduction in lending in this segment. The table below shows the distribution of the portfolio. The coverage ratio of the real estate doubtful exposure in Spain stands at 35.11% (30.08% and 32.95% in 2021 and 2020, respectively).

EUR million

	2022						
	EUR Million	Santander Group			Of which, Banco Santander, S.A.		
		Gross amount	exposure over maximum recoverable amount of effective	Specific allowance	Gross amount	Excess of gross exposure over maximum recoverable amount	Specific allowance
Financing for construction and property development (including land) (business in Spain)	2,327	211	44	2,337	211	44	
<i>Of which impaired</i>	94	21	33	94	21	33	
Memorandum items written-off assets	487	—	—	487			

Memorandum items: Data from the public balance sheet

EUR million

	2022	
	Carrying amount	
	Santander Group	Of which, Banco Santander, S.A.
Total loans and advances to customers excluding the Public sector (business in Spain) (Book value)	250,702	246,748
Total consolidated assets (Total business) (Book value)	1,734,659	750,026
Impairment losses and credit risk allowances. Coverage for unimpaired assets (business in Spain)	1,311	1,328

At year-end, the distribution of this portfolio was as follows:

EUR Million

	Loans: Gross amount	
	Santander Group	Of which, Banco Santander, S.A.
1. Without mortgage guarantee	43	42
2. With mortgage guarantee	2,285	2,295
2.1 Completed buildings	1,138	1,139
2.1.1 Residential	674	674
2.1.2 Other	464	465
2.2 Buildings and other constructions under construction	1,110	1,119
2.2.1 Residential	1,103	1,112
2.2.2 Other	7	7
2.3 Land	37	37
2.3.1 Developed consolidated land	25	25
2.3.2 Other land	12	12
Total	2,328	2,337

Policies and strategies in place for the management of these risks

The policies in force for the management of this portfolio are periodically reviewed and approved on a regular basis by Santander's senior management.

As has already been disclosed in this section, the Group and the Bank's anticipatory management of these risks enabled it to significantly reduce its exposure, and it has a granular, geographically diversified portfolio in which the financing of second residences accounts for a very small proportion of the total.

Mortgage lending on non-urban land represents a low percentage of mortgage exposure to land, while the remainder relates to land already classified as urban or approved for development.

The significant reduction of exposure in the case of residential financing projects in which the construction work has already been completed was based on various actions. As well as the specialised marketing channels already in existence, campaigns were carried out with the support of specific teams of managers for this function who, in the case of the Santander network, were directly supervised by the recoveries business area. These campaigns, which involved the direct management of the projects with property developers and purchasers, reducing sale prices and adapting the lending conditions to the buyers' needs, enabled loans already in force to be subrogated. These subrogations enable to diversify its risk in a business segment that displays a clearly lower non-performing loans ratio.

In the case of construction-phase projects that are experiencing difficulties of any kind, the policy adopted is to ensure completion of the construction work so as to obtain completed buildings that can be sold in the market. To achieve this aim, the projects are analysed on a case-by-case basis in order to adopt the most effective series of measures for each case (structured payments to suppliers to ensure completion of the work, specific schedules for drawing down amounts, etc.).

For the real estate business production, the admission processes are managed by specialized teams that work in direct coordination with the commercial teams, with clearly defined policies and criteria:

- Property developers with a robust solvency profile and a proven track record in the market.
- Medium-high level projects, conducting to contracted demand and significant cities.
- Strict criteria regarding the specific parameters of the transactions: exclusive financing for the construction cost, high percentages of accredited sales, principal residence financing, etc.
- Support of financing of government-subsidised housing, with accredited sales percentages.
- Restricted financing of land purchases dealt with exceptional nature.

In addition to the permanent control performed by its risk monitoring teams, the Group has a specialist technical unit that monitors and controls this portfolio with regard to the stage of completion of construction work, planning compliance and sales control, and validates and controls progress billing payments. The Group has created a set of specific tools for this function. All mortgage distributions, amounts drawn down of any kind, changes made to the grace periods, etc. are authorised on a centralised basis.

Foreclosed properties

At 31 December 2022, the net balance of these assets amounted to EUR 2,971 million (gross amount of EUR 6,422 million; recognised allowance of EUR 3,451 million, of which EUR 2,526 million related to impairment after the foreclosure date).

At 31 December 2021, the net balance of these assets amounted to EUR 3,591 million (gross amount: EUR 7,364 million; recognised allowance: EUR 3,773 million, of which EUR 2,729 million related to impairment after the foreclosure date). At 31 December, 2020, the net balance of these assets amounted to EUR 3,962 million (gross amount of EUR 7,937 million; recognised allowance of EUR 3,975 million, of which EUR 2,834 million related to impairment after the foreclosure date).

The following table shows the detail of the assets foreclosed by the businesses in Spain at the end of 2022:

EUR million

	2022			Net Carrying amount
	Gross carrying amount	Valuation adjustments	Of which impairment losses on assets since time of foreclosure	
Property assets arising from financing provided to construction and property development companies	5,587	3,097	2,275	2,490
<i>Of which:</i>				
<i>Completed buildings</i>	1,456	713	583	743
<i>Residential</i>	341	157	127	184
<i>Other</i>	1,115	556	456	559
<i>Buildings under construction</i>	92	44	32	48
<i>Residential</i>	25	7	4	18
<i>Other</i>	67	37	28	30
<i>Land</i>	4,039	2,340	1,660	1,699
<i>Developed land</i>	1,286	689	415	597
<i>Other land</i>	2,753	1,651	1,245	1,102
Property assets from home purchase mortgage loans to households	659	274	190	385
Other foreclosed property assets	176	80	61	96
Total property assets	6,422	3,451	2,526	2,971

The same information in the previous table reference to Banco Santander, S.A. is presented below:

EUR million

	2022			Carrying amount
	Gross carrying amount	Valuation adjustments	Of which impairment losses on assets since time of foreclosure	
Property assets arising from financing provided to construction and property development companies	781	347	280	434
<i>Of which:</i>				
<i>Completed buildings</i>	735	336	270	399
<i>Residential</i>	169	70	58	99
<i>Other</i>	565	265	212	300
<i>Buildings under construction</i>	—	—	—	—
<i>Residential</i>	—	—	—	—
<i>Other</i>	—	—	—	—
<i>Land</i>	46	11	10	35
<i>Developed land</i>	39	10	9	29
<i>Other land</i>	8	2	1	6
Property assets from home purchase mortgage loans to households	603	246	170	357
Other foreclosed property assets	148	67	53	81
Total property assets	1,532	660	503	872

In addition, the Group has shareholdings in entities holding foreclosed assets amounting to EUR 439 million (mainly Project Quasar Investment 2017, S.L. with EUR 405 million), and equity instruments foreclosed or received in payment of debts amounting to EUR 15 million.

In recent years, the Group and the Bank have considered foreclosure to be a more efficient method for resolving cases of default than legal proceedings. The Group and the Bank initially recognise foreclosed assets at the lower of the carrying amount of the debt (net of provisions) and the fair value of the foreclosed asset (less estimated costs to sell). Subsequent to initial recognition, the assets are measured at the lower of fair value (less costs to sell) and the amount initially recognised.

The fair value of this type of assets is determined by the Group and the Bank's directors based on evidence obtained from qualified valuers or evidence of recent transactions.

The management of real estate assets on the balance sheet is carried out through companies specializing in the sale of real estate that is complemented by the structure of the commercial network. The sale is realised with at prices in accordance with the market situation and the offer of wholesale buyers.

The gross movement in foreclosed properties were as follows (EUR billion):

	2022	2021
Gross additions	0.2	0.4
Disposals	(1.3)	(1.1)
Difference	(1.1)	(0.7)

4. Other credit risk aspects

4.1. Credit risk by activity in the financial markets

This section covers credit risk from treasury, with money market financing and counterparty risk products to satisfy the needs of customers (especially credit institutions) and the Bank.

Counterparty credit risk is the risk that a customer will default before the final settlement of a transaction's cash flows. It creates a bilateral credit risk because it can affect both parties to a transaction. It is also uncertain because it depends on market factors, which can be volatile.

Grupo and Banco Santander manages counterparties with several credit risk models based on their characteristics and needs. Model segmentation is by business and risk treatment and based on counterparty disclosures as well as the credit risk cycle. The exposure that the counterparty credit risk model covers includes derivatives contracts, repurchase agreements, securities and commodities lending, long settlements and margin lending.

An infrastructure that can quickly and dynamically measure current and potential exposure with various degrees of aggregation and granularity to generate detailed reports is important for decision-making.

To measure exposure, Santander uses two methods: "Mark-to-market" (MtM) (replacement cost of derivatives), plus potential future exposure ("add-on"); and the Monte Carlo simulation for certain countries and products. In addition, Santander calculates capital at risk and unexpected loss (e.g. economic capital, net of collateral and recoveries, after deducting expected loss).

At market close, Santander recalculates its exposure by adjusting transactions to a new time horizon, adapting potential future exposure, and applying netting, collateral and other mitigants. That way, Santander can check exposure daily against the limits approved by senior management within risk appetite. For risk control, the Group uses a real-time integrated system that shows the exposure limit with a counterparty, for any product and term, in all subsidiaries.

Counterparty credit risk can also give rise to "wrong-way" risk if exposure to a portfolio or a counterparty increases but credit quality declines. It can happen when rising default risk increases exposure to a counterparty.

Another risk called "settlement risk" occurs if a party might fail to hold their end of a contract and deliver the cash or security needed to settle the transaction.

4.2. Concentration risk

Concentration risk control is a vital part of our management. The Group and the Bank continuously monitors the degree of concentration of its credit risk portfolios using various criteria: geographic areas and countries, economic sectors and groups of customers.

The board, via the risk appetite framework, determines the maximum levels of concentration.

In line with these maximum levels and limits, the executive risk committee establishes the risk policies and reviews the appropriate exposure levels for the effective management of the degree of concentration in Santander's credit risk portfolios.

Grupo and Banco Santander must adhere to the regulation on large risks contained in the CRR, according to which the exposure contracted by an entity with a customer or group of associated customers will be considered a large exposure when its value is equal to or greater than 10% of eligible capital.

In addition, in order to limit large exposures, no entity may assume exposures exceeding 25% of its eligible capital with a single customer or group of associated customers, having factored in the credit risk mitigation effect contained in the regulation.

At the end of December, after applying risk mitigation techniques, no group reaches the above-mentioned thresholds.

Regulatory credit exposure with the 20 largest groups within the scope of large risks represented 5.6% of the outstanding credit risk with customers (lending to customers plus off-balance sheet risks) as of December 2022.

The detail, by activity and geographical area of the Group's risk concentration at 31 December 2022 is as follows:

EUR million

	2022 ^A				
	Total	Spain	Other EU countries	America	Rest of the world
Central banks and Credit institutions	367,620	98,405	61,138	119,005	89,072
Public sector	177,063	41,871	37,936	89,458	7,798
<i>Of which:</i>					
<i>Central government</i>	151,300	30,209	34,681	79,016	7,394
<i>Other central government</i>	25,763	11,662	3,255	10,442	404
<i>Other financial institutions (financial business activity)</i>	152,881	15,271	45,092	54,232	38,286
Non-financial companies and individual entrepreneurs (non-financial business activity) (broken down by purpose)	440,137	114,556	96,354	165,017	64,210
<i>Of which:</i>					
<i>Construction and property development</i>	22,797	3,278	3,569	8,149	7,801
<i>Civil engineering construction</i>	5,178	2,502	1,415	1,113	148
<i>Large companies</i>	267,976	53,355	56,243	111,912	46,466
<i>SMEs and individual entrepreneurs</i>	144,186	55,421	35,127	43,843	9,795
Households – other (broken down by purpose)	566,559	90,597	99,133	141,266	235,563
<i>Of which:</i>					
<i>Residential</i>	361,377	65,077	36,552	45,611	214,137
<i>Consumer loans</i>	185,097	17,074	60,497	90,609	16,917
<i>Other purposes</i>	20,085	8,446	2,084	5,046	4,509
Total	1,704,260	360,700	339,653	568,978	434,929

A. For the purposes of this table, the definition of risk includes the following items in the public balance sheet: 'Loans and advances to credit institutions', 'Loans and advances to Central Banks', 'Loans and advances to Customers', 'Debt securities', 'Equity Instruments', 'Trading Derivatives', 'Hedging derivatives', 'Investments and financial guarantees given'.

The same information in the previous table referring to Banco Santander, S.A. it is presented below:

EUR million

	2022 ^A				
	Total	Spain	Other EU countries	America	Rest of the world
Central banks and Credit institutions	254,259	119,945	42,684	57,840	33,790
Public sector	51,805	30,724	12,126	3,492	5,463
<i>Of which:</i>					
<i>Central government</i>	38,981	19,129	11,519	3,458	4,875
<i>Other central government</i>	12,824	11,595	607	34	588
<i>Other financial institutions (financial business activity)</i>	182,731	52,272	52,673	44,462	33,324
Non-financial companies and individual entrepreneurs (Non-financial business activity) (broken down by purpose)	212,734	108,455	35,480	31,417	37,382
<i>Of which:</i>					
<i>Construction and property development</i>	2,210	2,194	15	—	1
<i>Civil engineering construction</i>	3,817	2,209	604	855	149
<i>Rest of purposes</i>	206,707	104,052	34,861	30,563	37,232
<i>Large companies</i>	152,930	53,837	33,983	29,323	35,787
<i>SMEs and individual entrepreneurs</i>	53,777	50,215	878	1,239	1,445
Households – other (broken down by purpose)	80,548	78,905	440	455	748
<i>Of which:</i>					
<i>Residential</i>	63,669	62,314	377	329	649
<i>Consumer loans</i>	8,405	8,345	8	16	36
<i>Other purposes</i>	8,474	8,246	55	110	63
Total	782,077	390,301	143,403	137,666	110,707

A. For the purposes of this table, the definition of risk includes the following items in the public balance sheet: 'Loans and advances to credit institutions', 'Loans and advances to Central Banks', 'Loans and advances to Customers', 'Debt securities', 'Equity Instruments', 'Trading Derivatives', 'Hedging derivatives', 'Investments and financial guarantees given'.

4.3 Vulnerable sectors identification

Grupo and Banco Santander carry out quarterly monitoring of exposure to customers operating in sectors that could be affected by macroeconomic conditions. The monitoring involves the use of internal tools to forecast customer behaviour and trends in each sector under several macro scenarios, as well as this information:

- Market information: Industries' stock market performance.
- Analysts' EBITDA forecasts for the coming years.
- Internal information: Changes in credit exposure, defaults (in different timelines) and stagings.
- Our industry experts' opinion, based on specific details about our exposures and our relationships with customers

Following the effects of the pandemic, in the second quarter of 2022, Grupo Santander adapted our definition of 'affected sectors' to the current backdrop of rising energy and commodity prices and high inflation, mindful of internal and external factors.

4.4. Sovereign risk and exposure to other public sector entities

Sovereign risk occurs in transactions with a central bank. It includes the regulatory cash reserve, issuer risk with the Treasury (public debt portfolio) and risk from transactions with government institutions whose funding only come from the state's budgetary revenue and not commercial operations.

Grupo Santander's standard for sovereign risk differs somewhat from the European Banking Authority's (EBA) standard for regular stress testing. In particular, the EBA does not consider deposits with central banks, exposures with insurance companies or indirect exposures from guarantees and other financial instruments. However, its standard does generally include entities run by regional, local and central governments.

Grupo and Banco Santander continue to track and manage transactions with sovereign risk based on available information, such as reports by rating agencies and international organizations. Grupo and Banco Santander monitor each country where the Group and the Bank have cross-border³ and sovereign risk. The Group and the Bank analyse events that could affect the country's political or institutional stability and assign its government or central bank a credit rating. This helps us set limits for transactions with sovereign risk.

At the end of December, Grupo and Banco Santander's local sovereign exposure, in currencies other than the official currency of the country of issuance, is not significant (EUR 6,039 million, 1.4% of total sovereign risk) according to our management criteria. Furthermore, exposure to non-local sovereign issuers involving cross-border risk is even less significant⁴ (EUR 8,867 million, 2.1% of total sovereign risk).

Sovereign exposure in Latin America is mostly in local currency, and is recognised in the local accounts and concentrated in short- term maturities.

Over the past few years, total exposure to sovereign risk has remained in line with regulatory requirements and our strategy to manage this portfolio.

The shifts observed in the different countries exposure is due to our liquidity management strategy and the hedging of interest and exchange rates risks. Santander's exposure spreads among countries with varied macroeconomic outlooks and dissimilar scenarios in terms of growth, interest and exchange rates.

Our investment strategy for sovereign risk considers country's credit quality to set the maximum exposure limits^A:

	2022	2021
AAA	27 %	15 %
AA	19 %	32 %
A	34 %	26 %
BBB	11 %	11 %
Less than BBB	9 %	16 %

A. Internal ratings are applied.

³ Risk with domestic public or private borrowers in foreign currency and originated outside the country.

⁴ Countries that are not considered low risk by Banco de España.

Sovereign exposure at the end of 31 December 2022 is shown in the table below (data in million euros):

Country	2022				2021	
	Portfolio				Total net direct exposure	Total net direct exposure
	Financial assets designated at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Non-trading financial assets mandatorily at fair value through profit or loss		
Spain	2,666	240	26,189	—	29,095	19,557
Portugal	(299)	2,005	3,750	—	5,456	6,544
Italy	(1,055)	301	8,169	—	7,415	884
Greece	—	—	—	—	—	—
Ireland	—	—	—	—	—	9
Rest Eurozone	205	789	4,657	—	5,651	3,629
UK	53	315	1,738	—	2,106	366
Poland	4	7,754	957	—	8,715	11,293
Rest of Europe	(7)	14	125	—	132	1,368
US	3,503	8,938	10,857	—	23,298	22,469
Brazil	8,017	9,969	5,742	—	23,728	28,559
Mexico	2,627	11,303	3,376	—	17,306	13,509
Chile	175	818	5,492	—	6,485	6,071
Rest of America	123	1,211	630	—	1,964	1,425
Rest of the World	1	2,012	1,529	—	3,542	3,337
TOTAL	16,013	45,669	73,211	—	134,893	119,020

5. Forborne loan portfolio

Grupo and Banco Santander's The customer debt redirection policy incorporates the regulatory requirements of the EBA guidelines on the management of non-performing exposures, refinancing and restructuring. This policy acts as a reference for the transposition in our subsidiaries and shares the applicable supervisory expectations

This policy also sets down rigorous criteria for evaluating, classifying and monitoring forbearances to ensure the strictest possible care and diligence in recovering due amounts. Thus, it dictates that Grupo and Banco Santander must adapt payment obligations to customers' current circumstances. Our forbearance policy also defines classification criteria to ensure Grupo and Banco Santander recognize risks appropriately. They must remain classified as non-performing or in watch-list for a prudential period for reasonable certainty of repayment. In no case will repayments be used to delay the immediate recognition of losses or so that their use distorts the timely recognition of the risk of non-payment.

Forbearances may never be used to delay the immediate recognition of losses or hinder the appropriate recognition of risk of default.

After several years where the stock had fallen as a result of the positive economic situation in the main geographies, 2021 was a year of inflection with a growth of 24% to address the financial difficulties of our clients as a result of the situation generated by the pandemic. During 2022 the stock of readjustments has decreased lightly, and has stood at EUR 34,173 million. In terms of credit quality, 44% of the loans is classified as credit impaired, with a coverage ratio of 44%. In addition, 56% of the portfolio is classified as performing.

The following terms are used with the meanings specified below:

- **Refinancing transaction:** transaction that is granted or used, for reasons relating to current or foreseeable financial difficulties of the borrower, to repay one or more of the transactions granted to it, or through which the payments on such transactions are brought fully or partially up to date, in order to enable the borrowers of the cancelled or refinanced transactions to repay their debt (principal and interest) because they are unable, or might foreseeably become unable, to comply with the conditions there of in due time and form.
- **Restructured transaction:** transaction with respect to which, for economic or legal reasons relating to current or foreseeable financial difficulties of the borrower, the financial terms and conditions are modified in order to facilitate the payment of the debt (principal and interest) because the borrower is unable, or might foreseeably become unable, to comply with the aforementioned terms and conditions in due time and form, even if such modification is envisaged in the agreement.

Current refinancing and restructuring balances

Amounts in EUR million, except number of transactions that are in units

	2022														
	Total							Of which, non-performing/Doubtful							
	Without real guarantee			With real guarantee				Impairment of accumulated value or accumulated losses in fair value due to credit risk	Without real guarantee			With real guarantee			
	Number of transactions	Gross amount	Number of transactions	Gross amount	Real estate guarantee	Rest of real guarantees	Maximum amount of the actual collateral that can be considered		Number of transactions	Gross amount	Number of transactions	Gross amount	Real estate guarantee	Rest of real guarantees	Maximum amount of the actual collateral that can be considered
Credit entities	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Public sector	6,679	227	31	7	2	—	6	6,679	227	31	7	2	—	6	
Other financial institutions and individual shareholder	1,210	321	785	339	88	86	61	1,210	321	785	339	88	86	61	
Non-financial institutions and individual shareholder	312,934	9,578	60,003	8,419	4,790	1,834	3,912	312,934	9,578	60,003	8,419	4,790	1,834	3,912	
Of which financing for constructions and property development	15,578	125	1,890	570	423	48	208	15,578	125	1,890	570	423	48	208	
Other warehouses	5,878,455	5,790	492,232	9,492	4,835	3,502	4,287	5,878,455	5,790	492,232	9,492	4,835	3,502	4,287	
Total	6,199,278	15,916	553,051	18,257	9,715	5,422	8,266	6,199,278	15,916	553,051	18,257	9,715	5,422	8,266	
Financing classified as non-current assets and disposable groups of items that have been classified as held for sale	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

The same information in the previous table referring to Banco Santander, S.A. it is presented below:

Current refinancing and restructuring balances

Amounts in EUR million, except number of transactions that are in units

	2022													
	Total							Of which, non-performing/Doubtful						
	Without real guarantee			With real guarantee				Without real guarantee			With real guarantee			
	Number of transactions	Gross amount	Number of transactions	Gross amount	Maximum amount of the actual collateral that can be considered		Impairment of accumulated value or accumulated losses in fair value due to credit risk	Number of transactions	Gross amount	Number of transactions	Gross amount	Maximum amount of the actual collateral that can be considered		Impairment of accumulated value or accumulated losses in fair value due to credit risk
				Real estate guarantee	Rest of real guarantees						Real estate guarantee	Rest of real guarantees		
Credit entities	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Public sector	6,674	226	20	4	2	—	2	4	2	6	2	2	—	2
Other financial companies and sole proprietorships (financial business activity)	364	315	147	322	76	83	56	105	6	102	132	22	5	51
Non-financial corporations and sole proprietorships (non-financial business activity)	76,687	6,768	20,256	5,174	3,274	915	1,969	21,759	1,754	16,650	3,192	2,037	476	1,745
<i>Of which, financing for construction and real estate development (including land)</i>	14	5	302	146	120	19	32	13	5	219	78	53	19	30
Other warehouses	19,651	270	42,731	2,034	1,761	24	466	4,821	72	30,802	1,160	962	5	391
Total	103,376	7,579	63,154	7,534	5,113	1,022	2,493	26,689	1,834	47,560	4,486	3,023	486	2,189
Financing classified as non-current assets and disposable groups of items that have been classified as held for sale	—	—	—	—	—	—	—	—	—	—	—	—	—	—

In 2022, the amortised cost of financial assets whose contractual cash flows were modified during the year when the corresponding loss adjustment was valued at an amount equal to the expected credit losses over the life of the asset amounted to EUR 2,379 million (2,480 million in 2021), without these modifications having a material impact on the income statement. Also, during 2022, the total of financial assets that have been modified since the initial recognition, and whose correction for expected loss has gone from being valued during the entire life of the asset to the following twelve months, amounts to EUR 1,677 million (1,868 million in 2021).

In 2022, the amortised cost of financial assets owned by the Bank whose contractual cash flows were modified during the year when the corresponding loss adjustment was valued at an amount equal to the expected credit losses over the life of the asset amounted to EUR 711 million, without these modifications having a material impact on the income statement. Also, during 2022, the total of financial assets owned by the Bank that have been modified since the initial recognition, and whose correction for expected loss has gone from being valued during the entire life of the asset to the following twelve months, amounts to EUR 645 million.

The transactions presented in the foregoing tables were classified at 31 December 2022 by nature, as follows:

- Credit impaired: Operations that rest on an inadequate payment scheme will be classified within the non-performing category, regardless they include contract clauses that delay the repayment of the operation throughout regular payments or present amounts written off the balance sheet for being considered irrecoverable.
- Performing: Operations not classifiable as non-performing will be classified within this category. Operations will also be classified as normal if they have been reclassified from the non-performing category for complying with the specific criteria detailed below:
 - a A period of a year must have passed from the refinancing or restructuring date.
 - b The owner must have paid for the accrued amounts of the capital and interests, thus reducing the rearranged capital amount, from the date when the restructuring of refinancing operation was formalised.
 - c The owner must not have any other operation with amounts past due by more than 90 consecutive days of material delay on the date of the reclassification to the normal risk category.

Attending to the credit attention 56% of the forborne loan transactions are classified as other than non-performing. Particularly noteworthy are the level of existing guarantees 44% of transactions are secured by collateral) and the coverage provided by specific allowances (representing 24% of the total forborne loan portfolio and 44% of the non-performing portfolio).

c) Market, structural and liquidity risk

1. Activities subject to market risk and types of market risk

Activities exposed to market risk encompass transactions where risk is assumed as a consequence of potential changes in interest rates, inflation rates, exchange rates, stock prices, credit spreads, commodity prices, volatility and other market factors; the liquidity risk from our products and markets, and the balance-sheet liquidity risk. Therefore, they include trading risks and structural risks.

- Interest rate risk arises from movements in interest rates that reduce the value of a financial instrument, a portfolio or the Group or the Bank. It can affect loans, deposits, debt securities, most assets and liabilities held for trading, and derivatives.
- Inflation rate risk arises from movements in inflation that can reduce the value of a financial instrument, a portfolio or the Group or the Bank. It can affect loans, debt securities and derivatives (e.g. inflation swaps and futures) whose profitability is linked to inflation.
- Exchange rate risk is the possibility of loss because the currency of a long or open position will depreciate against the base currency. It can affect debt in subsidiaries whose local currency is not the euro, as well as loans denominated in a foreign currency.
 - Equity risk is the possibility of loss from open positions in securities if their market price or expected future dividends fall. It affects shares, stock market indices, convertible bonds and derivatives with shares as the underlying asset (put, call, equity swaps, etc.).
- Credit spread risk is the possibility of loss from open positions in fixed-income securities or credit derivatives if their yield curve, or the recovery rate of their issuer or type change. A spread is the yield difference between financial instruments against a benchmark (e.g. the internal rate of return (IRR) of government bonds and interbank interest rates).
- Commodity price risk is the possibility of loss from movements in commodity prices. Grupo and Banco Santander's commodity exposure is minor and stems mainly from commodity derivatives.

- Volatility risk is the possibility of loss caused by movements in interest rates, exchange rates, the stock market, credit spreads and other risk factors affecting portfolio value. It is inherent to all financial instruments whose value considers volatility (especially options contracts).

Derivative contracts (such as options, futures, forwards and swaps) can mitigate market risks partially or fully.

Additionally, other more complex coverage market risks are considered, such as correlation risk, market liquidity risk, prepayment or cancellation risk and subscription risk.

- Correlation risk is the possibility of loss due to an adverse correlation between risk variables that affect portfolio value. Risk variables could be the same (e.g. two FX rates) or different (e.g. an interest rate and a commodity price).
- Market liquidity risk is the possibility that fewer market makers or institutional investors, a large number of transactions, market instability and other factors will cause the Group or a subsidiary to exit a position at a worse market price or trade cost. Exposure to different products and currencies can also increase this risk.
- Pre-payment or cancellation risk originates when mortgages, deposits and other on-balance-sheet instruments give holders the option to buy or sell them, thus altering future cash flows. Potential mismatches on the balance sheet pose a risk since cash flows may have to be reinvested at an interest rate that is potentially lower (assets) or higher (liabilities).
- Underwriting risk is the possibility that the bank will have to hold part of a debt issue it has underwritten or agreed to place if it cannot all be placed among potential buyers.

Balance sheet liquidity risk (unlike market liquidity risk) is the possibility of loss caused by forced disposal of assets or cash flow imbalance if the bank meets its payment obligations late or at excessive cost. It can cause losses by forced asset sales or impacts on margins due to the mismatch between expected cash inflows and outflows.

Pension and actuarial risks (explained at the end of this section) also depend on market variables.

Grupo and Banco Santander aim to comply with the Basel Committee's Fundamental Review of the Trading Book (FRTB) and the EBA's Guidelines on the management of interest rate risk arising from non-trading book activities. The purpose of several projects Grupo Santander runs is to provide risk control managers and teams with the best market risk management tools under the right governance framework for the models Grupo Santander uses for metric reporting; and to comply with regulation on the risks mentioned above.

2. Trading market risk management

Setting market risk limits in a dynamic process according to the risk appetite in the annual limits plan prepared by senior management and extended to all subsidiaries.

The standard methodology for risk management and control in trading, measures the maximum expected loss with a specific level of confidence and time frame. The standard for historical simulation is a confidence level of 99% over one day.

Grupo and Banco Santander apply statistical adjustments efficiently to incorporate recent developments affecting our levels of risk. Our time frame is two years or at least 520 days from the reference date of the VaR calculation.

The balance sheet items in the Group's consolidated position that are subject to market risk are shown below, distinguishing those positions for which the main risk metric is VaR from those for which risk monitoring is carried out using other metrics:

EUR million

	Balance sheet amount	Main market risk metric		Main risk factor for 'Other' balance
		VaR	Other	
Assets subject to market risk				
Cash, cash balances at central banks and other deposits on demand	223,073		223,073	Interest rate
Financial assets held for trading	156,118	156,118		
Non-trading financial assets mandatorily at fair value through profit or loss	5,713	3,711	2,002	Interest rate, spread
Financial assets designated at fair value through profit or loss	8,989	815	8,174	Interest rate, spread
Financial assets designated at fair value through other comprehensive income	85,239	1,941	83,298	Interest rate, spread
Financial assets at amortized cost	1,147,044		1,147,044	Interest rate, spread
Hedging derivatives	8,069		8,069	Interest rate, exchange rate
Changes in the fair value of hedged items in portfolio hedges of interest risk	(3,749)		(3,749)	Interest rate
Other assets	104,163			
Total assets	1,734,659			
Liabilities subject to market risk				
Financial liabilities held for trading	115,185	115,185		
Financial liabilities designated at fair value through profit or loss	55,947	—	55,947	Interest rate, spread
Financial liabilities at amortized cost	1,423,858		1,423,858	Interest rate, spread
Hedging derivatives	9,228		9,228	Interest rate, exchange rate
Changes in the fair value of hedged items in portfolio hedges of interest rate risk	(117)		(117)	Interest rate
Other liabilities	32,973			
Total liabilities	1,637,074			
Equity	97,585			

The following table displays the latest and average VaR values at 99% by risk factor over the last three years. It also shows the minimum and maximum VaR values in 2022 and 97.5% ES at the end of December 2022:

VaR statistics and expected shortfall by risk factor^A

EUR million. VaR at 99% and ES at 97.5% with one day time horizon

	2022				2021			
	VaR (99%)			Latest	ES (97.5%)		VaR	
	Min	Average	Max		Latest	Average	Latest	
Total Trading	9.2	14.1	21.5	11.6	10.8	10.5	12.3	
Diversification effect	(7.8)	(14.6)	(30.5)	(15.5)	(15.6)	(12.9)	(13.4)	
Interest rate	8.1	12.6	21.5	9.9	9.8	9.6	9.1	
Equities	2.4	4.2	7.3	5.5	5.5	3.5	5.1	
Exchange rate	2.5	4.8	10.3	3.6	3.2	4.2	5.7	
Credit spread	3.4	5.4	8.5	5.8	4.9	4.8	5.1	
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	
Total Europe	7.9	12.2	21.9	10.5	9.2	9.3	9.9	
Diversification effect	(5.1)	(10.4)	(16.8)	(14.2)	(12.0)	(9.3)	(12.6)	
Interest rate	5.5	10.2	18.4	10.1	7.8	7.7	7.1	
Equities	2.2	3.6	5.8	5.5	5.5	3.3	5.8	
Exchange rate	1.9	3.4	5.8	3.3	3.0	2.8	4.5	
Credit spread	3.4	5.4	8.7	5.8	4.9	4.8	5.1	
Commodities	—	—	—	—	—	—	—	
Total North America	1.5	2.3	4.7	2.7	2.2	2.5	2.7	
Diversification effect	0.7	(0.8)	(4.0)	(1.1)	(1.3)	(0.7)	(0.6)	
Interest rate	0.7	2.2	5.7	2.7	2.4	2.5	2.7	
Equities	—	0.1	1.0	0.1	0.1	0.1	0.0	
Exchange rate	0.1	0.8	2.0	1.0	1.0	0.6	0.6	
Total South America	5.2	8.0	14.2	6.2	6.5	5.9	6.3	
Diversification effect	(1.3)	(5.0)	(19.8)	(4.2)	(4.4)	(4.9)	(5.1)	
Interest rate	4.5	7.0	14.9	5.5	5.7	5.5	5.8	
Equities	0.7	1.6	4.8	1.7	1.6	1.2	1.1	
Exchange rate	0.7	2.7	9.9	0.9	0.6	2.8	3.8	
Commodities	0.6	1.7	4.4	2.3	3.0	1.3	0.7	

A. In South and North America, VaR levels of credit spreads and commodities are not shown separately due to their low or null materiality.

At the end of 2022, VaR was slightly lower (EUR 0.7 million) than at the end of 2021, consequence of an update in calculation model and a lighter pressure in markets as inflation started to moderate in some regions, as the Eurozone.

Although by risk factor, VaR has followed a generally stable trend in recent years, in 2022 the average VaR rose by EUR 3.6 million compared to 2021. By risk factor, average VaR was greater in all of them, specially in interest rate due to a higher market volatility. The temporary increases in VaR are due more to short-term price volatility than to significant changes in positions.

By region, average VaR grew for all risk types in Europe and South America, which have the highest market risk exposure.

Backtesting

Actual losses can differ from predicted losses because of the VaR's limitations. Grupo Santander measures the accuracy of the VaR calculation model to make sure it is reliable. The most important tests Grupo Santander runs involve backtesting:

- Backtesting of hypothetical P/L and of the entire trading book showed no exceptions to 99% VaR in 2022. Regarding to 99% VaE, there was an exception the 15th of December as a consequence of market

volatility concurrent with the last ECB's year meeting where a 50 bp interest rate hike was confirmed.

- The exceptions observed in the past year are consistent with the assumptions of the VaR calculation model.

IBOR reform

Since 2013, different organizations and supranational authorities (IOSCO and FSB) have promoted and monitored initiatives aimed at carrying out reforms to strengthen interest rate indices. In this context, in order to execute the transition in a non-disruptive and progressive manner, central banks and regulators from various jurisdictions have organized working groups to recommend risk-free indices.

The objective was mainly to facilitate the transition to risk-free indices identified in different jurisdictions, highlighting the SONIA index as a replacement for the Libor in pounds, the SOFR for Libor in dollars, and the €STR for Libor in euros.

In this sense, and as a result of the joint effort of authorities and market participants, this transition process has materialized in different milestones during the period between 2019 and 2022, remaining only in 2023 the execution of the substitution plans for GBP LIBOR and USD LIBOR.

According with the regulatory milestones of the transition, the USD LIBOR terms (overnight, 1M, 3M, 6M and 12M) will continue to be calculated using the contributions of panel banks until mid-2023, although their use for new operations was limited. from the end 2021. The last date of publication of the USD LIBOR for the overnight and 12M terms will be June 30, 2023. For the 1, 3 and 6 month terms, on November 23, 2022, the FCA announced an inquiry of its proposal to require the LIBOR administrator, IBA, to continue to publish these USD LIBOR terms under a non-representative "synthetic" methodology until the end of September 2024. After that date, publication would cease permanently .

Regarding the GBP LIBOR, its publication is confirmed under the synthetic methodology for the 3-month term until the end of March 2024, while the 1- and 6-month terms will cease to be published in March 2023.

In accordance with the milestones indicated, the Group and its entities have focused on making all the contractual, commercial, operational and technological changes necessary to undertake the transition from these reference indices. In 2023, the following transition milestones will continue to be met in the different jurisdictions where the Grupo Santander operates.

Following is a detail of the carrying amount at 31 December 2022 of financial assets, financial liabilities, derivatives and loan commitments that continue to be referenced to the pending transition ratios:

EUR Million

Gross Carrying amount	Loans and advances	Debt securities acquired (Assets)	Deposits	Debt securities issued (Liabilities)	Derivatives (Assets)	Derivatives (Liabilities)	Loan Commitments
Referenced to EONIA	—	—	—	—	—	—	—
of which mature after 2021	—	—	—	—	—	—	—
Referenced to LIBOR	9,374	1,071	106	2,087	10,603	9,639	550
of which USD	9,165	696	106	2,087	10,348	9,619	550
of which GBP	209	375	0	0	255	20	0
TOTAL	9,374	1,071	106	2,087	10,603	9,639	550

Additionally, see information included in notes 32.

3. Structural balance sheet risks

3.1. Main aggregates and variations

Consistent with previous years, the market risk profile of Grupo and Banco Santander's balance sheet remained moderate in 2022 in terms of asset, shareholders' equity and NII volumes, each subsidiaries.

To measure interest rate risk, Grupo Santander uses statistical models based on strategies to mitigate structural risk with interest-rate instruments (such as bonds and derivatives) to keep risk profile within risk appetite.

The NII and EVE sensitivities below are based on scenarios of parallel interest rate movements from -100 to +100 basis points.

Structural VaR

With such a homogeneous metric as VaR, Grupo Santander can fully monitor market risk in the banking book (excluding SCIB trading activity). The Bank differentiates fixed income based on interest rates and credit spreads in ALCO portfolios, FX rates and shares.

In general, the structural VaR of Grupo and Banco Santander total assets and equity is minor.

Structural VaR

EUR million. Structural VaR 99% with a temporary horizon of one day.

	2022			2021		2020		
	Min	Average	Max	Latest	Average	Latest	Average	Latest
Structural VaR	538.5	664.0	1,084.4	538.5	993.7	1,011.9	911.0	903.1
Diversification effect	(323.5)	(417.1)	(489.5)	(422.4)	(327.3)	(240.2)	(349.8)	(263.4)
VaR Interest Rate ^A	266.2	350.8	577.0	304.5	400.7	287.8	465.1	345.5
VaR Exchange Rate	400.4	493.4	682.3	461.0	600.6	655.2	499.9	502.6
VaR Equities	195.4	236.9	314.6	195.4	319.7	309.1	295.9	318.5

A. Includes credit spread VaR on ALCO portfolios.

Structural interest rate risk

– Europe

At the end of December, the sensitivity of NII on our core balance sheets and of Santander España's EVE to interest rate hikes was positive; but at Santander UK it was negative.

Across our footprint, exposure was moderate in relation to annual budget and capital levels in 2022.

At the end of December, under the scenarios previously described, significant risk of NII sensitivity to the euro amounted to EUR 1,009 million; to the pound sterling, EUR 191 million; to the US dollar, EUR 51 million; and to the Polish zloty, EUR 64 million, all with risk of rate cuts.

Significant risk of EVE sensitivity to yield curves of the euro was EUR 2,820 million; of the pound sterling, EUR 440 million; of the US dollar, EUR 11 million euros; and of the Polish zloty, EUR 91 million euros, mostly with risk of rate cuts.

– North America

At the end of December, significant risk to NII was mainly in the US and amounted to EUR 151 million.

The most significant risk to EVE was in the US and amounted to EUR 763 million.

– South America

EVE and NII on our main South American balance sheets are positioned for interest rate cuts.

Exposure in all countries was moderate in relation to the annual budget and capital levels in 2022.

At the end of December, most significant risk to NII was mainly in Chile (EUR 72 million) and in Brazil (EUR 169 million).

Most significant risk to EVE was recorded in Chile (EUR 309 million) and in Brazil (EUR 386 million).

Structural foreign currency rate risk/results hedging

Grupo Santander's structural FX risk stems mainly from the income and hedging of foreign currency transactions for permanent financial investments. In the dynamic management of this risk, Grupo Santander aims to limit the impact of FX rate movements on the core capital ratio. In 2022, the hedged of the different currencies that have an impact on our core capital ratio was close to 100%.

In December 2022, our permanent exposures (with potential impact on shareholders' equity) were, from largest to smallest, in US dollars, Brazilian reais, British pounds sterling, Mexican pesos, Chilean pesos and Polish zloty.

Grupo and Banco Santander use FX derivatives to hedge part of those permanent positions. The Finance division manages FX risk and hedging for the expected profits and dividends of subsidiaries whose base currency is not the euro.

Structural equity risk

Grupo Santander holds equity positions in its banking and trading books. They are either equity instruments or stock, depending on the share of ownership or control.

At the end of December 2022, the equities and shareholdings in the banking book were diversified among Spain, China, Morocco, Poland and other countries. Most of them invest in the financial and insurance sectors. Grupo Santander has minor equity exposure to property and other sectors.

Structural equity positions are exposed to market risk. The Group calculates its VaR with a set of market prices and proxies. At the end of the year 2022, VaR at a 99% confidence level over a one-day horizon was EUR 195 million (EUR 309 million and EUR 319 million in 2021).

3.2.Methodologies

Structural interest rate risk

Grupo Santander measures the potential impact of interest rate movements on EVE and NII. Because changing rates may generate impacts, Grupo Santander must manage and control many subtypes of interest rate risk, such as repricing risk, curve risk, basis risk and option risk (e.g. behavioural or automatic).

Interest rate risk in the balance sheet and market conditions and outlooks could necessitate certain financial measures to achieve Grupo Santander's desired risk profile (such as selling positions or setting interest rates on products Grupo Santander markets).

The metrics Grupo Santander uses to monitor IRRBB include NII and EVE sensitivity to interest rate movements.

• Net interest income sensitivity

Net interest income (NII) is the difference between interest income from assets and the interest cost of liabilities in the banking book over a typical one- to three-year horizon (one year being standard in Grupo Santander). Because NII sensitivity is the difference in income between a selected scenario and the base scenario, its values can be as many as considered scenarios. It enables us to see short-term risks and supplement economic value of equity (EVE) sensitivity.

- Economic value of equity sensitivity

Economic value of equity (EVE) is the difference between the current value of all assets minus the current value of all liabilities in the banking book. It does not include shareholders' equity and non-interest-bearing instruments.

Because EVE sensitivity is the difference in EVE between a selected scenario and the base scenario, it can have as many values as considered scenarios. It enables us to see long-term risks and supplement NII sensitivity.

Structural exchange-rate risk/hedging of results

Every day, Grupo Santander measures FX positions, VaR and P/L.

Structural equity risk

Grupo Santander measures equity positions, VaR and P/L.

4. Liquidity risk

Structural liquidity management aims to fund the Group and the Bank's recurring activity optimising maturities and costs, while avoiding taking on undesired liquidity risks. Grupo and Banco Santander's liquidity management is based on the following principles:

- Decentralised liquidity model.
- Medium- and long-term (M/LT) funding needs must be covered by medium- and long-term instruments.
- High contribution from customer deposits due to the retail nature of the balance sheet.
- Diversification of wholesale funding sources by instruments/ investors, markets/currencies and maturities.
- Limited recourse to short-term funding.
- Availability of sufficient liquidity reserves, including standing facilities/discount windows at central banks to be used in adverse situations.
- Compliance with regulatory liquidity requirements both at Group and subsidiary level, as a new factor conditioning management.

The effective application of these principles by all institutions comprising the Group required the development of a unique management framework built upon three fundamental pillars:

- A solid organisational and governance model that ensures the involvement of the subsidiaries' senior management in decision-taking and its integration into the Group's global strategy. The decision-making process for all structural risks, including liquidity and funding risk, is carried out by local Asset and Liability Committees (ALCOs) in coordination with the global ALCO, which is the body empowered by the Bank's board in accordance with the corporate Asset and Liability Management (ALM) framework.

This governance model has been reinforced as it has been included within Santander's Risk Appetite Framework. This framework meets demands from regulators and market players emanating from the financial crisis to strengthen banks' risk management and control systems.

- In-depth balance sheet analysis and measurement of liquidity risk, supporting decision-taking and its control. The objective is to ensure the Group and the Bank maintain adequate liquidity levels necessary to cover its short- and long-term needs with stable funding sources, optimising the impact of their costs on the income statement. Grupo and Banco Santander's liquidity risk management processes are contained within a conservative risk appetite framework established in each geographic area in accordance with its commercial strategy. This risk appetite establishes the limits within which the subsidiaries and, therefore, the Bank can operate in order to achieve their strategic objectives.
- Management adapted in practice to the liquidity needs of each business. Every year, based on business needs, a liquidity plan is developed which seeks to achieve:
 - a solid balance sheet structure, with a diversified presence in the wholesale markets;
 - the use of liquidity buffers and limited encumbrance of assets;
 - compliance with both regulatory metrics and other metrics included in each entity's risk appetite statement.

Over the course of the year, all dimensions of the plan are monitored.

Grupo Santander continues to develop the ILAAP (Internal Liquidity Adequacy Assessment Process), an internal self-assessment of liquidity adequacy which must be integrated into the Group's other risk management and strategic processes. It focuses on both quantitative and qualitative matters and is used as an input to the SREP (Supervisory Review and Evaluation Process). The ILAAP evaluates the liquidity position both in ordinary and stressed scenarios.

i. Liquidity risk measurement

Grupo Santander uses the Basel regulatory definition and calculates a set of metrics and stress scenarios in relation to intraday liquidity risk to maintain a high level of management and control. On the one hand, the regulatory liquidity metrics (LCR, NSFR, etc.) are prepared following the regulatory criteria established in the CRR-II and CRD IV. Regarding internal metrics, liquidity scenarios are determined using a combination of behavioral observation in actual liquidity crises occurred at other banks, regulatory assumptions (e.g. the assumptions in the LiST) and expert judgment.

a) Liquidity buffer

The liquidity buffer is the total liquid assets a bank has to cope with cash outflows during periods of stress. The assets are free of encumbrances and can be used immediately to generate liquidity without losses or excessive discounts. The liquidity buffer is a tool for calculating most liquidity metrics. It is also a metric with defined limits for each subsidiary.

b) Liquidity Coverage Ratio (LCR)

The liquidity coverage ratio (LCR) is a regulatory metric. Its purpose is to promote the short-term resilience of a bank's liquidity profile and make sure it has enough high-quality liquid assets to withstand a considerable idiosyncratic or market stress scenario over 30 calendar days.

c) Wholesale liquidity metric

The wholesale liquidity metric measures the number of days Grupo and Banco Santander would survive if it used liquid assets to cover lost liquidity from a wholesale deposit run-off (without possible renewal) over a set time horizon. Grupo and Banco Santander also uses it as an internal short-term liquidity metric to reduce risk from dependence on wholesale funding.

d) Net Stable Funding Ratio (NSFR)

The net stable funding ratio (NSFR) is a regulatory metric we use to measure long-term liquidity risk. It is the ratio of available stable funding to required stable funding. It requires banks to keep a robust balance sheet, with off-balance-sheet assets and operations financed by stable liabilities.

e) Asset Encumbrance metrics

Grupo and Banco Santander calculate two metrics to measure asset encumbrance risk. On the one hand, the asset encumbrance ratio gives the proportion of encumbered assets to total assets; on the other, the structural asset encumbrance ratio gives the proportion of encumbered assets by structural funding transaction (namely long-term collateralized issues and credit transactions with central banks).

f) Other additional liquidity indicators

In addition to traditional tools to measure short and long-term liquidity and funding risk, Grupo and Banco Santander have a set of additional liquidity indicators to complement those and to measure other non-covered liquidity risk factors. These include concentration metrics, such as the main and the five largest funding counterparties, or the distribution of funding by maturity.

In addition, Santander calculates a number of metrics on the institution's ability to generate liquidity through collateralized financing, such as overcollateralization, eligibility ratios assets without charges and deadlines for their placement.

g) Liquidity scenario analysis

As liquidity stress tests, Grupo and Banco Santander have four standard scenarios have been defined:

- i. An idiosyncratic scenario of events detrimental only to the Group and the Bank;
- ii. a local market scenario of events highly detrimental to a base country's financial system or real economy;
- iii. a global market scenario of events highly detrimental to the global financial system; and
- iv. combined scenario consisting of a combination of more severe idiosyncratic and market events (local and global) occurring simultaneously and interactively.
- v. climate scenarios where different stress cases derived from the effects that climate change could have on the economy are collected.

Grupo and Banco Santander use these stress test outcomes as tools to determine risk appetite and support business decision-making.

h) Liquidity early warning indicators

The system of early warning indicators (EWI) consists of quantitative and qualitative liquidity indicators that help predict stress situations and weaknesses in the funding and liquidity structure of Grupo, and therefore, Banco Santander entities. External indicators relate to market-based financial variables; internal indicators relate to our own performance.

i) Intraday liquidity metrics

Grupo and Banco Santander follows Basel regulation and calculates several metrics and stress scenarios for intraday liquidity risk to maintain a high level of control.

ii. Liquidity coverage ratio and net stable financing ratio

As regards the liquidity coverage ratio (LCR), the regulatory requirement for this ratio, set at 100%, has been at its maximum level since 2018.

Below is a breakdown of the composition of the Group's liquid assets under the criteria set out in the supervisory prudential reporting (Commission Implementing Regulation (EU) 2017/2114 of 9 November 2017) for the determination of high quality liquid assets for the calculation of the LCR ratio (HQLA):

EUR million

	2022	2021
	Amount weighted applicable	Amount weighted applicable
High-quality liquid assets-HQLAs		
<i>Cash and reserves available at central banks</i>	127,285	206,507
<i>Marketable assets Level 1</i>	177,887	81,925
<i>Marketable assets Level 2A</i>	3,308	3,422
<i>Marketable assets Level 2B</i>	3,562	5,446
Total high-quality liquid assets	312,042	297,300

In relation to the net stable funding ratio (NSFR), its definition was approved by the Basel Committee in October 2014. The transposition of this requirement to the European regulation took place in June 2019 with the publication in the Official Gazette of the European Union of Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019. The Regulation establishes that entities must have a net stable financing ratio, as defined in the Regulation, higher 100% from June 2021.

The liquidity coverage ratio, broken down by component, and the net stable funding ratio for the Group at year-ends 2022 and 2021 are presented below:

EUR million

	2022	2021
High-quality liquid assets-HQLAs (numerator)	312,042	297,300
<i>Total net cash outflows (denominator)</i>	204,759	181,953
<i>Cash outflows</i>	270,748	233,294
<i>Cash inflows</i>	65,989	51,341
LCR ratio (%)	152%	163%
NSFR ratio (%)	121%	126%

As regards the funding structure, given the predominantly commercial nature of the Group's balance sheet, the loan portfolio is mainly financed by customer deposits.

In the last quarter of 2022, Grupo Santander has begun to repay in advance a significant part of the financing received under the TLTRO-III program launched by the European Central Bank, which originally matured in 2023. The replacement of these funds has been carried out after having strengthened the balance sheet through a combination of growth in customer deposits, an increase in short-term instruments and greater activity in medium and long-term issuances, which has allowed Grupo Santander to maintain liquidity coverage ratios (LCR) and net stable funding (NSFR) at prudent levels after the repayment.

The movement in the composition of the buffer between 'Cash and reserves available at central banks' to 'Level 1 marketable assets' corresponds to a reclassification of deposits with the Central Bank, due to the change in the remuneration of deposits with the European Central Bank.

Note 22 of the consolidated annual accounts and Note 20 of the individual accounts, under the name, 'Debt securities' shows the composition of these liabilities on the basis of their nature and classification, the movements and maturity profile of the debt securities issued by the Group, reflecting the strategy of diversification by products, markets, issuers and maturities followed by the Group in its approach to the wholesale markets.

iii. Asset encumbrance

Finally, the moderate use of assets by Grupo Santander as collateral in the sources of structural financing of the balance sheet should be highlighted.

In accordance with the guidelines established by the European Banking Authority (EBA) in 2014 on committed and uncommitted assets, the concept of assets committed in financing transactions (asset encumbrance) includes both on-balance sheet assets provided as collateral in transactions to obtain liquidity and off-balance sheet assets that have been received and reused for similar purposes, as well as other assets associated with liabilities for reasons other than financing.

The residual maturities of the liabilities associated with the assets and guarantees received and committed are presented below, as of 31 of December of 2022 (EUR thousand million):

Residual maturities of the liabilities	Unmatured	<=1month	>1 month <=3 months	>3 months <=12 months	>1 year <=2 years	>2 years <=3 years	3 years <=5 years	5 years <=10 years	>10 years	Total
Committed assets	44.6	32.3	10.6	49.7	39.2	50.1	51.6	20.1	10.7	308.9
Guarantees received committed	29.2	37.5	13.3	21.4	0.6	1.3	1.0	—	—	104.3

The reported Group information as required by the EBA at 2022 year-end is as follows:

On-balance-sheet encumbered assets

EUR billion				
	Carrying amount of encumbered assets	Fair value of encumbered assets	Fair value of non-encumbered assets	Carrying amount of non-encumbered assets
Loans and advances	197.3		1,143.5	
Equity instruments	8.3	8.3	7.4	7.4
Debt securities	71.7	71.7	122.0	125.8
Other assets	31.6		152.8	
Total assets	308.9		1,425.7	

Encumbrance of collateral received

EUR billion		
	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Collateral received	104.3	29.4
Loans and advances	1.3	—
Equity instruments	4.8	6.8
Debt securities	98.2	22.5
Other collateral received	—	0.1
Own debt securities issued other than own covered bonds or ABSs	—	0.5

Encumbered assets and collateral received and matching liabilities

EUR billion		
	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Total sources of encumbrance (carrying amount)	313.2	413.2

On-balance-sheet encumbered assets amounted to EUR 308,900 million, of which 64% are loans (mortgage loans, corporate loans, etc.). Guarantees received committed amounted to EUR 104,300 million, relating mostly to debt securities received as security in asset purchase transactions and re-used.

Taken together, these two categories represent a total of EUR 413,200 million of encumbered assets, which give rise to EUR 313,200 million matching liabilities.

As of December 2022, total asset encumbrance in funding operations represented 22.1% of the Group's extended balance sheet under EBA criteria (total assets plus guarantees received: EUR 1,868,400 million as of December 2022). This percentage has decreased from 26.1% that presented the Group as of December 2021, mainly as a result of the early repayment of collateralized financing with central banks, especially the European Central Bank (TLTRO) and the Bank of England (TFSME).

d) Capital risk

In the second line of defence, capital risk management can independently challenge business and first-line activities by:

- Supervising capital planning and adequacy exercises through a review of the main components affecting the capital ratios.
- Identifying key metrics to calculate the Group's regulatory capital, setting tolerance levels and analysing significant variations, as well as single transactions with impact on capital.
- Reviewing and challenging the execution of capital actions proposed in line with capital planning and risk appetite.

Grupo Santander commands a sound solvency position, above the levels required by regulators and by the European Central bank.

Regulatory capital

At 1 January 2023, at a consolidated level, the Group must maintain a minimum capital ratio of 9.07% of CET1 (4.50% being the requirement for Pillar I, 0.89% being the requirement for Pillar 2R (requirement), 2.50% being the requirement for capital conservation buffer, 1% being the requirement for global systemically entity (G-SIB) and 0.18% being the requirement for anti-cyclical capital buffer).

Grupo Santander must also maintain a minimum capital ratio of 10.87% of tier 1 and a minimum total ratio of 13.26%.

In 2022, the solvency target set was achieved. Santander's CET1 ratio stood at 12.18%⁵ at the close of the year, demonstrating its organic capacity to generate capital. The key regulatory capital figures are indicated below:

Reconciliation of accounting capital with regulatory capital

EUR million	2022	2021
Subscribed capital	8,397	8,670
Share premium account	46,273	47,979
Reserves	62,111	56,606
Treasury shares	(675)	(894)
Attributable profit	9,605	8,124
Approved dividend ^C	(979)	(836)
Shareholders' equity on public balance sheet	124,732	119,649
Valuation adjustments	(35,628)	(32,719)
Non-controlling interests	8,481	10,123
Total Equity on public balance sheet	97,585	97,053
Goodwill and intangible assets	(17,272)	(16,132)
Eligible preference shares and participating securities	8,831	10,050
Accrued dividend ^C	(942)	(895)
Other adjustments ^A	(5,169)	(7,624)
Tier 1^B	83,033	82,452

A. Fundamentally for non-computable non-controlling interests and deductions and reasonable filters in compliance with CRR.

B. Figures calculated by applying the transitional provisions of IFRS 9.

C. Assumes 20% of ordinary profit, see note 4.a for proposed distribution of results.

Note: Certain figures presented in this capital note have been rounded for ease of presentation. Consequently, the amounts corresponding to the rows or columns of totals in the tables presented in this note may not coincide with the arithmetic sum of the concepts or items that make up the total.

The following table shows the capital coefficients and a detail of the eligible internal resources of the Group:

Capital coefficients	2022	2021
Level 1 ordinary eligible capital (EUR million)	74,202	72,402
Level 1 additional eligible capital (EUR million)	8,831	10,050
Level 2 eligible capital (EUR million)	14,359	14,865
Risk-weighted assets (EUR million)	609,266	578,930
Level 1 ordinary capital coefficient (CET 1)	12.18 %	12.51 %
Level 1 additional capital coefficient (AT1)	1.45 %	1.73 %
Level 1 capital coefficient (TIER1)	13.63 %	14.24 %
Level 2 capital coefficient (TIER 2)	2.36 %	2.57 %
Total capital coefficient	15.99 %	16.81 %

⁵ Figures calculated by applying the transitional provisions of IFRS 9

Eligible capital

EUR million		
	2022	2021
Eligible capital		
Common Equity Tier I	74,202	72,402
Capital	8,397	8,670
(-) Treasury shares and own shares financed	(60)	(966)
Share Premium	46,273	47,979
Reserves	62,246	58,157
Other retained earnings	(37,439)	(34,784)
Minority interests	7,416	6,736
Profit net of dividends	7,684	6,394
Deductions	(20,315)	(19,784)
<i>Goodwill and intangible assets</i>	<i>(17,182)</i>	<i>(16,064)</i>
<i>Others</i>	<i>(3,133)</i>	<i>(3,720)</i>
Additional Tier I	8,831	10,050
Eligible instruments AT1	8,344	10,102
AT1-excesses-subsidiaries	487	(52)
Tier II	14,359	14,865
AT1-excesses-subsidiaries	487	(52)
Eligible instruments T2	14,770	15,424
Gen. funds and surplus loans loss prov. IRB	—	75
T2-excesses - subsidiaries	(411)	(634)
Total eligible capital	97,392	97,317

Note: Banco Santander, S.A. and its affiliates had not taken part in any State aid programmes.

Leverage ratio

Basel III established the leverage ratio as a non-risk sensitive measure aimed at limiting excessive balance sheet growth relative to available capital.

The Group performs the calculation in accordance with Regulation (EU) 2019/876 of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio.

This ratio is calculated as tier 1 capital divided by leverage exposure. Exposure is calculated as the sum of the following items:

- Accounting assets, excluding derivatives and items treated as deductions from tier 1 capital (for example, the balance of loans is included, but not that of goodwill) further excluding the exposures referred to in Article 429.a (1) of the regulation.
- Off-balance-sheet items (mainly guarantees, unused credit limits granted and documentary credits) weighted using credit conversion factors.

- Inclusion of net value of derivatives (gains and losses are netted with the same counterparty, minus collaterals if they comply with certain criteria) plus a charge for the future potential exposure.
- A charge for the potential risk of security funding transactions.
- Lastly, it includes a charge for the risk of credit derivative swaps (CDS).

With the publication of Regulation (EU) 2019/876 of 20 May, 2019, amending Regulation (EU) n.º 575/2013 as regards the leverage ratio, the final calibration of the ratio is set at 3% for all entities and, for systemic entities G-SIB, an additional surcharge is also established which will be 50% of the cushion ratio applicable to the EISM. In addition, modifications are included in its calculation, including the exclusion of certain exposures from the total exposure measure: public loans, transfer loans and officially guaranteed export credits.

Banks implemented this final definition of the leverage ratio in June 2021, however, the new calibration of the ratio (the additional surcharge for G-SIBs) will take effect from January 2023.

EUR million		
	2022	2021
Leverage		
Level 1 Capital	83,033	82,452
Exposure	1,750,626	1,536,516
Leverage Ratio	4.74 %	5.37 %

Global systemically important banks

Grupo Santander is one of 30 banks designated as global systemically important banks (G-SIBs).

The designation as a globally systemic entity comes from a measurement established by the regulators (FSB and BCBS) that they have implemented based on five indicators (size, interjurisdictional activity, interconnection with other financial entities, substitutability and complexity). The application methodology has been modified in December 2021, incorporating, among other things, an additional score considering the Member States of the SRM as a single jurisdiction.

This definition means it has to fulfil certain additional requirements, which consist mainly of a capital buffer (1%), in TLAC requirements (total loss absorbing capacity), that Grupo Santander has to publish relevant information more frequently than other banks, greater regulatory requirements for internal control bodies, special supervision and drawing up of special reports to be submitted to supervisors.

The fact that Grupo Santander has to comply with these requirements makes it a more solid bank than its domestic rivals.

Appendix I

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
2 & 3 Triton Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	40	1	12
A & L CF (Guernsey) Limited (n)	Guernsey	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
A & L CF June (2) Limited (e)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
A & L CF June (3) Limited (e)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
A & L CF March (5) Limited (d)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	1	0	0
A & L CF September (4) Limited (f)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	20	0	0
A3T Luxco 1 S.A. (c)	Luxembourg	0.00%	100.00%	100.00%	100.00%	Holding company	4	(1)	4
A3T Luxco 2 S.A. (c)	Luxembourg	100.00%	0.00%	100.00%	100.00%	Holding company	(20)	21	0
Abbey Business Services (India) Private Limited (d)	India	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Abbey Covered Bonds (Holdings) Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Abbey Covered Bonds (LM) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Abbey Covered Bonds LLP	United Kingdom	—	(b)	—	—	Securitization	231	159	0
Abbey National Beta Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Abbey National Business Office Equipment Leasing Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National International Limited	Jersey	0.00%	100.00%	100.00%	100.00%	Financial services	4	0	4
Abbey National Nominees Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National PLP (UK) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National Property Investments	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	278	(1)	156
Abbey National Treasury Services Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey National Treasury Services Overseas Holdings	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Abbey National UK Investments	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Abbey Stockbrokers (Nominees) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Abbey Stockbrokers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securities company	0	0	0
Abent 3T, S.A.P.I de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Electricity production	52	(86)	0
Ablasa Participaciones, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	233	48	894
Aduro S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payments and collection services	1	(1)	3
Avis Europa, S.L.	Spain	96.34%	0.00%	96.34%	96.34%	Cards	1	0	1

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
AFB SAM Holdings, S.L.	Spain	1.00%	99.00%	100.00%	100.00%	Holding company	0	0	0
Afisa S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Fund management company	4	0	4
Allane Leasing GmbH	Austria	0.00%	46.95%	100.00%	100.00%	Renting	(2)	0	0
Allane Location Longue Durée S.a.r.l.	France	0.00%	46.95%	100.00%	100.00%	Renting	14	3	0
Allane Mobility Consulting AG	Switzerland	0.00%	46.95%	100.00%	100.00%	Consulting services	1	0	0
Allane Mobility Consulting B.V.	Netherlands	0.00%	46.95%	100.00%	100.00%	Consulting services	(3)	0	0
Allane Mobility Consulting GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Consulting services	1	1	0
Allane Mobility Consulting Österreich GmbH	Austria	0.00%	46.95%	100.00%	100.00%	Consulting services	(1)	0	0
Allane Mobility Consulting S.a.r.l	France	0.00%	46.95%	100.00%	100.00%	Consulting services	(1)	0	0
Allane Schweiz AG	Switzerland	0.00%	46.95%	100.00%	100.00%	Renting	14	0	0
Allane SE	Germany	0.00%	46.95%	92.07%	92.07%	Renting	192	4	175
Allane Services GmbH & co. KG	Germany	0.00%	46.95%	100.00%	100.00%	Services	1	0	0
Allane Services Verwaltungs GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Management of portfolios	0	0	0
Alliance & Leicester Cash Solutions Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Alliance & Leicester Commercial Bank Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Investments (Derivatives) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Alliance & Leicester Investments (No.2) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Alliance & Leicester Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Alliance & Leicester Personal Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	(228)	0	0
Altamira Santander Real Estate, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	20	(109)	0
Alternative Leasing, FIL (Compartimento B)	Spain	100.00%	0.00%	100.00%	100.00%	Investment fund	108	6	105
Amazonia Trade Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Holding company	0	0	0
Amherst ASG Holdings, LLC	United States	0.00%	100.00%	100.00%	—	Holding company	225	(50)	175
Amherst Pierpont Commercial Mortgage Securities LLC	United States	0.00%	100.00%	100.00%	—	Securitization	0	0	0
Amherst Pierpont International Ltd.	Hong-Kong	0.00%	100.00%	100.00%	—	Intermediation	3	0	3
Amherst Pierpont Securities LLC	United States	0.00%	100.00%	100.00%	—	Securities Investment	366	(43)	323
AN (123) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Andaluz de Inversiones, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	37	1	27
ANITCO Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
AP Acquisition Trust I	United States	0.00%	100.00%	100.00%	—	Trust company	0	0	0
AP Asset Acquisition LLC	United States	0.00%	100.00%	100.00%	—	Financial services	1	0	1
Apê11 Tecnologia e Negócios Imobiliários S.A.	Brazil	0.00%	81.26%	90.00%	90.00%	Real estate	7	(1)	5
APSG GP LLC	United States	0.00%	100.00%	100.00%	—	Holding company	0	0	0
Aquanima Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	E-commerce	2	0	0
Aquanima Chile S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Services	3	0	0
Aquanima México S. de R.L. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	E-commerce	3	1	2
Aquanima S.A.	Argentina	0.00%	100.00%	100.00%	100.00%	Services	4	(1)	4
Artarien S.A. (o)	Uruguay	100.00%	0.00%	100.00%	100.00%	Insurance auxiliary services	0	0	1
Asto Digital Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	12	(2)	0
Athena Corporation Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Financial services	(8)	0	0
Atlantes Mortgage No. 2	Portugal	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Atlantes Mortgage No. 3	Portugal	—	(b)	—	—	Securitization	0	0	0
Atlantes Mortgage No. 4	Portugal	—	(b)	—	—	Securitization	0	0	0
Atual - Fundo de Invest Multimercado Crédito Privado Investimento no Exterior	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	433	49	436
Auto ABS Belgium Loans 2019 SA/NV	Belgium	—	(b)	—	—	Securitization	0	0	0
Auto ABS DFP Master Compartment France 2013	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Leases 2021	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Leases Master Compartment 2016	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French Loans Master	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS French LT Leases Master	France	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Balloon 2019-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Loans 2018-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Italian Rainbow Loans 2020-1 S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Auto ABS Spanish Loans 2018-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Auto ABS Spanish Loans 2020-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Auto ABS Spanish Loans 2022-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2017 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2019 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans 2019 Plc	United Kingdom	—	(b)	—	—	Securitization	(3)	2	0
Auto ABS UK Loans Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Auto ABS UK Loans PLC	United Kingdom	—	(b)	—	—	Securitization	(7)	40	0
Autodescuento, S.L.	Spain	0.00%	93.89%	93.89%	93.89%	Vehicles purchased by internet	2	0	18
Autohaus24 GmbH	Germany	0.00%	46.95%	100.00%	100.00%	Internet	(3)	1	0
Auttar HUT Processamento de Dados Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	IT services	6	0	6
Aviación Antares, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	53	6	28
Aviación Británica, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	26	5	6
Aviación Centaurus, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	0	1	0
Aviación Comillas, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Renting	8	0	8
Aviación Intercontinental, A.I.E.	Spain	99.97%	0.03%	100.00%	100.00%	Renting	42	(11)	31

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Aviación Laredo, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Air transport	3	0	3
Aviación Oyambre, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Renting	1	(4)	1
Aviación Santillana, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Renting	5	1	2
Aviación Suances, S.L.	Spain	99.00%	1.00%	100.00%	100.00%	Air transport	8	1	3
Aviación Tritón, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	0	2	0
Aymoré Crédito, Financiamento e Investimento S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Finance company	7,414	312	6,974
Azor Mortgages PLC (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Banca PSA Italia S.p.A.	Italy	0.00%	50.00%	50.00%	50.00%	Banking	393	69	153
Banco Bandepe S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Banking	902	78	885
Banco de Albacete, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Banking	14	0	9
Banco Hyundai Capital Brasil S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Banking	65	12	35
Banco PSA Finance Brasil S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Banking	42	5	21
Banco Santander - Chile	Chile	0.00%	67.13%	67.18%	67.18%	Banking	3,920	889	3,860
Banco Santander (Brasil) S.A.	Brazil	0.04%	90.25%	90.90%	90.50%	Banking	12,320	2,187	10,795

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso	Mexico	0.00%	96.24%	100.00%	100.00%	Finance company	168	18	128
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso	Mexico	0.00%	96.58%	100.00%	100.00%	Finance company	5	1	5
Banco Santander (México), S.A., Institución de Banca Múltiple, Grupo Financiero Santander México como Fiduciaria del Fideicomiso	Mexico	0.00%	96.64%	100.00%	100.00%	Finance company	22	1	22
Banco Santander Argentina S.A.	Argentina	0.00%	99.82%	99.77%	99.26%	Banking	1,851	390	578
Banco Santander de Negocios Colombia S.A.	Colombia	94.90%	5.10%	100.00%	100.00%	Banking	120	5	127
Banco Santander International	United States	0.00%	100.00%	100.00%	100.00%	Banking	1,226	134	1,360
Banco Santander International SA	Switzerland	0.00%	100.00%	100.00%	100.00%	Banking	1,215	39	837
Banco Santander México, S.A., Institución de Banca Múltiple, Grupo Financiero Santander México	Mexico	21.19%	75.04%	96.24%	96.24%	Banking	6,708	1,270	8,165
Banco Santander Perú S.A.	Peru	99.90%	0.10%	100.00%	100.00%	Banking	236	41	122
Banco Santander S.A.	Uruguay	97.75%	2.25%	100.00%	100.00%	Banking	480	106	191
Banco Santander Totta, S.A.	Portugal	0.00%	99.87%	99.96%	99.96%	Banking	2,887	604	3,815
Bansa Santander S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Real estate	23	4	27
BEN Benefícios e Serviços Instituição de Pagamento S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Payment services	12	(1)	9
Bilkredit 6 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Bilkredit 7 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Blechno Investments, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Real estate	172	10	202
BRS Investments S.A.	Argentina	5.10%	94.90%	100.00%	100.00%	Finance company	76	12	75
Cántabra de Inversiones, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	126	0	115
Cántabro Catalana de Inversiones, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	275	(2)	267
Canyon Multifamily Impact Fund IV LLC (c)	United States	0.00%	98.00%	98.00%	98.00%	Real estate	0	0	0
Capital Street Delaware LP	United States	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Capital Street Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	14	0	14
Capital Street REIT Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	1,184	15	1,200
Capital Street S.A.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Casa de Bolsa Santander, S.A. de C.V., Grupo Financiero Santander México	Mexico	0.00%	99.97%	99.97%	99.97%	Securities company	62	4	66
Cater Allen Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Cater Allen International Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Cater Allen Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Banking	343	56	251

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Cater Allen Lloyd's Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Cater Allen Syndicate Management Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
CCAP Auto Lease Ltd.	United States	0.00%	100.00%	100.00%	100.00%	Leasing	365	42	407
Centro de Capacitación Santander, A.C.	Mexico	0.00%	96.24%	100.00%	100.00%	Non-profit institute	1	0	1
Certidesa, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Aircraft rental	(64)	(8)	0
Chrysler Capital Auto Funding II LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	0	37	0
Chrysler Capital Master Auto Receivables Funding 2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(258)	0	0
Chrysler Capital Master Auto Receivables Funding LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	116	3	0
Cobranza Amigable, S.A.P.I. de C.V.	Mexico	0.00%	85.00%	100.00%	100.00%	Collection services	4	0	3
Community Development and Affordable Housing Fund LLC (c)	United States	0.00%	96.00%	96.00%	96.00%	Asset management	(1)	(1)	1
Compagnie Generale de Credit Aux Particuliers - Credipar S.A.	France	0.00%	50.00%	100.00%	100.00%	Banking	460	22	428
Compagnie Pour la Location de Vehicules - CLV	France	0.00%	50.00%	100.00%	100.00%	Banking	22	(1)	26
Compartment German Auto Loans 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
Consulteam Consultores de Gestão, Unipessoal, Lda.	Portugal	100.00%	0.00%	100.00%	100.00%	Real estate	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Consumer Totta 1	Portugal	—	(b)	—	—	Securitization	0	0	0
Crawfall S.A. (g) (j)	Uruguay	100.00%	0.00%	100.00%	100.00%	Services	0	0	0
Credileads S.A.	Uruguay	0.00%	100.00%	100.00%	—	Advertising	0	0	4
Darep Designated Activity Company	Ireland	100.00%	0.00%	100.00%	100.00%	Reinsurances	7	0	7
Decarome, S.A.P.I. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Finance company	50	3	52
Deva Capital Advisory Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Advisory services	2	1	2
Deva Capital Holding Company, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	227	(17)	235
Deva Capital Investment Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	117	6	111
Deva Capital Management Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Advisory services	21	(13)	8
Deva Capital Servicer Company, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	99	(10)	90
Digital Procurement Holdings N.V.	Netherlands	0.00%	100.00%	100.00%	100.00%	Holding company	5	0	1
Diglo Servicer Company 2021, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Real estate management	19	1	19
Diners Club Spain, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Cards	9	1	10
Dirección Estratega, S.C.	Mexico	0.00%	100.00%	100.00%	100.00%	Services	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Drive Auto Receivables Trust 2018-5	United States	—	(b)	—	—	Securitization	44	37	0
Drive Auto Receivables Trust 2019-1	United States	—	(b)	—	—	Securitization	57	40	0
Drive Auto Receivables Trust 2019-2	United States	—	(b)	—	—	Securitization	49	46	0
Drive Auto Receivables Trust 2019-3	United States	—	(b)	—	—	Securitization	71	66	0
Drive Auto Receivables Trust 2019-4	United States	—	(b)	—	—	Securitization	60	72	0
Drive Auto Receivables Trust 2020-1	United States	—	(b)	—	—	Securitization	37	79	0
Drive Auto Receivables Trust 2020-2	United States	—	(b)	—	—	Securitization	50	80	0
Drive Auto Receivables Trust 2021-1	United States	—	(b)	—	—	Securitization	(122)	185	0
Drive Auto Receivables Trust 2021-2	United States	—	(b)	—	—	Securitization	(329)	264	0
Drive Auto Receivables Trust 2021-3	United States	—	(b)	—	—	Securitization	(292)	172	0
Drive Auto Receivables Trust 2022-1	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-2	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-3	United States	—	(b)	—	—	Inactive	0	0	0
Drive Auto Receivables Trust 2022-4	United States	—	(b)	—	—	Inactive	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Drive S.r.l.	Italy	0.00%	100.00%	100.00%	—	Renting	5	(1)	5
Ductor Real Estate, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	25	1	20
Ebury Brasil Consultoria Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Consulting services	1	0	0
Ebury Brasil Participações Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Holding company	2	0	3
Ebury Facilitadora De Pagamentos Ltda. (q)	Brazil	0.00%	66.54%	100.00%	—	Software	0	0	0
Ebury Finance Belgium NV (q)	Belgium	0.00%	66.54%	100.00%	—	Finance company	0	0	0
Ebury Mass Payments Holdco Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Holding company	0	0	17
Ebury Mass Payments Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Payment services	5	3	0
Ebury Partners Australia Pty Ltd. (q)	Australia	0.00%	66.54%	100.00%	—	Finance company	1	0	1
Ebury Partners Belgium NV (q)	Belgium	0.00%	66.54%	100.00%	—	Payment services	60	21	82
Ebury Partners Canada Limited (q)	Canada	0.00%	66.54%	100.00%	—	Finance company	3	0	7
Ebury Partners China Limited (q)	China	0.00%	66.54%	100.00%	—	Inactive	5	0	0
Ebury Partners Finance Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Finance company	(8)	(2)	0
Ebury Partners Holdings Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Holding company	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)			EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Ebury Partners Hong Kong Limited (q)	Hong-Kong	0.00%	66.54%	100.00%	—	Finance company	3	0	3
Ebury Partners Limited (q)	United Kingdom	0.00%	66.54%	66.54%	51.28%	Holding company	250	(6)	531
Ebury Partners Markets Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Finance company	5	0	0
Ebury Partners SA (Pty) Ltd. (q)	Republic of South Africa	0.00%	66.54%	100.00%	—	Inactive	0	0	0
Ebury Partners Switzerland AG (q)	Switzerland	0.00%	66.54%	100.00%	—	Finance company	5	0	5
Ebury Partners UK Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Electronic money	56	(31)	148
Ebury Payments PTE Ltd. (q)	Singapur	0.00%	66.54%	100.00%	—	Payment services	0	0	0
Ebury Technology Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	Software	(48)	(5)	0
EDT FTPYME Pastor 3 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Elcano Renovables, S.L.	Spain	0.00%	70.00%	70.00%	70.00%	Holding company	0	0	0
Electrolyser, S.A. de C.V.	Mexico	0.00%	96.24%	100.00%	100.00%	Services	0	0	0
Elevate Tech Platforms, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Holding company	2	0	2
Entidad de Desarrollo a la Pequeña y Micro Empresa Santander Consumo Perú S.A.	Peru	100.00%	0.00%	100.00%	100.00%	Finance company	33	4	34
Erestone S.A.S.	France	0.00%	90.00%	90.00%	90.00%	Inactive	1	0	1

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (k)		Activity	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
Esfera Fidelidade S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Services	126	110	213
Evidence Previdência S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance	134	2	121
Eyemobile Tecnologia S.A.	Brazil	0.00%	58.26%	60.00%	60.00%	IT services	2	(1)	0
F1rst Tecnologia e Inovação Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	IT services	52	8	54
Financeira El Corte Inglés, Portugal, S.F.C., S.A.	Portugal	0.00%	51.00%	100.00%	100.00%	Finance company	8	1	4
Financiera El Corte Inglés, E.F.C., S.A.	Spain	0.00%	51.00%	51.00%	51.00%	Finance company	278	58	140
Finsantusa, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	1,257	(2)	1,020
First National Motor Business Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
First National Motor Contracts Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
First National Motor plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
First National Tricity Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	6	0	6
Fondation Holding Auto ABS Belgium Loans	Belgium	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización de Activos Santander Consumer Spain Auto 2014-1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización PYMES Santander 15	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Consumer Spain Auto 2016-1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Consumer Spain Auto 2016-2	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización Santander Financiación 1	Spain	—	(b)	—	—	Securitization	0	0	0
Fondo de Titulización, RMBS Santander 7	Spain	—	(b)	—	—	Securitization	0	0	0
Fondos Santander, S.A. Administradora de Fondos de Inversión (en liquidación) (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Fund management company	0	0	0
Foreign Exchange Solutions (UK) Limited (q)	United Kingdom	0.00%	66.54%	100.00%	—	IT services	0	0	0
Foreign Exchange Solutions S.L. (q)	Spain	0.00%	66.54%	100.00%	—	IT services	0	(1)	0
Fortensky Trading, Ltd.	Ireland	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Fosse (Master Issuer) Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Fosse Funding (No.1) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	1	81	0
Fosse Master Issuer PLC	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	(1)	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Fosse Trustee (UK) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Freedom Depository Holdings, LLC	United States	0.00%	100.00%	100.00%	—	Holding company	0	0	0
Freedom Depository, LLC	United States	0.00%	100.00%	100.00%	—	Securitization	0	0	0
FTPYME Banesto 2, Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Fundo de Investimento em Direitos Creditórios Atacado - Não Padronizado	Brazil	0.00%	90.28%	100.00%	—	Investment fund	83	11	85
Fundo de Investimentos em Direitos Creditórios Multisegmentos NPL Ipanema VI - Não padronizado	Brazil	0.00%	90.28%	100.00%	—	Investment fund	350	38	350
Gamma, Sociedade Financeira de Titularização de Créditos, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Securitization	7	0	8
GC FTPYME Pastor 4 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Gesban México Servicios Administrativos Globales, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Services	1	0	0
Gesban Santander Servicios Profesionales Contables Limitada	Chile	0.00%	100.00%	100.00%	100.00%	Accounting services	1	0	0
Gesban Servicios Administrativos Globales, S.L.	Spain	99.99%	0.01%	100.00%	100.00%	Services	5	1	1
Gesban UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Payments and collection services	1	0	0
Gestión de Inversiones JILT, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Services	15	0	15
Gestora de Procesos S.A. en liquidación (j)	Peru	0.00%	100.00%	100.00%	100.00%	Holding company	(1)	0	0
Getnet Adquirência e Serviços para Meios de Pagamento S.A. - Instituição de Pagamento	Brazil	0.04%	97.07%	97.10%	89.91%	Payment services	444	102	356
Getnet Argentina S.A.U.	Argentina	0.00%	100.00%	100.00%	100.00%	Payment methods	26	(10)	16
Getnet Europe, Entidad de Pago, S.L. Unipersonal	Spain	—	100.00%	100.00%	100.00%	Payment services	215	2	207

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Getnet Fundo de Investimento em Direitos Creditórios	Brazil	0.00%	90.28%	100.00%	—	Investment fund	1	0	1
Getnet Merchant Solutions UK Ltd	United Kingdom	0.00%	100.00%	100.00%	—	Financial services	0	0	0
Getnet Sociedade de Credito Direto S.A.	Brazil	0.00%	97.10%	100.00%	100.00%	Finance company	14	7	21
Gira, Gestão Integrada de Recebíveis do Agronegócio S.A. (e)	Brazil	0.00%	72.23%	80.00%	80.00%	Consulting services	1	(3)	0
GNXT Serviços de Atendimento Ltda.	Brazil	0.00%	97.10%	100.00%	—	Telemarketing	4	(1)	3
Golden Bar (Securitisation) S.r.l.	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2016-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2018-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2019-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2020-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2020-2	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2021-1	Italy	—	(b)	—	—	Securitization	0	0	0
Golden Bar Stand Alone 2022-1	Italy	—	(b)	—	—	Securitization	0	0	0
Gravity Cloud Technology, S.L.	Spain	100.00%	0.00%	100.00%	—	IT services	33	1	31
Grupo Empresarial Santander, S.L.	Spain	99.62%	0.38%	100.00%	100.00%	Holding company	3,985	571	2,861
Grupo Financiero Santander México, S.A. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Holding company	5,093	954	5,164
Guaranty Car, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Automotive	3	0	2

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Hipototta No. 13	Portugal	—	(b)	—	100.00%	Securitization	0	0	0
Hipototta No. 4 FTC	Portugal	—	(b)	—	100.00%	Securitization	(53)	(1)	0
Hipototta No. 4 plc	Ireland	—	(b)	—	100.00%	Securitization	(4)	2	0
Hipototta No. 5 FTC	Portugal	—	(b)	—	—	Securitization	(46)	0	0
Hipototta No. 5 plc	Ireland	—	(b)	—	—	Securitization	(13)	2	0
Holbah Santander, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	563	157	820
Holmes Funding Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	8	58	0
Holmes Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Holmes Master Issuer plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	(11)	(1)	0
Holmes Trustees Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Hyundai Capital Bank Europe GmbH	Germany	0.00%	51.00%	51.00%	51.00%	Banking	701	17	391
Ibérica de Compras Corporativas, S.L.	Spain	97.17%	2.83%	100.00%	100.00%	E-commerce	7	1	6
Independence Community Bank Corp.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	3,596	53	3,649
Insurance Funding Solutions Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Interfinance Holanda B.V.	Netherlands	100.00%	0.00%	100.00%	100.00%	Holding company	0	0	0
Inversiones Capital Global, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	98	(1)	109
Inversiones Marítimas del Mediterráneo, S.A.	Spain	0.00%	100.00%	100.00%	100.00%	Inactive	4	(1)	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Isar Valley S.A.	Luxembourg	—	(b)	—	—	Securitization	8	0	0
Isla de los Buques, S.A.	Spain	99.98%	0.02%	100.00%	100.00%	Finance company	1	0	1
Klare Corredora de Seguros S.A.	Chile	0.00%	33.63%	50.10%	50.10%	Insurance brokerage	4	(3)	0
Landcompany 2020, S.L.	Spain	17.66%	82.34%	100.00%	100.00%	Real estate management	1,701	(22)	1,689
Langton Securities (2008-1) plc (j)	United Kingdom	—	(b)	—	100.00%	Securitization	0	0	0
Laparanza, S.A.	Spain	61.59%	0.00%	61.59%	61.59%	Agricultural holding	28	0	16
Lerma Investments 2018, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	—	Real estate	10	2	13
Liderança Serviços Especializados em Cobranças Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Collection services	46	1	42
Liquetine, S.L. Unipersonal	Spain	0.00%	70.00%	100.00%	100.00%	Renewable energies	1	0	2
Liquidity Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Factoring	(1)	0	0
Luri 6, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate investment	1,358	13	1,390
Lynx Financial Crime Tech, S.A. Unipersonal	Spain	0.00%	100.00%	100.00%	—	IT services	2	0	2
MAC No. 1 Limited	United Kingdom	—	(b)	—	—	Mortgage credit company	0	0	0
Master Red Europa, S.L.	Spain	96.34%	0.00%	96.34%	96.34%	Cards	1	0	1
Mata Alta, S.L. Unipersonal	Spain	0.00 %	61.59 %	100.00 %	100.00 %	Agricultural holding	0	0	0
Mercadotecnia, Ideas y Tecnología, S.A. de C.V.	Mexico	0.00%	70.00%	70.00%	70.00%	Payment methods	1	7	14
Merciver, S.L.	Spain	99.90%	0.10%	100.00%	100.00%	Financial advisory	1	0	1

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Mercury Trade Finance Solutions S.A.S.	Colombia	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions SpA	Chile	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions, S.A. de C.V.	Mexico	0.00%	50.10%	100.00%	100.00%	IT services	0	0	0
Mercury Trade Finance Solutions, S.L.	Spain	0.00%	50.10%	50.10%	50.10%	IT services	10	1	22
Merlion Aviation One Designated Activity Company	Ireland	—	(b)	—	—	Renting	32	(3)	0
Mob Soluções em Tecnologia Ltda. - EPP	Brazil	0.00%	56.88%	100.00%	—	Advertising	0	0	0
Mobilis Corretora de Seguros Ltda.	Brazil	0.00%	56.88%	100.00%	—	Insurance brokerage	1	0	0
Mobilis Labs Soluções em Tecnologia Ltda. - EPP	Brazil	0.00%	56.88%	100.00%	—	IT services	2	1	2
Monetus Investimentos S.A.	Brazil	0.00%	56.88%	100.00%	—	Securities investment	2	(1)	1
Motor 2016-1 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Motor 2016-1 PLC	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Motor 2017-1 Holdings Limited	United Kingdom	—	(b)	—	—	Securitization	0	0	0
Motor 2017-1 PLC (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Securitization	0	0	0
Motor Securities 2018-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(2)	(1)	0
Mouro Capital I LP	United Kingdom	0.00%	100.00%	100.00%	100.00%	Investment fund	822	(84)	305
Multiplifica SpA	Chile	0.00%	100.00%	100.00%	100.00%	Payment services	5	(1)	4
Munduspar Participações S.A.	Brazil	80.00%	0.00%	80.00%	—	Holding company	27	(1)	74

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Navegante Américo Vespucio SpA	Chile	0.00%	100.00%	100.00%	—	Real estate	73	(1)	105
Naviera Mirambel, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Naviera Trans Gas, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	34	(2)	38
Naviera Trans Iron, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	26	0	21
Naviera Trans Ore, A.I.E.	Spain	99.99%	0.01%	100.00%	100.00%	Renting	28	9	17
Naviera Transcantábrica, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	5	0	4
Naviera Transchem, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	1	0	1
NeoAuto S.A.C.	Peru	0.00%	55.00%	55.00%	55.00%	Vehicles purchased by internet	1	0	1
Newcomar, S.L., en liquidación (j)	Spain	40.00%	40.00%	80.00%	80.00%	Real estate	1	0	0
Novimovest – Fundo de Investimento Imobiliário	Portugal	0.00%	78.64%	78.74%	78.74%	Investment fund	217	3	174
NW Services CO.	United States	0.00%	100.00%	100.00%	100.00%	E-commerce	7	2	2
One Mobility Management GmbH	Germany	0.00%	46.95%	100.00%	—	Services	0	0	0
Open Bank Argentina S.A.	Argentina	0.00%	99.91%	100.00%	100.00%	Banking	46	(23)	24
Open Bank, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	550	15	566
Open Digital Market, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Commerce	0	0	0
Open Digital Services Argentina S.A.U. en liquidación (j)	Argentina	0.00%	100.00%	100.00%	100.00%	IT services	0	0	0
Open Digital Services, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Services	116	(87)	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Open Mx Servicios Administrativos, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Financial services	0	(1)	0
Openbank Santander México, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	—	Inactive	0	0	0
Operadora de Carteras Gamma, S.A.P.I. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Holding company	10	1	8
Optimal Investment Services SA	Switzerland	100.00%	0.00%	100.00%	100.00%	Fund management company	44	(1)	29
Optimal Multiadvisors Ireland Plc / Optimal Strategic US Equity Ireland Euro Fund (m) (p)	Ireland	0.00%	0.00%	0.00%	—	Fund management company	0	0	0
Optimal Multiadvisors Ireland Plc / Optimal Strategic US Equity Ireland US Dollar Fund (m) (p)	Ireland	0.00%	0.00%	0.00%	—	Fund management company	0	0	0
Paga Después, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	—	Financial services	4	0	4
PagoFX Europe S.A. (c)	Belgium	0.00%	100.00%	100.00%	100.00%	Inactive	2	(1)	1
PagoFX UK Ltd	United Kingdom	0.00%	100.00%	100.00%	100.00%	Payment services	6	(2)	4
PagoNxt Ltd	United Kingdom	100.00%	0.00%	100.00%	100.00%	Holding company	6	(3)	6
PagoNxt Merchant Soluções Tecnológicas Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	IT services	85	(30)	54
PagoNxt Merchant Solutions FZ-LLC	United Arab Emirates	0.00%	100.00%	100.00%	100.00%	Financial services	2	1	2
PagoNxt Merchant Solutions India Private Limited	India	0.00%	100.00%	100.00%	100.00%	Financial services	1	0	1
PagoNxt Merchant Solutions, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	1,098	(93)	1,175
PagoNxt One Trade UK Ltd	United Kingdom	0.00%	100.00%	100.00%	100.00%	Financial services	0	0	0
PagoNxt OneTrade España, E.D.E., S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Financial services	2	(1)	1
PagoNxt Payments Platform México, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	—	IT services	0	0	0

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by		Percentage of voting power (k)		Activity	EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
PagoNxt Solutions, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Payment services	36	(16)	21
Pagonxt Trade Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	—	Financial services	0	0	0
PagoNxt Trade Chile SpA	Chile	0.00%	100.00%	100.00%	—	Services	0	0	0
PagoNxt Trade Services, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Services	231	(87)	144
PagoNxt Trade, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	IT services	277	(101)	180
PagoNxt, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	2,289	(229)	2,616
Parasant SA	Switzerland	100.00%	0.00%	100.00%	100.00%	Holding company	1,212	(3)	969
Paytec Logística e Armazém Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	Logistic services	0	0	0
Paytec Tecnologia em Pagamentos Ltda.	Brazil	0.00%	97.10%	100.00%	100.00%	Commerce	3	2	5
PBD Germany Auto 2018 UG (Haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Lease Master 2019	Luxembourg	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Lease Master S.A., Compartment 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
PBD Germany Auto Loan 2021 UG (Haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
PBE Companies, LLC	United States	0.00%	100.00%	100.00%	100.00%	Real estate	117	0	117
Pereda Gestión, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Securities brokerage	52	11	4
Phoenix C1 Aviation Designated Activity Company	Ireland	—	(b)	—	—	Renting	18	1	0
Phoenix S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payment methods	0	0	4

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Pierpont Advisory Management LLC	United States	0.00%	100.00%	100.00%	—	Administrative services	0	0	0
Pierpont Capital Holdings LLC	United States	0.00%	100.00%	100.00%	—	Holding company	301	(57)	244
Pierpont Financial Services LLC	United States	0.00%	100.00%	100.00%	—	Financial services	(3)	0	0
Pingham International, S.A. (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Pony S.A.	Luxembourg	—	(b)	—	—	Securitization	0	0	0
Portal Universia Argentina S.A.	Argentina	0.00%	75.75%	75.75%	75.75%	Internet	0	0	0
Portal Universia Portugal, Prestação de Serviços de Informática, S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Prime 16 – Fundo de Investimentos Imobiliário	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	22	(2)	16
PSA Bank Deutschland GmbH	Germany	0.00%	50.00%	50.00%	50.00%	Banking	497	47	229
PSA Banque France	France	0.00%	50.00%	50.00%	50.00%	Banking	1,142	62	881
PSA Consumer Finance Polska Sp. z o.o.	Poland	0.00%	40.22%	100.00%	100.00%	Finance company	3	1	0
PSA Finance Belux S.A.	Belgium	0.00%	50.00%	100.00%	100.00%	Finance company	95	14	47
PSA Finance Polska Sp. z o.o.	Poland	0.00%	40.22%	50.00%	50.00%	Finance company	38	5	10
PSA Finance UK Limited	United Kingdom	0.00%	50.00%	100.00%	100.00%	Finance company	323	28	159
PSA Financial Services Nederland B.V.	Netherlands	0.00%	50.00%	100.00%	100.00%	Finance company	58	18	26
PSA Financial Services Spain, E.F.C., S.A.	Spain	0.00%	50.00%	50.00%	50.00%	Finance company	684	60	363
PSA Renting Italia S.p.A.	Italy	0.00%	50.00%	100.00%	100.00%	Renting	13	12	3

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results
Punta Lima Wind Farm, LLC	United States	0.00%	100.00%	100.00%	100.00%	Renewable energies	45	(6)	39
Punta Lima, LLC	United States	0.00%	100.00%	100.00%	100.00%	Leasing	45	(6)	39
Retail Company 2021, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	259	(4)	255
Retop S.A. (f)	Uruguay	100.00%	0.00%	100.00%	100.00%	Finance company	19	7	61
Return Capital S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Collection services	1,131	12	1,031
Riemersma Leasing B.V.	Netherlands	0.00%	100.00%	100.00%	—	Renting	7	2	21
Riobank International (Uruguay) SAIFE (p)	Uruguay	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Roc Aviation One Designated Activity Company	Ireland	—	(b)	—	—	Renting	(4)	(1)	0
Roc Shipping One Designated Activity Company	Ireland	—	(b)	—	—	Renting	(4)	0	0
Rojo Entretenimento S.A.	Brazil	0.00%	85.41%	94.60%	94.60%	Real estate	23	2	21
SAFO Alternative Lending, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	—	Finance company	0	0	0
SALCO, Servicios de Seguridad Santander, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Security	2	0	1
SAM Asset Management, S.A. de C.V., Sociedad Operadora de Fondos de Inversión	Mexico	0.00%	100.00%	100.00%	100.00%	Fund management company	35	26	188
SAM Investment Holdings, S.L.	Spain	92.37%	7.63%	100.00%	100.00%	Holding Company	1,373	92	1,597
SANB Promotora de Vendas e Cobrança S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Finance company	3	(3)	0
Sancap Investimentos e Participações S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Holding company	125	112	192
Santander (CF Trustee Property Nominee) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander (CF Trustee) Limited (d)	United Kingdom	—	(b)	—	—	Inactive	0	0	0
Santander (UK) Group Pension Schemes Trustees Limited (d)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander Ahorro Inmobiliario 1, S.A.	Spain	98.53%	0.00%	98.53%	98.53%	Real estate rental	1	0	1
Santander Asesorías Financieras Limitada	Chile	0.00%	67.44%	100.00%	100.00%	Financial advisory	58	5	43
Santander Asset Finance (December) Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	74	4	0
Santander Asset Finance Opportunities	Luxembourg	100.00%	0.00%	100.00%	—	Investment fund	42	0	42
Santander Asset Finance plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	282	18	164
Santander Asset Management - S.G.O.I.C., S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Fund management company	9	4	12
Santander Asset Management Chile S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Securities investment	0	0	0
Santander Asset Management Luxembourg, S.A.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Fund management company	4	4	0
Santander Asset Management S.A. Administradora General de Fondos	Chile	0.00%	100.00%	100.00%	100.00%	Fund management company	3	12	132
Santander Asset Management UK Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	221	14	186
Santander Asset Management UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Management of funds and portfolios	40	8	157
Santander Asset Management, S.A., S.G.I.I.C.	Spain	0.00%	100.00%	100.00%	100.00%	Fund management company	260	52	393
Santander Auto Lease Titling Ltd.	United States	0.00%	100.00%	100.00%	—	Leasing	0	0	0
Santander Back-Offices Globales Mayoristas, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Services	2	0	1
Santander Banca de Inversión Colombia, S.A.S.	Colombia	100.00%	0.00%	100.00%	100.00%	Advisory services	1	0	2

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results
Santander Bank & Trust Ltd.	Bahamas	0.00%	100.00%	100.00%	100.00%	Banking	374	3	332
Santander Bank Polska S.A.	Poland	67.41%	0.00%	67.41%	67.41%	Banking	5,091	523	4,361
Santander Bank, National Association	United States	0.00%	100.00%	100.00%	100.00%	Banking	10,201	276	10,475
Santander Brasil Administradora de Consórcio Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Services	179	77	232
Santander Brasil Gestão de Recursos Ltda.	Brazil	0.08%	99.92%	100.00%	100.00%	Securities Investment	445	39	520
Santander Capital Structuring, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Investment Company	13	(1)	0
Santander Capitalização S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance	(17)	92	67
Santander Cards Ireland Limited	Ireland	0.00%	100.00%	100.00%	100.00%	Cards	(8)	0	0
Santander Cards Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Cards	95	0	95
Santander Cards UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	154	2	109
Santander Chile Holding S.A.	Chile	22.11%	77.75%	99.86%	99.84%	Holding company	1,579	271	1,522
Santander Consulting (Beijing) Co., Ltd.	China	0.00%	100.00%	100.00%	100.00%	Advisory services	9	1	4
Santander Consumer (UK) plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	947	146	294
Santander Consumer Auto Receivables Funding 2013-B2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(88)	84	0
Santander Consumer Auto Receivables Funding 2018-L1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	273	22	0
Santander Consumer Auto Receivables Funding 2018-L3 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	119	20	0
Santander Consumer Auto Receivables Funding 2018-L5 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	161	31	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Consumer Auto Receivables Funding 2019-B1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	53	85	0
Santander Consumer Auto Receivables Funding 2020-B1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	(18)	33	0
Santander Consumer Auto Receivables Funding 2020-L1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	117	10	0
Santander Consumer Auto Receivables Funding 2020-L2 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	18	9	0
Santander Consumer Auto Receivables Funding 2022-B1 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(134)	0
Santander Consumer Auto Receivables Funding 2022-B2 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(162)	0
Santander Consumer Auto Receivables Funding 2022-B3 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(267)	0
Santander Consumer Auto Receivables Funding 2022-B4 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(183)	0
Santander Consumer Auto Receivables Funding 2022-B5 LLC	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Consumer Auto Receivables Grantor Trust 2021-D	United States	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander Consumer Auto Receivables Trust 2021-D	United States	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Santander Consumer Bank AG	Germany	0.00%	100.00%	100.00%	100.00%	Banking	3,313	469	5,070
Santander Consumer Bank AS	Norway	0.00%	100.00%	100.00%	100.00%	Banking	2,403	211	2,251
Santander Consumer Bank GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Banking	424	58	363
Santander Consumer Bank S.A.	Poland	0.00%	80.44%	100.00%	100.00%	Banking	744	77	478
Santander Consumer Bank S.p.A.	Italy	0.00%	100.00%	100.00%	100.00%	Banking	833	92	603
Santander Consumer Credit Services Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	(37)	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Consumer Finance Global Services, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	IT	6	3	5
Santander Consumer Finance Inc.	Canada	100.00%	0.00%	100.00%	96.42%	Holding company	91	0	140
Santander Consumer Finance Limitada	Chile	49.00%	34.24%	100.00%	100.00%	Finance company	88	23	52
Santander Consumer Finance Oy	Finland	0.00%	100.00%	100.00%	100.00%	Finance company	368	49	163
Santander Consumer Finance Schweiz AG	Switzerland	0.00%	100.00%	100.00%	100.00%	Leasing	56	10	60
Santander Consumer Finance, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	9,328	852	10,025
Santander Consumer Financial Solutions Sp. z o.o.	Poland	0.00%	80.44%	100.00%	100.00%	Leasing	2	(1)	2
Santander Consumer Finanse Sp. z o.o. w likwidacji (j)	Poland	0.00%	80.44%	100.00%	100.00%	Services	15	0	12
Santander Consumer Holding Austria GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Holding company	364	0	518
Santander Consumer Holding GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Holding company	5,564	317	6,077
Santander Consumer Inc.	Canada	0.00%	100.00%	100.00%	100.00%	Finance company	82	13	48
Santander Consumer Leasing GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Leasing	70	93	151
Santander Consumer Mobility Services, S.A.	Spain	0.00%	100.00%	100.00%	100.00%	Renting	12	(4)	12
Santander Consumer Multirent Sp. z o.o.	Poland	0.00%	80.44%	100.00%	100.00%	Leasing	58	5	26
Santander Consumer Operations Services GmbH	Germany	0.00%	100.00%	100.00%	100.00%	Services	12	1	18
Santander Consumer Receivables 10 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	1,113	(1)	0
Santander Consumer Receivables 11 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	653	(95)	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results
Santander Consumer Receivables 15 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(71)	0
Santander Consumer Receivables 16 LLC	United States	0.00%	100.00%	100.00%	—	Finance company	0	(48)	0
Santander Consumer Receivables 17 LLC	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Consumer Receivables 3 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	397	5	0
Santander Consumer Receivables 7 LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	713	(211)	0
Santander Consumer Receivables Funding LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	4	2	0
Santander Consumer Renting S.r.l.	Italy	0.00%	100.00%	100.00%	—	Renting	4	(1)	4
Santander Consumer Renting, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Renting	38	3	38
Santander Consumer S.A.	Argentina	0.00%	99.82%	100.00%	100.00%	Finance company	18	(3)	15
Santander Consumer S.A. Compañía de Financiamiento	Colombia	79.02%	20.98%	100.00%	100.00%	Finance company	22	(1)	23
Santander Consumer Services GmbH	Austria	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Santander Consumer Services, S.A.	Portugal	0.00%	100.00%	100.00%	100.00%	Finance company	13	1	6
Santander Consumer Spain Auto 2019-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2020-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2021-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Spain Auto 2022-1, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumer Technology Services GmbH	Germany	0.00%	100.00%	100.00%	100.00%	IT services	24	3	22

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Consumer USA Holdings Inc.	United States	0.00%	100.00%	100.00%	80.22%	Holding company	3,816	1,203	6,067
Santander Consumer USA Inc.	United States	0.00%	100.00%	100.00%	100.00%	Finance company	4,300	1,007	5,307
Santander Consumo 4, F.T.	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Consumo, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	100.00%	Cards	1,490	312	1,734
Santander Corredora de Seguros Limitada	Chile	0.00%	67.21%	100.00%	100.00%	Insurance brokerage	78	9	59
Santander Corredores de Bolsa Limitada	Chile	0.00%	83.24%	100.00%	100.00%	Securities company	52	4	46
Santander Corretora de Câmbio e Valores Mobiliários S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Securities company	142	22	148
Santander Corretora de Seguros, Investimentos e Serviços S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Insurance brokerage	816	250	960
Santander Customer Voice, S.A.	Spain	99.50%	0.50%	100.00%	100.00%	Services	2	0	2
Santander de Titulización, S.G.F.T., S.A.	Spain	81.00%	19.00%	100.00%	100.00%	Fund management company	5	3	2
Santander Distribuidora de Títulos e Valores Mobiliários S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Securities company	100	(17)	75
Santander Drive Auto Receivables Grantor Trust 2022-A	United States	0.00%	100.00%	100.00%	—	Inactive	0	0	0
Santander Drive Auto Receivables LLC	United States	0.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Santander Drive Auto Receivables Trust 2019-1	United States	—	(b)	—	—	Securitization	46	24	0
Santander Drive Auto Receivables Trust 2019-2	United States	—	(b)	—	—	Securitization	60	35	0
Santander Drive Auto Receivables Trust 2019-3	United States	—	(b)	—	—	Securitization	50	39	0
Santander Drive Auto Receivables Trust 2020-1	United States	—	(b)	—	—	Securitization	24	58	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Drive Auto Receivables Trust 2020-2	United States	—	(b)	—	—	Securitization	47	76	0
Santander Drive Auto Receivables Trust 2020-3	United States	—	(b)	—	—	Securitization	32	114	0
Santander Drive Auto Receivables Trust 2020-4	United States	—	(b)	—	—	Securitization	(9)	101	0
Santander Drive Auto Receivables Trust 2021-1	United States	—	(b)	—	—	Securitization	(46)	138	0
Santander Drive Auto Receivables Trust 2021-2	United States	—	(b)	—	—	Securitization	(171)	196	0
Santander Drive Auto Receivables Trust 2021-3	United States	—	(b)	—	—	Securitization	(279)	259	0
Santander Drive Auto Receivables Trust 2021-4	United States	—	(b)	—	—	Securitization	(288)	199	0
Santander Drive Auto Receivables Trust 2022-1	United States	—	(b)	—	—	Securitization	0	(139)	0
Santander Drive Auto Receivables Trust 2022-2	United States	—	(b)	—	—	Securitization	0	(193)	0
Santander Drive Auto Receivables Trust 2022-3	United States	—	(b)	—	—	Securitization	0	(195)	0
Santander Drive Auto Receivables Trust 2022-4	United States	—	(b)	—	—	Securitization	0	(267)	0
Santander Drive Auto Receivables Trust 2022-5	United States	—	(b)	—	—	Securitization	0	(314)	0
Santander Drive Auto Receivables Trust 2022-6	United States	—	(b)	—	—	Securitization	0	(323)	0
Santander Drive Auto Receivables Trust 2022-7	United States	—	(b)	—	—	Securitization	0	(156)	0
Santander Drive Auto Receivables Trust 2022-A	United States	—	(b)	—	—	Inactive	0	0	0
Santander Drive Auto Receivables Trust 2023-1	United States	—	(b)	—	—	Inactive	0	0	0
Santander Equity Investments Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	28	6	33

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander España Servicios Legales y de Cumplimiento, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Services	9	1	8
Santander Estates Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	(6)	(1)	0
Santander European Hospitality Opportunities	Luxembourg	100.00%	0.00%	100.00%	100.00%	Investment fund	23	(4)	20
Santander F24 S.A.	Poland	0.00%	67.41%	100.00%	100.00%	Finance company	2	0	2
Santander Facility Management España, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	415	(1)	392
Santander Factoring S.A.	Chile	0.00%	99.86%	100.00%	100.00%	Factoring	8	1	15
Santander Factoring Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Financial services	37	11	1
Santander Factoring y Confirming, S.A. Unipersonal, E.F.C.	Spain	100.00%	0.00%	100.00%	100.00%	Factoring	208	73	126
Santander Finance 2012-1 LLC	United States	0.00%	100.00%	100.00%	100.00%	Financial services	3	0	3
Santander Financial Exchanges Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Inactive	0	0	0
Santander Financial Services plc	United Kingdom	0.00%	100.00%	100.00%	100.00%	Banking	351	45	436
Santander Financiamientos S.A.	Peru	100.00%	0.00%	100.00%	100.00%	Finance company	18	(4)	15
Santander Financing S.A.S.	Colombia	100.00%	0.00%	100.00%	100.00%	Financial advisory	0	(1)	0
Santander Finanse Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Financial services	66	7	19
Santander Fintech Holdings, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	327	(13)	357
Santander Fintech Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Finance company	(21)	22	0
Santander Fundo de Investimento Santillana Multimercado Crédito Privado Investimento No Exterior (e)	Brazil	—	(b)	—	—	Investment fund	455	23	478

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Fundo de Investimento SBAC Referenciado di Crédito Privado (h)	Brazil	0.00%	90.28%	100.00%	100.00%	Investment fund	1,638	187	1,586
Santander Gestión de Recaudación y Cobranzas Ltda.	Chile	0.00%	99.86%	100.00%	100.00%	Financial services	6	2	8
Santander Global Cards & Digital Solutions Brasil S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	IT consulting	36	(1)	40
Santander Global Cards & Digital Solutions, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	IT services	25	(4)	17
Santander Global Consumer Finance Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Finance company	7	0	7
Santander Global Facilities, S.A. de C.V.	Mexico	100.00%	0.00%	100.00%	100.00%	Services	143	5	152
Santander Global Services S.A. (j)	Uruguay	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Santander Global Services, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Real estate	393	(1)	394
Santander Global Sport, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Sports activity	19	(2)	18
Santander Global Technology and Operations Brasil Ltda.	Brazil	0.00%	100.00%	100.00%	100.00%	IT services	4	0	1
Santander Global Technology and Operations Chile Limitada	Chile	0.00%	100.00%	100.00%	100.00%	IT services	21	2	20
Santander Global Technology and Operations, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	IT services	454	36	438
Santander Green Investment, S.L.	Spain	99.97%	0.03%	100.00%	100.00%	Holding company	32	0	32
Santander Guarantee Company	United Kingdom	0.00%	100.00%	100.00%	100.00%	Leasing	4	0	3
Santander Hipotecario 2 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Hipotecario 3 Fondo de Titulización de Activos	Spain	—	(b)	—	—	Securitization	0	0	0
Santander Holding Imobiliária S.A.	Brazil	0.00%	90.28%	100.00%	100.00%	Real estate	81	4	77

Subsidiaries of Banco Santander, S.A.¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Holding Internacional, S.A.	Spain	99.95%	0.05%	100.00%	100.00%	Holding company	4,057	67	2,432
Santander Holdings USA, Inc.	United States	100.00%	0.00%	100.00%	100.00%	Holding company	15,477	1,316	13,468
Santander Inclusión Financiera, S.A. de C.V., S.O.F.O.M., E.R., Grupo Financiero Santander México	Mexico	0.00%	96.24%	100.00%	100.00%	Finance company	14	(7)	7
Santander Innoenergy Climate VC I, S.C.R., S.A. (i)	Spain	0.00%	100.00%	100.00%	—	Inactive	—	—	—
Santander Innoenergy Climate VC II, S.C.R., S.A. (i)	Spain	0.00%	100.00%	100.00%	—	Inactive	—	—	—
Santander Insurance Agency, U.S., LLC	United States	0.00%	100.00%	100.00%	100.00%	Insurance	1	0	1
Santander Insurance Services UK Limited	United Kingdom	100.00%	0.00%	100.00%	100.00%	Asset management	42	1	43
Santander Intermediación Correduría de Seguros, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Insurance brokerage	26	3	18
Santander International Products, Plc. (l)	Ireland	99.99%	0.01%	100.00%	100.00%	Finance company	1	0	0
Santander Inversiones S.A.	Chile	0.00%	100.00%	100.00%	100.00%	Holding company	1,237	198	1,032
Santander Investment Bank Limited	Bahamas	0.00%	100.00%	100.00%	100.00%	Banking	468	5	583
Santander Investment Chile Limitada	Chile	0.00%	100.00%	100.00%	100.00%	Finance company	508	41	321
Santander Investment Securities Inc.	United States	0.00%	100.00%	100.00%	100.00%	Securities company	517	(2)	516
Santander Investment, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Banking	1,309	8	245
Santander Investments GP 1 S.à.r.l.	Luxembourg	0.00%	100.00%	100.00%	100.00%	Fund management company	1	0	1
Santander Inwestycje Sp. z o.o.	Poland	0.00%	67.41%	100.00%	100.00%	Securities company	20	0	7
Santander ISA Managers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Management of funds and portfolios	43	5	6

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Lease, S.A., E.F.C.	Spain	100.00%	0.00%	100.00%	100.00%	Leasing	61	7	51
Santander Leasing Poland Securitization 01 Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Santander Leasing S.A.	Poland	0.00%	67.41%	100.00%	100.00%	Leasing	152	15	36
Santander Leasing S.A. Arrendamento Mercantil	Brazil	0.00%	90.28%	100.00%	100.00%	Leasing	1,964	101	1,864
Santander Leasing, LLC	United States	0.00%	100.00%	100.00%	100.00%	Leasing	2	(1)	1
Santander Lending Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Mortgage credit company	239	8	234
Santander Mediación Operador de Banca-Seguros Vinculado, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Insurance intermediary	50	1	3
Santander Merchant Platform Operations, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Financial services	2	0	2
Santander Merchant Platform Services, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Financial services	1	0	1
Santander Merchant Platform Solutions México, S.A. de C.V.	Mexico	0.00%	98.16%	100.00%	100.00%	Holding company	148	32	150
Santander Merchant Platform Solutions Uruguay S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Payment methods	8	(3)	5
Santander Merchant S.A.	Argentina	5.10%	94.90%	100.00%	100.00%	Finance company	1	0	2
Santander Mortgage Holdings Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	(23)	1	0
Santander Paraty Qif PLC	Ireland	0.00%	90.28%	100.00%	100.00%	Investment Company	(39)	414	
Santander Pensiones, S.A., E.G.F.P.	Spain	0.00%	100.00%	100.00%	100.00%	Pension fund management company	85	14	184
Santander Pensões - Sociedade Gestora de Fundos de Pensões, S.A.	Portugal	100.00%	0.00%	100.00%	100.00%	Pension fund management company	3	0	3
Santander Prime Auto Issuance Notes 2018-A Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(4)	2	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Prime Auto Issuance Notes 2018-B Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(31)	(7)	0
Santander Prime Auto Issuance Notes 2018-C Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(7)	(1)	0
Santander Prime Auto Issuance Notes 2018-D Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(28)	(11)	0
Santander Prime Auto Issuance Notes 2018-E Designated Activity Company	Ireland	—	(b)	—	—	Securitization	(15)	(6)	0
Santander Private Banking Gestión, S.A., S.G.I.I.C.	Spain	100.00%	0.00%	100.00%	100.00%	Fund management company	64	10	35
Santander Private Banking s.p.a. in Liquidazione (j)	Italy	100.00%	0.00%	100.00%	100.00%	Finance company	13	1	7
Santander Private Banking UK Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	288	338	392
Santander Private Real Estate Advisory & Management, S.A.	Spain	99.99%	0.01%	100.00%	100.00%	Real estate	4	0	4
Santander Private Real Estate Advisory, S.A.	Spain	100.00%	—	100.00%	100.00%	Real estate	15	1	16
Santander Real Estate, S.A.	Spain	100.00%	—	100.00%	100.00%	Inactive	1	0	1
Santander Retail Auto Lease Funding LLC	United States	100.00%	100.00%	100.00%	100.00%	Finance company	0	0	0
Santander Retail Auto Lease Trust 2020-A	United States	—	(b)	—	—	Securitization	87	30	0
Santander Retail Auto Lease Trust 2020-B	United States	—	(b)	—	—	Securitization	70	43	0
Santander Retail Auto Lease Trust 2021-A	United States	—	(b)	—	—	Securitization	67	53	0
Santander Retail Auto Lease Trust 2021-B	United States	—	(b)	—	—	Securitization	67	52	0
Santander Retail Auto Lease Trust 2021-C	United States	—	(b)	—	—	Securitization	93	48	0
Santander Retail Auto Lease Trust 2022-A	United States	—	(b)	—	—	Securitization	0	14	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Retail Auto Lease Trust 2022-B	United States	—	(b)	—	—	Securitization	0	22	0
Santander Retail Auto Lease Trust 2022-C	United States	—	(b)	—	—	Inactive	0	0	0
Santander Revolving Auto Loan Trust 2019-A	United States	—	(b)	—	—	Securitization	(1)	32	0
Santander Revolving Auto Loan Trust 2021-A	United States	—	(b)	—	—	Inactive	0	0	0
Santander Río Asset Management Gerente de Fondos Comunes de Inversión S.A.	Argentina	0.00%	100.00%	100.00%	100.00%	Fund management company	16	8	3
Santander RMBS 6, Fondo de Titulización	Spain	—	(b)	—	—	Securitization	0	0	0
Santander S.A. Sociedad Securitizadora	Chile	0.00%	67.25%	100.00%	100.00%	Fund management company	1	0	1
Santander Secretariat Services Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Santander Securities LLC	United States	0.00%	100.00%	100.00%	100.00%	Securities company	27	(2)	26
Santander Seguros y Reaseguros, Compañía Aseguradora, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Insurance	1,473	128	1,188
Santander Servicios Corporativos, S.A. de C.V.	Mexico	0.00 %	96.24 %	100.00 %	100.00 %	Services	12	0	12
Santander Servicios Especializados, S.A. de C.V.	Mexico	0.00 %	96.24 %	100.00 %	100.00 %	Services	3	0	3
Santander Technology USA, LLC	United States	0.00 %	100.00 %	100.00 %	100.00 %	IT services	73	(11)	62
Santander Tecnología Argentina S.A.	Argentina	0.00 %	99.83 %	100.00 %	100.00 %	IT services	7	7	10
Santander Tecnología México, S.A. de C.V.	Mexico	0.00 %	96.24 %	100.00 %	100.00 %	IT services	52	0	50
Santander Totta Seguros, Companhia de Seguros de Vida, S.A.	Portugal	0.00 %	99.91 %	100.00 %	100.00 %	Insurance	92	15	47
Santander Totta, SGPS, S.A.	Portugal	99.91 %	0.00 %	99.91 %	99.91 %	Holding company	3,008	1,508	5,352

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander		Year 2022	Year 2021	Activity	Capital + reserves	Net results	Carrying amount
Santander Towarzystwo Funduszy Inwestycyjnych S.A.	Poland	50.00 %	33.70 %	100.00 %	100.00 %	Fund management company	4	16	10
Santander Trade Services Limited	Hong-Kong	0.00 %	100.00 %	100.00 %	100.00 %	Inactive	24	2	16
Santander Trust S.A.	Argentina	0.00 %	99.99 %	100.00 %	100.00 %	Services	0	0	0
Santander UK Group Holdings plc	United Kingdom	77.67 %	22.33 %	100.00 %	100.00 %	Holding company	13,935	1,359	17,015
Santander UK Investments	United Kingdom	100.00 %	0.00 %	100.00 %	100.00 %	Finance company	48	(2)	45
Santander UK Operations Limited	United Kingdom	0.00 %	100.00 %	100.00 %	100.00 %	Finance company	7	0	17
Santander UK plc	United Kingdom	0.00 %	100.00 %	100.00 %	100.00 %	Banking	13,075	956	14,913
Santander UK Technology Limited	United Kingdom	0.00 %	100.00 %	100.00 %	100.00 %	IT services	40	1	6
Santander Valores S.A.	Argentina	5.10 %	94.73 %	100.00 %	100.00 %	Securities company	4	0	4
Santander Wealth Management International SA, en liquidation (j)	Switzerland	0.00 %	100.00 %	100.00 %	100.00 %	Inactive	0	0	0
Santusa Holding, S.L.	Spain	69.76 %	30.24 %	100.00 %	100.00 %	Holding company	8,940	273	6,504
SC Austria Consumer Loan 2021 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SC Austria Finance 2020-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2014-2 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2016-2 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2018-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Auto 2019-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A. ¹

Company	Location	% of ownership held by		Percentage of voting power (k)		Activity	EUR million (a)		
		Banco Santander	Indirect	Year 2022	Year 2021		Capital + reserves	Net results	Carrying amount
SC Germany Consumer 2014-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Consumer 2018-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Mobility 2019-1 UG (haftungsbeschränkt)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A.	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Consumer 2020-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Consumer 2021-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2021	Year 2020	Activity	Capital + reserves	Net results
SC Germany S.A., Compartment Consumer 2022-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany S.A., Compartment Mobility 2020-1	Luxembourg	—	(b)	—	—	Securitization	0	0	0
SC Germany Vehicles 2013-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Germany Vehicles 2015-1 UG (haftungsbeschränkt) (j)	Germany	—	(b)	—	—	Securitization	0	0	0
SC Poland Consumer 15-1 Sp. z o.o. (j)	Poland	—	(b)	—	—	Securitization	0	0	0
SC Poland Consumer 16-1 Sp. z o.o.	Poland	—	(b)	—	—	Securitization	0	0	0
SC Poland Consumer 23-1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto I Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto II Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto IX Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto KIMI VI Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto VII Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto VIII Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Ajoneuvohallinto X Limited	Ireland	—	(b)	—	—	Securitization	0	0	0

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2021	Year 2020	Activity	Capital + reserves	Net results
SCF Ajoneuvohallinto XI Limited	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Eastside Locks GP Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate management	0	0	0
SCF Rahoituspalvelut I Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut II Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut IX DAC	Ireland	—	(b)	—	—	Securitization	11	0	0
SCF Rahoituspalvelut KIMI VI Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut VII Designated Activity Company (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut VIII Designated Activity Company	Ireland	—	(b)	—	—	Securitization	2	0	0
SCF Rahoituspalvelut X DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
SCF Rahoituspalvelut XI Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
SCM Poland Auto 2019-1 DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
SDMX Superdigital, S.A. de C.V., Institución de Fondos de Pago Electrónico	Mexico	0.00%	100.00%	100.00%	100.00%	Payment platform	4	(1)	3
Securor Finance 2021-1, DAC	Ireland	—	(b)	—	—	Securitization	0	0	0
Services and Promotions Delaware Corp.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	64	2	66

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)		Activity	EUR million (a)		
		Banco Santander	Indirect	Year 2021	Year 2020		Capital + reserves	Net results	Carrying amount
Services and Promotions Miami LLC	United States	0.00%	100.00%	100.00%	100.00%	Real estate	57	3	60
Servicios de Cobranza, Recuperación y Seguimiento, S.A. de C.V.	Mexico	0.00%	85.00%	85.00%	85.00%	Finance company	39	2	32
Sheppards Moneybrokers Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Shiloh III Wind Project, LLC	United States	0.00%	100.00%	100.00%	100.00%	Renewable energies	344	1	345
Silk Finance No. 5	Portugal	—	(b)	—	—	Securitization	9	42	0
SMPS Merchant Platform Solutions México, S.A de C.V	Mexico	0.00%	98.16%	100.00%	100.00%	Payments and collection services	145	32	173
Sociedad Integral de Valoraciones Automatizadas, S.A. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Appraisals	1	2	1
Sociedad Operadora de Tarjetas de Pago Santander Getnet Chile S.A.	Chile	0.00%	67.13%	100.00%	100.00%	Payments and collection services	12	4	11
Socur S.A. (f)	Uruguay	100.00%	0.00%	100.00%	100.00%	Finance company	58	13	59
Solarlaser Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Solution 4Fleet Consultoria Empresarial S.A.	Brazil	0.00%	72.23%	80.00%	80.00%	Vehicle rental	3	(1)	1
Sovereign Community Development Company	United States	0.00%	100.00%	100.00%	100.00%	Holding company	41	1	42
Sovereign Delaware Investment Corporation	United States	0.00%	100.00%	100.00%	100.00%	Holding company	143	4	147
Sovereign Lease Holdings, LLC	United States	0.00%	100.00%	100.00%	100.00%	Financial services	235	1	236

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)		Activity	EUR million (a)		
		Banco Santander	Indirect	Year 2021	Year 2020		Capital + reserves	Net results	Carrying amount
Sovereign REIT Holdings, Inc.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	8035	159	8194
Sovereign Spirit Limited (n)	Bermudas	0.00%	100.00%	100.00%	100.00%	Leasing	0	0	0
SSA Swiss Advisors AG	Switzerland	0.00%	100.00%	100.00%	100.00%	Asset management	1	0	4
Sterrebeeck B.V.	Netherlands	100.00%	0.00%	100.00%	100.00%	Holding company	4771	633	10840
Suleyado 2003, S.L. Unipersonal	Spain	0.00%	100.00%	100.00%	100.00%	Securities Investment	31	(1)	28
Summer Empreendimentos Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Real estate management	4	1	4
Superdigital Argentina S.A.U.	Argentina	0.00%	100.00%	100.00%	100.00%	IT services	3	(2)	2
Superdigital Colombia S.A.S.	Colombia	0.00%	100.00%	100.00%	100.00%	IT services	1	0	0
Superdigital Holding Company, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	144	(12)	132
Superdigital Instituição de Pagamento S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	Payment services	46	(11)	100
Superdigital Perú S.A.C.	Peru	0.00%	100.00%	100.00%	100.00%	Financial services	1	(1)	0
Suzuki Servicios Financieros, S.L.	Spain	0.00%	51.00%	51.00%	51.00%	Intermediation	12	2	0
Svensk Autofinans WH 1 Designated Activity Company	Ireland	—	(b)	—	—	Securitization	0	0	0
Swesant SA	Switzerland	0.00%	100.00%	100.00%	100.00%	Holding company	63	42	0

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)		Activity	EUR million (a)		
		Banco Santander	Indirect	Year 2021	Year 2020		Capital + reserves	Net results	Carrying amount
SX Negócios Ltda.	Brazil	0.00%	90.28%	100.00%	100.00%	Telemarketing	13	2	14
SX Tools Soluções e Serviços Compartilhados Ltda.	Brazil	0.00%	90.28%	100.00%	0.00%	Services	33	1	31
Tabasco Energía España, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	1	0	0
Taxagest Sociedade Gestora de Participações Sociais, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Holding company	56	0	0
Taxos Luz, S.L. Unipersonal	Spain	0.00%	70.00%	100.00%	100.00%	Renewable energies	0	0	9
Teatinos Siglo XXI Inversiones S.A.	Chile	50.00%	50.00%	100.00%	0.00%	Holding company	1869	285	2136
The Alliance & Leicester Corporation Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Real estate	14	0	14

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Direct	Indirect	Year 2021	Year 2020	Activity	Capital + reserves	Net results
The Best Specialty Coffee, S.L. Unipersonal	Spain	100.00%	0.00%	100.00%	100.00%	Restaurant services	2	(1)	1
Time Retail Finance Limited (j)	United Kingdom	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
TIMFin S.p.A.	Italy	0.00%	51.00%	51.00%	51.00%	Finance company	45	(4)	28
Tonopah Solar I, LLC	United States	0.00%	100.00%	100.00%	100.00%	Holding company	5	0	5
Tornquist Asesores de Seguros S.A. (j)	Argentina	0.00%	99.99%	99.99%	99.99%	Inactive	0	0	0
Toro Corretora de Títulos e Valores Mobiliários Ltda.	Brazil	0.00%	56.88%	63.00%	60.00%	Securities company	53	1	31
Toro Investimentos S.A.	Brazil	0.00%	56.88%	91.32%	100.00%	Securities company	38	0	22
Totta (Ireland), PLC (h)	Ireland	0.00%	99.87%	100.00%	100.00%	Finance company	451	5	450
Totta Urbe - Empresa de Administração e Construções, S.A.	Portugal	0.00%	99.87%	100.00%	100.00%	Real estate	98	(10)	100
Trabajando.com Mexico, S.A. de C.V. en liquidación (j)	Mexico	0.00%	100.00%	100.00%	100.00%	Services	0	0	0
Trade Maps 3 Ireland Limited (j)	Ireland	—	(b)	—	—	Securitization	0	0	0
Trans Rotor Limited (j)	United Kingdom	100.00%	0.00%	100.00%	100.00%	Renting	0	0	0
Transolver Finance EFC, S.A.	Spain	0.00%	51.00%	51.00%	51.00%	Leasing	71	3	17
Tresmares Growth Fund Santander, S.C.R., S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	53	(1)	53

Subsidiaries of Banco Santander, S.A.1

Company	Location	% of ownership held by		Percentage of voting power (k)			EUR million (a)		
		Banco Santander	Indirect	Year 2021	Year 2020	Activity	Capital + reserves	Net results	Carrying amount
Tresmares Santander Direct Lending, SICC, S.A.	Spain	99.60%	0.00%	99.60%	99.60%	Fund management company	685	19	678
Tuttle and Son Limited	United Kingdom	0.00%	100.00%	100.00%	100.00%	Inactive	0	0	0
Universia Brasil S.A.	Brazil	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia Chile S.A.	Chile	0.00%	86.84%	86.84%	86.84%	Internet	0	0	0
Universia Colombia S.A.S.	Colombia	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia España Red de Universidades, S.A.	Spain	0.00%	89.45%	89.45%	89.45%	Internet	2	0	2
Universia Holding, S.L.	Spain	100.00%	0.00%	100.00%	100.00%	Holding company	20	(5)	17
Universia México, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Universia Perú, S.A.	Peru	0.00%	99.76%	99.76%	99.76%	Internet	0	0	0
Universia Uruguay, S.A.	Uruguay	0.00%	100.00%	100.00%	100.00%	Internet	0	0	0
Uro Property Holdings, S.A.	Spain	99.99%	0.00%	99.99%	99.99%	Real estate investment	178	(22)	179
Verbena FCVS - Fundo de Investimentos em Direitos Creditórios (e)	Brazil	—	(b)	—	—	Investment fund	-3	3	0
Wallcesa, S.A.	Spain	100.00%	0.00%	100.00%	100.00%	Financial services	(928)	6	0
Wave Holdco, S.L.	Spain	0.00%	100.00%	100.00%	100.00%	Holding company	0	0	0
Waycarbon Soluções Ambientais e Projetos de Carbono S.A.	Brazil	0.00%	80.00%	100.00%	100.00%	Consulting services	27	(1)	21
Waypoint Insurance Group, Inc.	United States	0.00%	100.00%	100.00%	100.00%	Holding company	9	0	9
WIM Servicios Corporativos, S.A. de C.V.	Mexico	0.00%	100.00%	100.00%	100.00%	Advisory services	0	0	0
WTW Shipping Designated Activity Company	Ireland	100.00%	0.00%	100.00%	100.00%	Leasing	16	(3)	9

- a. Amount according to the provisional books of each company as of the date of publication of these annexes, generally referring to December 31, 2022 without considering, where appropriate, interim dividends that have been made during the year. In the book value (net provision cost), the percentage of ownership of the Group has been applied to the figure of each of the holding companies, without considering the impairment of goodwill made in the consolidation process. The data for foreign companies are converted into euros at the exchange rate at the end of the year.
 - b. Companies over which effective control is maintained.
 - c. Data as at 31 December 2021, latest available accounts.
 - d. Data as at 31 March 2022, latest accounts available.
 - e. Data as at 30 June 2022, last accounts available.
 - f. Data as at 30 September 2022, last accounts available.
 - g. Data as at 31 July 2021, last accounts available.
 - h. Data as at 30 November 2022, last accounts available.
 - i. Recently created company, with no available financial information.
 - j. Company in liquidation as at 31 December 2022.
 - k. Pursuant to Article 3 of Royal Decree 1159/ 2010, of 17 September, approving the rules for the preparation of consolidated annual accounts, in order to determine the voting rights, voting rights held directly by the parent company have been added to those held by companies controlled by the parent company or by other persons acting in their own name but on behalf of a Group company. For these purposes, the number of votes corresponding to the parent company, in relation to the companies indirectly dependent on it, is that corresponding to the dependent company that directly participates in the share capital of the latter.
 - l. Company resident for tax purposes in Spain.
 - m. Data as of 30 June 2021, latest available accounts.
 - n. Company resident for tax purposes in the United Kingdom.
 - o. Data as at 28 February 2022, last accounts available.
 - p. Companies in liquidation. Pending registration.
 - q. Data as at 30 April 2022, latest available accounts.
- (1) Companies issuing preference shares are listed in Annex III, together with other relevant information.

Appendix II

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Abra 1 Limited (k)	Cayman Island	—	(h)	—	—	Leasing	Joint ventures	—	—	—
Achmea Tussenholding, B.V. (b)	Netherlands	8.89%	0.00%	8.89%	8.89%	Holding company	—	356	356	20
Administrador Financiero de Transantiago S.A.	Chile	0.00%	13.43%	20.00%	20.00%	Payments and collection services	Associated	67	20	4
Aegon Santander Portugal Não Vida - Companhia de Seguros, S.A.	Portugal	0.00%	48.96%	49.00%	49.00%	Insurance	Joint ventures	64	12	12
Aegon Santander Portugal Vida - Companhia de Seguros Vida, S.A.	Portugal	0.00%	48.96%	49.00%	49.00%	Insurance	Joint ventures	139	19	20
Aeroplan - Sociedade Construtora de Aeroportos, Lda. (e)	Portugal	0.00%	19.97%	20.00%	20.00%	Inactive	—	0	0	0
Aguas de Fuensanta, S.A. (e) (k)	Spain	36.78%	0.00%	36.78%	36.78%	Food	—	—	—	—
Alcuter 2, S.L. (k)	Spain	37.23%	0.00%	37.23%	37.23%	Technical services	—	—	—	—
Alma UK Holdings Ltd (b)	United Kingdom	30.00%	0.00%	30.00%	30.00%	Holding company	Joint ventures	4	4	0
Altamira Asset Management, S.A. (consolidado)	Spain	0.00%	15.00%	15.00%	15.00%	Real estate	—	171	2	(21)
Apolo Fundo de Investimento em Direitos Creditórios	Brazil	0.00%	30.09%	33.33%	33.33%	Investment fund	Joint ventures	405	343	63
Attijariwafa Bank Soci�t� Anonyme (consolidado) (b)	Morocco	0.00%	5.10%	5.10%	5.10%	Banking	—	53,452	4,898	461
AutoFi Inc. (b)	United States	0.00%	19.75%	19.75%	—	E-commerce	—	7	7	(8)
Autopistas del Sol S.A. (b)	Argentina	0.00%	14.17%	14.17%	14.17%	Motorway concession	—	156	77	(3)

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Avanath Affordable Housing IV LLC	United States	0.00%	7.27%	7.27%	—	Investment Company	—	258	188	1
Banco RCI Brasil S.A.	Brazil	0.00%	36.02%	39.89%	39.89%	Banking	Joint ventures	1,945	215	37
Banco S3 Caceis México, S.A., Institución de Banca Múltiple	Mexico	0.00%	50.00%	50.00%	50.00%	Banking	Joint ventures	244	79	8
Bank of Beijing Consumer Finance Company	China	0.00%	20.00%	20.00%	20.00%	Finance company	Associated	1,430	125	12
Bank of Shanghai Co., Ltd. (consolidado) (b)	China	6.54%	0.00%	6.54%	6.54%	Banking	—	360,213	24,944	2,993
Bizum, S.L. (b)	Spain	20.92%	0.00%	20.92%	—	Payment services	Associated	11	2	1
CACEIS (consolidado)	France	0.00%	30.50%	30.50%	30.50%	Custody services	Associated	124,340	4,182	278
Campo Grande Empreendimentos Ltda. (k)	Brazil	0.00%	22.86%	25.32%	—	Inactive	—	—	—	—
Cantabria Capital, SGEIC, S.A.	Spain	50.00%	0.00%	50.00%	50.00%	Venture capital	Associated	0	0	0
Car10 Tecnologia e Informação S.A.	Brazil	0.00%	42.13%	46.67%	46.67%	Internet	Joint ventures	13	0	(2)
CCPT - ComprarCasa, Rede Serviços Imobiliários, S.A.	Portugal	0.00%	49.98%	49.98%	49.98%	Real estate services	Joint ventures	0	0	0
Centro de Compensación Automatizado S.A.	Chile	0.00%	22.38%	33.33%	33.33%	Payments and collection services	Associated	21	11	5
Centro para el Desarrollo, Investigación y Aplicación de Nuevas Tecnologías, S.A. (b)	Spain	0.00%	49.00%	49.00%	49.00%	Technology	Associated	3	3	0
CIP S.A.	Brazil	0.00%	16.13%	17.87%	—	Financial services	Associated	468	354	49
CNP Santander Insurance Europe Designated Activity Company	Ireland	49.00%	0.00%	49.00%	49.00%	Insurance	Associated	1,075	189	40

Societies of which Grupo Santander owns more than 5% (g) , entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)			Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity		Asset	Capital + reserves	Net results
CNP Santander Insurance Life Designated Activity Company	Ireland	49.00%	0.00%	49.00%	49.00%	Insurance	Associated	1,226	119	52
CNP Santander Insurance Services Ireland Limited	Ireland	49.00%	0.00%	49.00%	49.00%	Services	Associated	26	5	1
Comder Contraparte Central S.A	Chile	0.00%	8.37%	12.47%	12.47%	Financial services	Associated	37	11	3
Companhia Promotora UCI	Brazil	0.00%	25.00%	25.00%	25.00%	Financial services	Joint ventures	1	0	0
Compañía Española de Financiación de Desarrollo, Cofides, S.A., SME (b)	Spain	20.18%	0.00%	20.18%	20.18%	Finance company	—	179	152	21
Compañía Española de Seguros de Crédito a la Exportación, S.A., Compañía de Seguros y Reaseguros (consolidado) (b)	Spain	23.33%	0.55%	23.88%	23.88%	Credit insurance	—	1,078	431	96
Compañía Española de Viviendas en Alquiler, S.A.	Spain	24.07%	0.00%	24.07%	24.07%	Real estate	Associated	556	353	27
Compañía para los Desarrollos Inmobiliarios de la Ciudad de Hispalis, S.L., en liquidación (d) (e)	Spain	21.98%	0.00%	21.98%	21.98%	Real estate promotion	—	38	(325)	0
Connecting Visions Ecosystems, S.L.	Spain	19.90%	0.00%	19.90%	19.90%	Consulting services	Joint ventures	1	1	(1)
Corkfoc Cortiças, S.A. (c)	Portugal	0.00%	27.55%	27.58%	27.58%	Cork industry	—	3	20	0
CSD Central de Serviços de Registro e Depósito Aos Mercados Financeiro e de Capitais S.A.	Brazil	0.00%	18.06%	20.00%	—	Financial services	Associated	38	37	0
Desarrollo Eólico las Majas VI, S.L.	Spain	45.00%	0.00%	45.00%	45.00%	Renewable energies	Joint ventures	52	6	1
Energías Renovables de Ormonde 25, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energías Renovables de Ormonde 26, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Energias Renovables de Ormonde 27, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energias Renovables de Ormonde 30, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energias Renovables de Titania, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energias Renovables Gladiateur 45, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Energias Renovables Prometeo, S.L.	Spain	0.00%	55.00%	55.00%	55.00%	Renewable energies	Joint ventures	1	1	0
Euro Automatic Cash Entidad de Pago, S.L.	Spain	50.00%	0.00%	50.00%	50.00%	Payment services	Associated	54	35	(6)
European Hospitality Opportunities S.à r.l. (b)	Luxembourg	0.00%	49.00%	49.00%	49.00%	Holding company	Joint ventures	1	1	0
Evolve SPV S.r.l.	Italy	—	(h)	—	—	Securitization	Joint ventures	91	0	0
FAFER- Empreendimentos Urbanísticos e de Construção, S.A. (b) (e)	Portugal	0.00%	36.57%	36.62%	36.62%	Real estate	—	0	1	0
Federal Home Loan Bank of Pittsburgh (b)	United States	0.00%	6.05%	6.05%	—	Banking	—	35,264	2,482	81
Federal Reserve Bank of Boston (b)	United States	0.00%	19.12%	19.12%	20.09%	Banking	—	214,885	1,640	7
Fondo de Titulización de Activos UCI 11	Spain	—	(h)	—	—	Securitization	Joint ventures	113	0	0
Fondo de Titulización de Activos UCI 14	Spain	—	(h)	—	—	Securitization	Joint ventures	269	0	0
Fondo de Titulización de Activos UCI 15	Spain	—	(h)	—	—	Securitization	Joint ventures	337	0	0

Societies of which Grupo Santander owns more than 5% (g) , entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Fondo de Titulización de Activos UCI 16	Spain	—	(h)	—	—	Securitization	Joint ventures	454	0	0
Fondo de Titulización de Activos UCI 17	Spain	—	(h)	—	—	Securitization	Joint ventures	397	0	0
Fondo de Titulización Hipotecaria UCI 12	Spain	—	(h)	—	—	Securitization	Joint ventures	154	0	0
Fondo de Titulización, RMBS Prado IX	Spain	—	(h)	—	—	Securitization	Joint ventures	479	0	0
Fondo de Titulización, RMBS Prado V	Spain	—	(h)	—	—	Securitization	Joint ventures	277	0	0
Fondo de Titulización, RMBS Prado VI	Spain	—	(h)	—	—	Securitization	Joint ventures	311	0	0
Fondo de Titulización, RMBS Prado VII	Spain	—	(h)	—	—	Securitization	Joint ventures	467	0	0
Fondo de Titulización, RMBS Prado VIII	Spain	—	(h)	—	—	Securitization	Joint ventures	422	0	0
Fondo de Titulización, RMBS Prado X	Spain	—	(h)	—	—	Securitization	Joint ventures	566	0	0
Fortune Auto Finance Co., Ltd	China	0.00%	50.00%	50.00%	50.00%	Finance company	Joint ventures	2,039	434	54
Fremman limited	United Kingdom	33.00%	0.00%	4.99%	4.99%	Finance company	Associated	10	2	(1)
Gestora de Inteligência de Crédito S.A.	Brazil	0.00%	14.05%	10.00%	20.00%	Collection services	Joint ventures	277	84	(14)
Gire S.A.	Argentina	0.00%	58.22%	58.33%	58.33%	Payments and collection services	Associated	157	76	4
HCUK Auto Funding 2017-2 Ltd	United Kingdom	—	(h)	—	—	Securitization	Joint ventures	395	0	0

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
HCUK Auto Funding 2022-1 Limited (m)	United Kingdom	—	(h)	—	—	Securitization	Joint ventures	456	0	0
Healthy Neighborhoods Equity Fund I LP (b)	United States	0.00%	22.37%	22.37%	22.37%	Real estate	—	13	12	(1)
Hyundai Capital UK Limited	United Kingdom	0.00%	50.01%	50.01%	50.01%	Finance company	Joint ventures	4,658	381	65
Hyundai Corretora de Seguros Ltda.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance brokerage	Joint ventures	1	0	0
Imperial Holding S.C.A. (e) (i)	Luxembourg	0.00%	36.36%	36.36%	36.36%	Securities investment	—	0	(112)	0
Imperial Management S.à r.l. (b) (e)	Luxembourg	0.00%	40.20%	40.20%	40.20%	Holding company	—	0	0	0
Innohub S.A.P.I. de C.V.	Mexico	0.00%	40.84%	40.84%	20.00%	IT services	Associated	2	4	(2)
Inverlur Aguilas I, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	0	0	0
Inverlur Aguilas II, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	1	1	0
Inversiones Ibersuizas, S.A. (b)	Spain	25.42%	0.00%	25.42%	25.42%	Venture capital	—	11	11	0
Inversiones ZS América Dos Ltda.	Chile	0.00%	49.00%	49.00%	49.00%	Real estate and securities investment	Associated	285	285	36
Inversiones ZS América SpA	Chile	0.00%	49.00%	49.00%	49.00%	Real estate and securities investment	Associated	395	395	34
J.C. Flowers I L.P. (b) (l)	United States	0.00%	0.00%	0.00%	0.00%	Holding company	—	2	3	(1)
LB Oprent, S.A. (b)	Spain	40.00%	0.00%	40.00%	40.00%	Industrial machinery rent	Associated	4	1	1

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Loop Gestão de Pátios S.A.	Brazil	0.00%	32.23%	35.70%	35.70%	Business services	Joint ventures	8	0	(2)
Mapfre Santander Portugal - Companhia de Seguros, S.A.	Portugal	0.00%	49.94%	49.99%	49.99%	Insurance	Associated	17	7	0
Massachusetts Business Development Corp. (consolidado) (b)	United States	0.00%	21.61%	21.61%	21.61%	Finance company	—	75	14	3
MB Capital Fund IV, LLC (b)	United States	0.00%	21.51%	21.51%	21.51%	Finance company	—	27	27	2
Merlin Properties, SOCIMI, S.A. (consolidado) (b)	Spain	19.01%	5.63%	24.64%	24.77%	Real estate investment	Associated	14,273	6,585	512
Metrovacesa, S.A. (consolidado) (b)	Spain	31.94%	17.50%	49.44%	49.44%	Real estate promotion	Associated	2,777	2,061	18
Niuco 15, S.L. (k)	Spain	57.10%	0.00%	57.10%	37.23%	Technical services	—	—	—	—
Ocyener 2008, S.L.	Spain	0.00%	45.00%	45.00%	45.00%	Holding company	Associated	2	2	0
Operadora de Activos Beta, S.A. de C.V.	Mexico	49.99%	0.00%	49.99%	49.99%	Finance company	Associated	0	0	0
Pag10 Fomento Mercantil Eireli	Brazil	0.00%	42.13%	46.67%	46.67%	Factoring	Joint ventures	0	0	0
Payever GmbH	Germany	0.00%	10.00%	10.00%	10.00%	Software	Associated	3	2	0
Platinum Care, S.A.	Spain	0.00%	50.00%	50.00%	—	Holding company	Joint ventures	5	5	(3)
Play Digital S.A.	Argentina	0.00%	15.35%	15.38%	15.70%	Payment platform	Associated	23	42	(24)
POLFUND - Fundusz Poręczeń Kredytowych S.A.	Poland	0.00%	33.70%	50.00%	50.00%	Management company	Associated	29	20	0
Portland SPV S.r.l.	Italy	—	(h)	—	—	Securitization	Joint ventures	195	0	0

Societies of which Grupo Santander owns more than 5% (g) , entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)			Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity		Asset	Capital + reserves	Net results
Procapital - Investimentos Imobiliários, S.A. (b) (e)	Portugal	0.00%	39.97%	40.00%	40.00%	Real estate	—	0	13	0
Project Quasar Investments 2017, S.L. (consolidado) (b)	Spain	49.00%	0.00%	49.00%	49.00%	Holding company	—	5,861	679	(317)
Promontoria Manzana, S.A. (consolidado) (b)	Spain	20.00%	0.00%	20.00%	20.00%	Holding company	Associated	953	279	(55)
PSA Corretora de Seguros e Serviços Ltda.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance brokerage	Joint ventures	1	0	0
Redbanc S.A.	Chile	0.00%	22.44%	33.43%	33.43%	Services	Associated	34	11	2
Redsys Servicios de Procesamiento, S.L. (consolidado)	Spain	24.90%	0.06%	24.96%	24.96%	Cards	Associated	126	75	4
Relevante e Astuto, S.A.	Portugal	0.00%	70.00%	70.00%	70.00%	Real estate management	Joint ventures	0	0	0
Retama Real Estate, S.A. Unipersonal	Spain	0.00%	50.00%	50.00%	50.00%	Real estate	Joint ventures	21	(46)	(1)
Rías Redbanc S.A.	Uruguay	0.00%	25.00%	25.00%	25.00%	Services	—	4	1	0
RMBS Belém No.2	Portugal	—	(h)	—	—	Securitization	Joint ventures	333	0	0
RMBS Green Belém No. 1	Portugal	—	(h)	—	—	Securitization	Joint ventures	241	0	0
S3 Caceis Brasil Distribuidora de Títulos e Valores Mobiliários S.A.	Brazil	0.00%	50.00%	50.00%	50.00%	Securities company	Joint ventures	237	168	28
S3 Caceis Brasil Participações S.A.	Brazil	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	199	170	28
San Preca Federal I Fundo de Investimento em Direitos Creditorios Não-Padronizados	Brazil	0.00%	45.14%	50.00%	—	Investment fund	Joint ventures	10	10	0

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)			Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity		Asset	Capital + reserves	Net results
Sancus Green Investments II, S.C.R., S.A. (b)	Spain	0.00%	41.60%	41.60%	43.29%	Venture capital	—	4	5	0
Santander Allianz Towarzystwo Ubezpieczeń na Życie S.A.	Poland	0.00%	33.03%	49.00%	49.00%	Insurance	Associated	303	12	27
Santander Allianz Towarzystwo Ubezpieczeń S.A.	Poland	0.00%	33.03%	49.00%	49.00%	Insurance	Associated	82	36	9
Santander Assurance Solutions, S.A.	Spain	0.00%	66.67%	66.67%	66.67%	Insurance intermediary	Joint ventures	14	5	1
Santander Auto S.A.	Brazil	0.00%	45.14%	50.00%	50.00%	Insurance	Associated	39	6	5
Santander Caceis Colombia S.A. Sociedad Fiduciaria	Colombia	0.00%	50.00%	50.00%	50.00%	Finance company	Joint ventures	6	6	0
Santander Caceis Latam Holding 1, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	731	722	10
Santander Caceis Latam Holding 2, S.L.	Spain	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	2	2	0
Santander Generales Seguros y Reaseguros, S.A.	Spain	0.00%	49.00%	49.00%	49.00%	Insurance	Joint ventures	770	185	44
Santander Mapfre Seguros y Reaseguros, S.A.	Spain	0.00%	49.99%	49.99%	49.99%	Insurance	Associated	123	65	(1)
Santander Vida Seguros y Reaseguros, S.A.	Spain	0.00%	49.00%	49.00%	49.00%	Insurance	Joint ventures	1,023	333	44
Sepacon 31, S.L. (k)	Spain	37.23%	0.00%	37.23%	37.23%	Technical services	—	—	—	—
Servicios de Infraestructura de Mercado OTC S.A.	Chile	0.00%	8.38%	12.48%	12.48%	Services	Associated	39	14	1
SIBS-SGPS, S.A. (consolidado) (b)	Portugal	0.00%	16.53%	16.55%	16.55%	Management of portfolios	—	396	67	44

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)		Activity	Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021			Asset	Capital + reserves	Net results
Siguler Guff SBIC Fund LP (b)	United States	0.00%	20.00%	20.00%	20.00%	Investment company	—	28	14	1
Sistema de Tarjetas y Medios de Pago, S.A. (b)	Spain	20.61%	0.00%	20.61%	20.61%	Payment methods	Associated	749	5	0
Sistemas Técnicos de Encofrados, S.A. (consolidado) (b)	Spain	27.15%	0.00%	27.15%	27.15%	Construction materials	—	102	15	4
Sociedad Conjunta para la Emisión y Gestión de Medios de Pago, E.F.C., S.A.	Spain	45.70%	0.00%	45.70%	45.70%	Payment services	Joint ventures	112	36	1
Sociedad de Garantía Recíproca de Santander, S.G.R. (b)	Spain	25.35%	0.25%	25.60%	25.60%	Financial services	—	17	11	0
Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria, S.A. (b)	Spain	22.21%	0.00%	22.21%	22.21%	Financial services	—	25,311	586	(1,626)
Sociedad Interbancaria de Depósitos de Valores S.A.	Chile	0.00%	19.66%	29.29%	29.29%	Securities deposits	Associated	8	7	2
Solar Maritime Designated Activity Company (b)	Ireland	—	(h)	—	—	Leasing	Joint ventures	148	(1)	0
STELLANTIS Insurance Europe Limited	Malta	0.00%	50.00%	50.00%	50.00%	Insurance	Joint ventures	245	60	28
STELLANTIS Life Insurance Europe Limited	Malta	0.00%	50.00%	50.00%	50.00%	Insurance	Joint ventures	110	11	16
Stephens Ranch Wind Energy Holdco LLC (consolidado) (b)	United States	0.00%	20.50%	20.50%	17.10%	Renewable energies	—	220	176	(2)
Tbforte Segurança e Transporte de Valores Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	Security	Associated	111	74	(3)
Tbnet Comércio, Locação e Administração Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	Telecommunications	Associated	107	79	(2)
Tecban Serviços Integrados Ltda.	Brazil	0.00%	17.13%	18.98%	18.98%	IT services	Associated	4	1	0

Societies of which Grupo Santander owns more than 5% (g), entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)			Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity		Asset	Capital + reserves	Net results
Tecnologia Bancária S.A.	Brazil	0.00%	17.13%	18.98%	19.81%	ATM	Associated	527	160	9
Tonopah Solar Energy Holdings I, LLC (k)	United States	0.00%	26.80%	26.80%	26.80%	Holding company	Joint ventures	—	—	—
Trabajando.com Chile S.A.	Chile	0.00%	33.33%	33.33%	33.33%	Services	Associated	2	(1)	1
Transbank S.A.	Chile	0.00%	16.78%	25.00%	25.00%	Cards	Associated	1,648	93	29
Tresmares Growth Fund II, S.C.R., S.A.	Spain	40.00%	0.00%	40.00%	40.00%	Holding company	—	54	42	12
Tresmares Growth Fund III, S.C.R., S.A.	Spain	40.00%	0.00%	40.00%	40.00%	Holding company	—	41	32	9
Tresmares Growth Fund Santander, S.C.R., S.A. (n)	Spain	100.00%	0.00%	100.00%	100.00%	Holding Company	—	59	53	(1)
U.C.I., S.A.	Spain	50.00%	0.00%	50.00%	50.00%	Holding company	Joint ventures	794	261	(2)
UCI Hellas Credit and Loan Receivables Servicing Company S.A.	Greece	0.00%	50.00%	50.00%	50.00%	Financial services	Joint ventures	1	1	0
UCI Holding Brasil Ltda.	Brazil	0.00%	50.00%	50.00%	50.00%	Holding company	Joint ventures	2	0	0
UCI Mediação de Seguros Unipessoal, Lda.	Portugal	0.00%	50.00%	50.00%	50.00%	Insurance brokerage	Joint ventures	0	0	0
UCI Servicios para Profesionales Inmobiliarios, S.A. Unipersonal	Spain	0.00%	50.00%	50.00%	50.00%	Real estate services	Joint ventures	1	0	0
Unicre-Instituição Financeira de Crédito, S.A.	Portugal	0.00%	21.83%	21.86%	21.86%	Finance company	Associated	452	110	24
Unión de Créditos Inmobiliarios, S.A. Unipersonal, EFC	Spain	0.00%	50.00%	50.00%	50.00%	Mortgage credit company	Joint ventures	11,247	1,080	(53)

Societies of which Grupo Santander owns more than 5% (g) , entities associated with Grupo Santander and jointly controlled entities

Company	Location	% of ownership held by Banco Santander		Percentage of voting power (f)			Type of company	EUR million (a)		
		Direct	Indirect	Year 2022	Year 2021	Activity		Asset	Capital + reserves	Net results
VCFS Germany GmbH	Germany	0.00%	50.00%	50.00%	50.00%	Marketing	Joint ventures	1	0	0
Venda de Veículos Fundo de Investimento em Direitos Creditórios	Brazil	—	(h)	—	—	Securitization	Joint ventures	217	196	20
Volvo Car Financial Services UK Limited	United Kingdom	0.00%	50.01%	50.01%	50.01%	Leasing	Joint ventures	1,755	107	16
Webmotors S.A.	Brazil	0.00%	63.20%	70.00%	70.00%	Services	Joint ventures	70	41	14
Zurich Santander Brasil Seguros e Previdência S.A.	Brazil	0.00%	48.79%	48.79%	48.79%	Insurance	Associated	15,099	359	183
Zurich Santander Brasil Seguros S.A.	Brazil	0.00%	48.79%	48.79%	48.79%	Insurance	Associated	189	(14)	44
Zurich Santander Holding (Spain), S.L. Unipersonal	Spain	0.00%	49.00%	49.00%	49.00%	Holding company	Associated	937	936	193
Zurich Santander Holding Dos (Spain), S.L. Unipersonal	Spain	0.00%	49.00%	49.00%	49.00%	Holding company	Associated	384	382	101
Zurich Santander Insurance América, S.L.	Spain	49.00%	0.00%	49.00%	49.00%	Holding company	Associated	1,497	1,490	322
Zurich Santander Seguros Argentina S.A. (j)	Argentina	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	60	36	6
Zurich Santander Seguros de Vida Chile S.A.	Chile	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	254	24	37
Zurich Santander Seguros Generales Chile S.A.	Chile	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	326	60	26
Zurich Santander Seguros México, S.A.	Mexico	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	1,169	45	158
Zurich Santander Seguros Uruguay S.A.	Uruguay	0.00%	49.00%	49.00%	49.00%	Insurance	Associated	42	18	8

- a. Amount according to the provisional books at the date of publication of these annexes of each company, generally referring to 31 December 2022, except where otherwise indicated due to the fact that the annual accounts are pending formulation. The data for foreign companies are converted into euros at the exchange rate at the end of the year.
- b. Data as at 31 December 2021, latest available accounts.
- c. Data as at 31 December 2019, latest available accounts.
- d. Data as at 30 November 2021, latest available accounts.
- e. Company in liquidation as at 31 December 2022.
- f. Pursuant to Article 3 of Royal Decree 1159/2010, of 17 September, approving the rules for the preparation of consolidated annual accounts, in order to determine the voting rights, voting rights held directly by the parent company have been added to those held by companies controlled by the parent company or by other persons acting in their own name but on behalf of a group company. For these purposes, the number of votes corresponding to the parent company, in relation to the companies indirectly dependent on it, is that corresponding to the dependent company that directly participates in the share capital of the latter.
- g. Excluding the Group companies listed in Appendix I, as well as those which are of negligible interest with respect to the true and fair view that the consolidated financial statements must give (in accordance with articles 48 of the Commercial Code and 260 of the Spanish Companies Act).
- h. Companies over which joint control is maintained.
- i. Data as at 31 October 2021, latest available accounts.
- j. Data as at 30 June 2022, latest available accounts.
- k. Company with no financial information available.
- l. Company in liquidation. Pending registration.
- m. Data as at 30 September 2022, latest available accounts
- n. Investment managed discretionally by a manager outside the Santander Group, the voting rights not being, in this case, decisive in determining control of the entity.

Appendix III

Issuing subsidiaries of shares and preference shares

Company	Location	% of ownership held by Banco Santander			EUR million (a)			
		Direct	Indirect	Activity	Capital	Reserves	Cost of preferred	Net results
Emisora Santander España, S.A. Unipersonal	Spain	100.00%	0.00%	Finance company	2	0	0	0
Santander UK (Structured Solutions) Limited	United Kingdom	0.00%	100.00%	Finance company	0	0	0	0
Sovereign Real Estate Investment Trust	United States	0.00%	100.00%	Finance company	5,231	(3,477)	55	13

a. Amount according to the books of each interim company as at 31 December 2022, converted into euro (in the case of foreign companies) at the year-end exchange rate.

Appendix IV

Notifications of acquisitions and disposals of investments in 2022

Details of the notifications of acquisitions and disposals of participations for 2022 in accordance with Article 125 of the Securities Market Law may be found below:

On May 13, 2022, Banco Santander, S.A. disclosed to the CNMV the decrease of its stake in REPSOL, S.A. below the 3% threshold, keeping a stake of 2.291%, as of May 9, 2022.

With respect to compliance with Article 125 of the Securities Market Law, no communications required under this article were made in 2020. In relation to the information required by 155 of the Corporate Enterprises Act, on the shareholdings in which Grupo Santander owns more than 10% of the capital of another company, and the successive acquisitions of more than 5% of the share capital, see appendices I, II and III.

Appendix V

List of Transactions subject to the Special Regime for Mergers, Divisions, Assets Contributions and Exchange of Securities in which the company has acted as an Acquiring Entity or Partner

In compliance with the reporting obligations established in Article 86 of Law 27/2014, of 27 November, on Corporate Tax (LIS), the following information is provided on the transactions subject to the tax regime of mergers, divisions, contributions of assets and exchange of securities, provided for in Chapter VII of Title VII of the LIS, in which BANCO SANTANDER, S.A. has intervened during 2021:

I. In accordance with the provisions of section 2 of article 86 of the LIS, it is reported that the company BANCO SANTANDER, S.A. has intervened as a partner in the following transactions:

- Merger by absorption of SANTANDER TECNOLOGÍA Y OPERACIONES ESPAÑA, S.L.U. by SANTANDER GLOBAL TECHNOLOGY AND OPERATIONS, S.L.U. This transaction constitutes a merger as regulated in article 76.1 a) of the LIS. BANCO SANTANDER, S.A. had a full shareholding in the capital of both the absorbed company and the absorbing company. The book value of the securities delivered from SANTANDER TECNOLOGÍA Y OPERACIONES ESPAÑA, S.L.U. was €68,001,505.96, while their tax value amounted to €68,001,505.96. The value at which BANCO SANTANDER, S.A. has accounted for the securities received at SANTANDER GLOBAL TECHNOLOGY AND OPERATIONS, S.L.U. is €68,001,505.96.
- Non-monetary contribution, in financial year 2021, to equity without capital increase by BANCO SANTANDER, S.A. to DEVA CAPITAL HOLDING COMPANY, S.L.U. This transaction took the form of the contribution by BANCO SANTANDER, S.A. to the equity of DEVA CAPITAL HOLDING COMPANY, S.L.U. of a credit right against YERA SERVICER COMPANY 2021, S.L.U. (currently DIGLO SERVICER COMPANY 2021, S.L.U.) in the amount of 13,819,919,921, S.L.U. (currently DIGLO SERVICER COMPANY 2021, S.L.U.), of a credit right against YERA SERVICER COMPANY 2021, S.L.U. (currently DIGLO SERVICER COMPANY 2021, S.L.U.) in the amount of 13,819,975.27 €, being recorded in the "Other contributions from shareholders or owners" account (account 118) of DEVA CAPITAL HOLDING COMPANY, S.L.U. The aforementioned operation was carried out by BANCO SANTANDER, S.A. to the shareholders' equity of DEVA CAPITAL HOLDING COMPANY, S.L.U. The aforementioned operation

was carried out by BANCO SANTANDER, S.A., S.L.U. L.U. The aforementioned non-monetary contribution to equity without capital increase constitutes a special non-monetary contribution as regulated in article 87 of the LIS and was not covered by the regime provided for in article 77.1 of the aforementioned law.

II. In compliance with the provisions of article 86.3 of the LIS, it is hereby stated that the information required by sections 1 and 2 of article 86, relating to transactions subject to the tax regime for mergers, spin-offs, contributions of assets and exchange of securities, provided for in Chapter VII of Title VII of the LIS, in which BANCO SANTANDER, S.A. has intervened as acquirer or partner during previous years, is included in the first approved annual report of the acquirers after each of the aforementioned transactions.

Appendix VI

Information regarding mergers by absorption carried out in the financial year 2022 pursuant to Article 86.1 of the Corporate Income Tax Law 27/2014.

Banco Santander has not carried out any merger by absorption agreements during 2022. For this reason, the information required by article 86.1 of Law 27/2014 on Corporate Income Tax is not disclosed.

Appendix VII

Agent network - Collaborating agents, Agents empowered at 31 of December 2022.

NEOBAN SL	JOSE PABLO CASTELLANO GARCIA-DONAS	ASESORAMIENTO FINANCIERO Y ANALISIS DE MERCADOS SLU
MARIA ARANZAZU DOMEZAIN GRANADOS	FINANSANDO S.L	MAYKA GONZALEZ HEREDIA
ANGEL EDUARDO RODRIGUEZ REY	FRANCISCA MARQUEZ CONTRERAS	JUAN RAMON BENITEZ GOMEZ
HOPE FINANCE SL	NUÑEZ MONTES FINANCIEROS S.L.	LIDIA MONTILLA GONZALEZ
BERCAMLU S.L.	JOLUANCA 2006 S.L.	LUIS RISQUETE REQUENA
JESUS MARTINEZ CAÑAVATE GOMEZ MILLAN	ALBERTO SANTIAGO LLORENTE MARTINEZ	PEDRO ANGEL LUPIAÑEZ RODRIGUEZ
MARIA ISABEL RAMIREZ RODRIGUEZ	JOSE ANTONIO ESCUDERO ORTEGA	JOSEFA SIMON YEBENES
ALBERTO LOPEZ CARDENAS	JOAQUIN GALVEZ RODRIGUEZ	CASTOR INVERYSER S.L
JUAN CARLOS MALDONADO HODAR	JUAN JERONIMO TIMERMANS NUÑEZ	MANUEL BARRIGA DORADO
SALVADOR CEA PEREZ	IVAN PEREZ VARGAS	FERNANDO GONZALEZ SANCHEZ
JULUM FINANZAS, S.L.U.	SIMO CONSULTORIA SL	CORDOBESA DE INVERSIONES PUNTAS LEÓN S.L.
J&M INVERSIONES Y FINANCIACIÓN EMPRESARIAL S.L.	ALICIA MATILDE LOPEZ FRANCO	AAFF RUTE S.L.
FRANCISCO JAVIER MARTINEZ FERNANDEZ	RAFAEL JESUS VILLARREAL ARIZA	FINANTOR 2017, S.L.
AM SERVICIOS FINANCIEROS SL	SARA GIL LECHADO	ROLARG SERVICIOS FINANCIEROS, S.L.
MARIA PAZ IBARRA RECHE	FANDILA GARCIA ZAMORA	BURMA AGENTES FINANCIEROS S.L.
ANTONIO GUILLEN RAMIREZ	CARBALLO & CARO 2019, S.L.	MONICA CARRANZA S.L.U.
JUCAR ASESORES, S.L.	ERNESTO MARTINEZ FERNANDEZ	TINTO SANTA ROSA S.L.
MARIA DE LOS ANGELES ESCUDERO ORTEGA	ISAMAR ORDOÑEZ MUÑOZ	BOPECON INVERSIONES S.L.
ALVARO FABREGAS SANTAMARIA	BRIGIDA MARIA ROMERO SALADO	CHARUMA S.L.
ASESORAMIENTO Y COACHING FINANCIERO S.L.	FRANCISCA MARIA LOPEZ PEREZ	CETINVE, S.L.
EFEROR ASOCIADOS S.L.	JOSE MANUEL MARTINEZ MILLAN	TREZAVILLA SLU
	BERNABE JOSE VALLECILLO MUÑOZ	SANPIBO SL

NUBARPOL S.L.	DANIEL MARTI RODRIGUEZ	FRANCISCO JAVIER ORTIZ CASTILLO
SERVICIOS FINANCIEROS SANLO, S.L.	GESTIONES MORENO E HIJOS S.L.	MARIA ANTONIA POZA GARCIA
GRANDERSAN SLU	SANPUEBLA SL	BEATRIZ GOMARIZ LOPEZ
VINUESA & MOCHON 2014, S.L.L.	GABRIEL MENENDEZ NOTARIO	MARIA DEL PILAR PLAZA MUÑOZ
ISAMER FINANCIEROS S.L.	ANTONIO MARIN VALIENTE	MARIA JOSE CHARNECO HERRERO
MARTA DOLORES CASTRO HIDALGO	ANTONIO ALFONSO HERRERA RAMIREZ	ANTONIO ESCUDERO VILLAREJO
ABU ROAD, S.L.	MILAGROSA ESTUDILLO CEPILLO	CARMEN PINTO DIAZ
RODRIGUEZ CALS FINANCIERA S.L.	ANTONIO CEREZUELA RUIZ	LOURDES ROMERO LOPEZ
GESTIÓN FINANCIERA MALACITANA 2007 S.L.	SERVICIOS BANCARIOS CANTORIA S.L.	REQUERTILLO, S.L.
RC 2007 FINANCIEROS SL	MULTIALGAIDA, S.L.	JUAN LEON NAVARRETE
ESTEPONA FINANCIEROS, S.L.	MARIA LUISA PEREZ GUILLEN	SERVICIOS INTEGRALES DOÑANA S.L.
MANUEL GUERRERO VERDEJA	CRISTINA NADALES PEREZ	MARIA DOLORES MORIANA RODRIGUEZ
MIGUEL ANGEL CASASOLA CASASOLA	NATALIA FERNANDEZ SANCHEZ	RICARDO PIÑERO GARCIA
AGUEDA MARTIN RAMIREZ	SERVICIOS FINANCIEROS PEDRO ABAD, S.L.	FRANCISCO CASTILLO CONTRERAS
FRANCISCO JOSE LOPEZ SILVENTE	JOSE MARIN PEREZ	MANUEL SALGADO KAITTANI
SOLEDAD LAMBERTO GARCIA	JUAN CARLOS GOMEZ GARCIA	MARIA JESUS MARTIN RODRIGUEZ
IGNACIO IÑARETA MARQUEZ	ANGEL LOPEZ RODRIGUEZ	JOSE CABRERA COSANO
JESUS RAMOS NIETO	JOSE MANUEL GUEVARA GONZALEZ	JOMICACE, S.L.
ALVARO DELGADO DE MENDOZA CORTES	SERVICIOS FINANCIEROS DEL CONDADO S.L.U.	MANUEL DOMINGUEZ BEATO
VC SERVICIOS FINANCIEROS SL	ASESORIA GESTION GLOBAL S.L.	SEBASTIAN PAVON CAMPOY
SEFIAL 2021, S.L.	ANA MARIA DIAZ SANTANA	JUAN PEDRO BENITEZ GARCIA
SERVICIOS BANCARIOS BERJA SL	NURIA MONTERO GONZALEZ	MARIA BELEN GONZALEZ RAMIREZ
ONUBA FINANCIEROS SL	MARIA ISABEL GARCIA GONZALEZ	MARIA CONCEPCION TELLEZ RUIZ

GRUPO ALMARES 2015 S.L.	ANA BELEN PAMPLONA CALAHORRA	JOSE JIMENEZ OVEJAS
SERGIO MUÑOZ RAMIREZ	JAVIER GURIDI EZQUERRO	MARIA GEMA GARCIA BUIL
ROCIO BELTRAN ZAFRA	JAVIER DOMINGO PASCUAL JIMENEZ	VERONICA PUEY MUÑOZ
FERNANDO POLO MATEOS	LUIS FERNANDO ANDRES VILLALBA	JOSE GABRIEL BALLESTERO FERNANDEZ
MARIA DEL MAR CARRETERO FERNANDEZ	MARIA ELENA TREMPAS ALDEA	USTARIZ ZUBIRI ASOCIADOS SL
JORGE BARRERA PEREZ	LIDYA FERNANDEZ AMURRIO	MARIA JOSE AUSEJO MARTINEZ
JUAN MANUEL MAYORGA BELLOSO	JULIA MARIA SEGURA VICENTE	MARIA AURORA TORRES GARCIA
MARIA DEL CARMEN ZAMBRANO MONGE	MAXIMO PLUMED LUCAS	LAURA MARTINEZ ZUBIRI
FATIMA DEL PINO ARIZA	NAVARRETE GESTION 2018 SL	ALVARO MOLINER ABADIA
JUAN DAVID PEREZ VALENZUELA	JOAN FELIU PUIGVERT	SERGIO URDANIZ GARBAYO
MARIA ASUNCION PALOMARES RUIZ	ROSA ANA FATAS LAPLANA	IGNACIO SAGÜETA URTASUN
JUAN MANUEL PEREZ PRADO	MARIA TERESA MARTIN MUNIESA	FEDERICO SOROLLA LLAQUET
FINANCIACIONES LAS CABEZAS SL	MARIA DEL CARMEN NIEVES MARTINEZ	ANA ISABEL MONTULL CACHO
PLAZA SERVICIOS FINANCIEROS SL	MARIA DEL PILAR RAMIREZ DIEZ	SONIA BRAZO BOSQUE
CARLOS GAVIN LORIENTE	MARIA DOLORES FOLLA-CISNEROS GARCIA	MIRIAM GARCIA ALFARO
MARIA ESCRIBANO PAVON	MARIA HERNANDEZ ALONSO	SARA MORALES ECHEVERRIA
JOSE ANTONIO GARCIA CHINCHETRU	LANZA MENDOZA GESTION FINANCIERA, S.L.	VERONICA REMIRO BASANTA
MARIA MORATALLA RUIZ	LOURDES GIMENO TIRADO	RAUL LANGA GOMEZ
MIGUEL ANGEL MARTIN ISERTE	GEMMA ARRUFAT RAFALES	OIHANE AICUA RODRIGUEZ
MARIA EUGENIA BOZAL HUGUET	JOSE GABRIEL PASTOR MANZANO	JAVIER ROYO HERRANZ
MARIA PILAR UROZ PASCUAL	DIEGO CARCAS SANCHEZ	MANUEL GARCIA MONTOLIO
HECTOR EDO ALEGRE	ELSA TORRES MOLINA	BELEN PALACIO TORRES
ALCARRAZ PERALTA, S.L.	IRENE ABIZANDA VAL	FLORENTINO LARA NOTIVOLI

OSCAR ADAN CABEZON	RAUL RIVAS VAL	LUIS DA COSTA FERNANDEZ
MARIA EUGENIA GONZALEZ SANCHEZ	AGENTES FINANCIEROS AOIZ S.L.	MALULA SERVICIOS FINANCIEROS SL
MARIA DANIELA URUÑUELA NAJERA	SHEILA DEL BARRIO SAENZ	TEROR VP INVERSION SL
JOSE JAVIER MAZUELA CREGO	CRISTINA ZABALA USTARIZ	OMAR PEREZ GARCIA
VICTOR JIMENEZ VERANO	FRANCISCO JOSE VIEJO GONZALEZ	LUIS FERRERAS GRANADO
Oliver Labarta S.L.	FERNANDEZ DEL VALLE NOE 046869184C S L N E	LETICIA INES MARTIN SANGUINO
ANA MARIA RUBIO PALACIOS	GUILLERMO FOS ALZAMORA	ANA BEBI SL
ROSA MARIA POBLADOR ASENSIO	ANGELA FIGAROLA TARDIU	FRANCISCO JAVIER SANTIAGO ALEMAN
FINANZAS ALLOZA S.L	JUAN ROSSELLO AMENGUAL	PEDRO JAVIER SANCHEZ RODRIGUEZ
JOSE DANIEL GARCES VIRGOS	JORDI JUAN RIBAS	JOSE MANUEL PERERA QUINTANA
ADRIAN MILIAN GONZALEZ	ALBERTO BARTOLOME DE BLAS GUASP	FRANCISCO JAVIER CABRERA LLAMAS
INTERMEDIACION NASARRE S.L.	GUILLEM GENOVARD CALDENTY	EDUARDO HERNANDEZ HERNANDEZ
JESUS QUINTANA MAULEON	CECILIA MARIA ROSSELLO FLORIT	PEDRO ROMAN SANMARTI
PASCUAL HIGINIO DOMINGO PEÑA	MARMA MALLORCA, S.L.	RUBEN TORIJANO BUENO
CLARA URGEL CASEDAS	ANTONIO MANUEL SALCES FERNANDEZ	JOSE ANDRES HERNANDEZ FALCON
LAURA COMENGE HIGUERAS	ELISENDA ARIMANY BALLART	GORKA PEREZ DIAGO
MARIA MERCEDES SALAS BAENA	AGFINAND SL	JON DIEZ DE DIEGO
MARIA ESTHER FERRANDEZ PARDOS	MARIA JOSE DE LA DUEÑA FUSTER	SARA SANCHEZ GONZALEZ
PRISCILA CRISTOBAL MALO	ERNESTO DOMINGUEZ SLU	ENRIQUE MARCOS ORTEGA
SERGIO BUIL GARCIA	PEDRO FERRAGUT DIAGO	AGUSTIN RUIZ SAIZ
ALEJANDRO IBAÑEZ LERA	MARIA ANTONIA BARCELO AMENGUAL	ALEJANDRO FERNANDEZ GARCIA
JOSE JAVIER SALAVERRI MARTINEZ	JUAN CARBONELL SOCIAS S.L.	ALEJANDRO MARTIN KARLSSON
BEATRIZ SERRANO SAN PEDRO	JUAN MANUEL ALARCON GARCIA	CARLOS MESA DIEZ

ANGEL MOLLEDA VELEZ	JOSE IGNACIO UBILLA BOLADO	LUIS MIGUEL VEGA JANILLO
MIGUEL SUAREZ RODRIGUEZ	ENRIQUE FOMPEROSA RUIZ	EMILIO MARTIN LANCHAS
JORGE ESCAPA ESPINEL	SERVICIOS FINANCIEROS MAZA Y VILAR SL	MARIA SASTRE GONZALEZ
MARIA DE LOS ANGELES RODRIGO GUTIERREZ	CLARA POO GARCIA	0880 SANTANDER SANTIBAÑEZ, S.L.
MARIA FERNANDEZ DE LA UZ	JESUS ANTONIO AMO FERNANDEZ	MARIA MANUELA SANCHEZ CASTAÑO
EFREN PEREZ ILLAS	SERGIO GONZALEZ PALACIO	DAVID LOPEZ-GAVELA GAGO
LUCAS RIVAS PORTILLO	YOLANDA ALVAREZ RODRIGUEZ	ALBERTO RIAÑO MOROCHO
EMMANUEL GRANDA TARRAZO	ALVARO DIAZ ASTARLOA	ARCADIO SAEZ SANZ
POSADA GESTION FINANCIERA SLU	AOMAR NUÑEZ APARICIO	RAUL DE PABLO DEL OLMO
PEDRO CONDE DIEZ	JONATHAN AGUSTIN COLODRO DIAZ	FRANCISCO ALBARRÁN PELAYO
PATRICIA RODRIGUEZ ALONSO	JUAN MARIA VALDES MARTIN	INES PINDADO SAEZ
RAQUEL RIVERA PALACIO	JOSE MARIA ANTON GARCIA	JAIME RIVERO CALVO
JAVIER COBO GARCIA	ALMUDENA GONZALEZ GALLEGO	1321 SANTANDER LA ALBERCA S.L.
CARLA SANJULIAN MENDEZ	VICTOR GONZALEZ CABO	MARIA VICTORIA IGLESIAS MATEOS
BUSINESS AND PERSONAL SERVICE S.A.	NOELIA MARTIN BOLIVAR	MONICA CUBAS HERNANDEZ
LAP ASTURIAS S.L.	ALBERTO SUTIL FERNANDEZ	A C CARRIZO DE LA RIBERA SL
GONZALEZ Y NAVES, S.L.	JAVIER TERAN CAMUS	RAQUEL GAVELA SANCHEZ
DAVID GARCIA-ARICOLLAR RODRIGUEZ	DAVID GONZALEZ SANZ	JUAN MANUEL CASTRO FANEGO
SERFISAN SERVICIOS FINANCIEROS S.L.	OLGA LLORENTE DA COSTA	ÓRDAS CASADO S.L.
DAVID INCHAUSPE PEÑA	HELLEN JANETH MENDEZ MURCIA	MARTA ISABEL MARTINEZ ESCOBAR
TAMARA CANTERO SANCHEZ	OSCAR MANUEL ALFAGEME MARTIN	FERNANDO ENRIQUE RODRIGUEZ PEREZ
ENRIQUE ARAUJO IRUSTA	HECTOR DIAZ DIEZ	MARIA TERESA SALGADO RODRIGUEZ
IGNACIO SORDO AGÜERO	MARIA VISITACION BECARES MARTINEZ	MARIA VICTORIA DURAN ALVEZ

ALBERTO GONZALEZ MONTES	ALBERTO MORAN PEREZ	A.C. CIGUEÑA SL
MADRIGAL FINANCIERO SL	EDUARDO GONZALEZ MARTIN	PEDRO CUESTA BAUTISTA
BEATRIZ GALLEGU MARTIN	ALBARRAN FIGAL S.L.	A.C. VILLARCAYO S.L.
JESUS CANTON GONZALEZ	GONZALO PEREZ JOSE	6155 SANTANDER LEDESMA, S.L.
VANESA VEGA BLANCO	MARIA ELISA ROSON FERRERO	SUSANA CASADO FERRERO
NOELIA PEÑALVO MARINA	MARTA HERNANDEZ PEREZ	CLARA HERNANDEZ NOVOA
MARIA SALOME DE LA ROSA DIEZ	ANA MARIA SIERRA HERNANDEZ	MARCIAL SANTOS SANCHEZ
SONSOLES RIVERO HERNANDEZ	AC LA CISTERNIGA 2022 SL	6395 Poyales del Hoyo Agente Colaborador S.L.
FERNANDO AREVALO GOMEZ	A.C. SANTOVENIA DE PISUERGA SL.	JOANA LOPEZ ROZAS
JORGE ALONSO ARRIBAS	LEAGENSA S.L.	ANA MARIA SAN MILLAN COBO
ASUNCION MATEOS PASCUAL	BEATRIZ GARRIDO SANTANDER S.L.	IGNACIO ARROYO RODRIGUEZ
MARIA ELENA BRAVO SAN INOCENTE	24198 SANTANDER LA VIRGEN DEL CAMINO, S.L.	SANTOS BOL GARCIA
40165 AGENTE COLABORADOR PRADENA, S.L.	JOSE MARIA CABERO MATA	MARIA DEL CARMEN CAMUS SAN EMETERIO
ALBA SANCHEZ MATEOS	GESBANCYL, S.L.	SANTANDER VEGUELLINA DE ORBIGO, S.L.
MARIA INES VALCUENDE GARMON	JOSE BERZAL MIGUEL	A.C. LAGUNA DE NEGRILLOS S.L.
AGUSTINA AGUDO FRANCIA	MARIA GONZALEZ MUNICIO	MERINO LOBATO S.L.
IGNACIO MARIA ANTOLIN FERNANDEZ	MARIA JESUS MONROY CARNERO	MARIA MERCEDES GUZON LIEBANA
JULIANA BERLANA DEL POZO	PEDRO MARIA MARINA MEDRANO	JACINTO MANUEL PALOMERO PALOMERO
MARIA VICTORIA SAN ROMAN FERNANDEZ	JOSE ANGEL TIERNO ARANDA	MARIA DEL SOCORRO BENAVIDES SANCHEZ
NOELIA SANZ VILLARREAL	JESUS ANGEL GUTIERREZ QUINTANILLA	GESTION SANTANDER CARBAJOSA, S.L.
JORGE APARICIO GONZALEZ	MANUEL JAVIER DELBOY RODRIGUEZ	MIKEL ANDRES SANCHEZ CASTILLO
MARIA ELISA SAEZ JIMENEZ	A.C. PAREDES DE NAVA S.L.	BENEDICTO GUTIERREZ BERNAL
ANGELA MAGDALENO GONZALEZ	SERGIO SANCHEZ RODRIGUEZ	MARIA AUXILIADORA PEREZ SERRADA

ANNA LOURDES MATEOS SANCHEZ	JOSE ENRIQUE ARBONAS MAS	PABLO GODAYOL RUIZ
ARACELI GONZALEZ MEJIAS	MARIA SOLE RIBERA	DAVID RIDER JIMENEZ
ANA MARIA MARTIN LOBO	NAROBESA INV SL	MARC OLIVA VIDAL
MARCOS ASENJO HERNANDO	OLGA MARIA SANCHO ARASA	MARIA PILAR ALMARAZ FERNANDEZ
AREVALO Y MONGE, S.L.	SERGIO LORENZO RODRIGUEZ	ANNA BATALLA FARRE
EDUARDO LERONES AGUADO	MARIA DOLORES MORERA SOLA	AINOA LORAS COLL
MIRIAM CARRO HERNANDO	ANTONI MONSO BONET	AGUSTI MONTANE DELCOR
JUAN ANTONIO SALGADO HERNANDEZ	JORDI RIBALTA ARIAS	MARIA GLORIA TENA BISTUE
ALICIA FADRIQUE PICO	MANUELA BUERA GILABERT	MARIA ROSA BERTRAN CASALS
IVAN LLAMAS PÉREZ	MATEU & SANTANDER, S.L.	BERTA RIERA FERRAN
GESTION INTEGRAL SANTANDER, S.L.	MARIA AFRICA CARDIEL COLL	IVAN GUIU FARRE
ENRIQUE Y SINDE ASOCIADOS SL	CARLOS DE PABLO LOPEZ	MARIA TERESA BORRELL MICOLA
MARIA TERESA RODRIGUEZ FUENTES	VICENT MORE CAMPS	AMALIA GEMMA AGUILAR CASAS
LORENA HERNANDEZ ATIENZA	ROSA MARIA HOMEDES PERIS	OSCAR BLANCO CID
SARA MARTINEZ GONZALEZ	JORGE TORTA BELBIS	ESTEVE UTSET BADIELLA
ANGEL ARMENTEROS CUESTA	GROUP CLOP INVERSIO SL	EDUARD RAMON NADEU ABENOZA
JUAN BAUTISTA HIDALGO IÑIGO	JUAN JOSE GISBERT FERRERES	VIRGINIA LEDESMA ARCOS
YUBERO MORENO AGENTES FINANCIEROS SL	ALEJANDRO LLERA FERNANDEZ	JIA AGENTS SL
JESUS BERZAL MIGUEL	MONTSERRAT SABATE BORRELL	DANIEL MASSA I RAMIREZ
MARIA DEL MAR TELLEZ ALVAREZ	JORDI ROSA ARIZA	SAUSOLUCIONS SL
MARIA ANTONIA ROVIROSA PIÑOL	ERIC NADAL GRIFOL	NESTOR GALIMANY SANROMA
MIGUEL JOSE MALAVE FERNANDEZ	ALEXANDRE COLL QUINTANA	ISIDRE CALBO PELLICER
GERENCIA & DESARROLLO DE SUCURSALES S.L.	ISABEL OLMO VIBORAS	POL MIR MARTINEZ

KMB FINANCES SOCIEDAD LIMITADA	INVERSIONES TERRA FERMA, S.L.	INGRID QUILES SANCHEZ
MARIA DOLORES ROCA BLANCH	FINANCERES ARO, S.L.	SANDRA MULERO MARTINEZ
DAMIÁ RIERA ALBAREDA	FRANQUICIES FINANCERES LLEIDA S.L.	ELOY HARO ROMERO
DIPTOS, S.L.	GRUP BBR GESTIO PRIVADA, S.L.	MYRIAM ALPAÑEZ PINO
JAVIER BLANCO LOPEZ	MARC TARRES MALE	FELIPE PARRA CARRERA
GESTION INVERGARA S.L.	ALEIX SUBIRA SOLER	JAUME VEGAS BAUTISTA
MARTI FORTUNY PLANAS	OSCAR MUSTE ROIG	MARESFIN MARESME S.L.
ENRIC CORTADA GUTIERREZ	MONTSERRAT OLIVA MANDAÑA	JAVIER COMA PALOU
FINANZAS SAN ANDRÉS S.L.	FINANCIAL VALUE INVESTMENT, SL	DANIEL TORRES MUIXI
ALEXANDRE UTSET BADIELLA	LORENZO BARREIRA VIA	DANIEL LIENAS GRANDE
ALBALATE SERVICIOS FINANCIEROS Y DE GESTION	AA FF NV FINANCERA 2018 SL	OSCAR PLANES NOVAU
EVA CASAHUGA FUSET	EDUARD MAS POMES	ANTONIO DE PADUA BELLAUBI MIRO
SISMOINT, S.L.	JOSE MARIA BALTASAR TOMAS	MARC MAYORAL SERRET
EMA VILATORRADA 2007, S.L.	INMACULADA SAHUN JOVE	ANNA SANS GARDEÑES
MATARÓ ASESORES LEGALES Y TRIBUTARIOS, S.L.	INVERSORA TUCKERTON SLU	SONIA ROIGE VIDAL
BANEST BLANES, S.L.	ESTHER NOGUES FERNANDEZ	ANTONIO FORNOS ISERN
Glinkgo Biloba Properties S.L.	LUIS LOPEZ SIRER	PALMIRA RODRIGUEZ PEREZ
SERVEIS FINANCERS DE BANYOLES, S.L.	INVERSIONS RIBAGORÇA S.L.	ANTONIO VICO ARCE
PUNT FINANCER GESTIO I ASSESSORAMENT, S.L.	TANIA GELPI ESCANDIL	ABEL ISERN ROIG
DAVID OLMO FORTE	JORDI BRULL MARGALEF	GUADALUPE FORNE TENA
ANA MARIA JIMENEZ AGUAYO	BBR BATEA GROUP S.L.	JOAQUIN SERRA BERTRAN
CRISTINA HUERTOS CABEZA	AAFF OLESA 2019,S.L.	MARIA BELEN GARCIA BLANCO
ROSA MARIA PADROS ANGUIITA	SUSANA MARIA JOVANI BELTRAN	JORDI ALUJA OSSO

OFICINA 6788, S.L.	ALBERTO VAZQUEZ OLMEDA	MARIA DEL CARMEN LEDESMA COUTO
ENRIC PUJOL ROVIRA	MARIA ROSA AMPARO BLAZQUEZ FRAILE	JULIAN HERNANDEZ RANZ
CRISTINA PURROY CASTELLO	JUAN MARIA DOMINGUEZ GARCIA	JOSE CARLOS VENERO TANCO
MARIA LUISA VALIENTE LORENZO	SATURNINO QUIÑONES GARCIA	MIGUEL RODRIGUEZ GARCIA
LARA & RAUL ASOCIADOS S.L.	ISMAEL PALACIOS AGUDO	ARCADIO PAREDES ROMERO
SOLEDAD GALAN FREJO	ENRIQUE JONATAN EXPOSITO CAÑA	PEDRO MANUEL BALSERA GARCIA
ROBERTO MARTIN RIVERO	FELIX ALFONSO TORRADO DIAZ	JOSE CARLOS GARCIA SANCHEZ
SAUL ANTONIO TOVAR ASENSIO	VICTOR MANUEL DIAZ MARRON	ELENA LAJA MONTES
MONICA LIBERAL CAMISÓN	VICTOR TOME LLANOS	ELENA DIAZ FERNANDEZ
JUAN JOSE SANCHEZ ACEDO	ALICIA ESTEBAN GARRIDO	ANA MARIA MORALES NUÑEZ
CARMEN MARIA MARTINEZ BOHORQUEZ	ANGELICA MONTEJO ASENSIO	ANGEL LUIS GIL PEÑA
BARBARA FERNANDES DIAS	ELENA PUERTO GALVEZ	NOEMI VIVAS SANCHEZ
ANABEL SANCHEZ MARTIN	VIRGINIA CASTAÑO GONZALEZ	ALMUDENA GARCIA SANCHEZ
MARIA EVA NUÑEZ GONZALEZ	JOSE MARIA MANZANO CIDONCHA	PATRICIA ACOSTA SERRADILLA
CECILIO ALVARADO GARCIA	ALEJANDRO GOMEZ CORRALES	JUAN HERNANDEZ DE TORRES
ANA MARIA LOPEZ OVEJERO	MARIA ANGELICA RODRIGUEZ OLIVEROS	MARIA SAZO SALGUERO
JOSE IGNACIO BORDALLO MEDINA	CARLOS MIGUEL GIJON MELENDEZ	LAURA MARTIN PALOMO
PATRICIA GUIJO LOZANO	SERVICIOS FINANCIEROS CERES SL	OLMO JULIAN PUERTO FERNANDEZ
RAQUEL BARRERO GORDILLO	MARIA MERCEDES GARCIA SANTANA	SERVICIOS FINANCIEROS AHIGAL, S.L.
OSCAR RODRIGUEZ ROMERO	JUAN MIGUEL ALFARO GONZALEZ	CARLOS RUIZ BURDALO
MERCEDES GARCIA DURAN	REYES MARTIN MORENO	VIRGINIA VELASCO MAJADA
LOURDES IGLESIAS ALONSO	ANA MARIA GARCIA DOMINGUEZ	LAURA FERNANDEZ TORIBIO
RAFAEL SALGUERO VARGAS	ROBERTO CABALLERO MARTIN	AMBROSIO TORNAVACAS VINAGRE

BELEN GONZALEZ BERMEJO	OSCAR PARDAL ANIDO	MARTA GARRIDO FERNANDEZ
DAMIAN CEBALLOS SORIA	JOSE LUIS COUCEIRO DORELLE	GAGO Y SOUTO FINANCIAL SERVICES S.L.
MARIA TRINIDAD BRIEVA DOMINGUEZ	SERBAN AGUIÑO S.L.	JAVIER PONTANILLA MARTINEZ
MARIA MARTIN SANCHEZ	JOSE ALFONSO FUENTE PARGA	AGENCIA FINANCIERA ULLOA S.L.
MARIA INMACULADA LUENGO MARIN	NATALIA DIOS OUTEDA	SERCOM ASFICO AGENTES FINANCIEROS, S.L.
VALENZUELA MARTIN ASESORES S.L.	ARACELI GONZALEZ GONZALEZ	MEDA FINANCIERA, S.L.
ANSELMO HERNANDEZ RANZ	MARIA DEL CARMEN CARBALLO GOMEZ	INTERMEDIACION FINANCIERA RIAS BAIXAS, SLL
JOSE GAMERO MUÑIZ	MARTA MARIA COPA PEREZ	MARIA MARTINA GONZALEZ ANDRADE
ASEVAL ASESORES S.L	HECTOR PIÑEIRO MARTIN	ÓSCAR NÚÑEZ PUGA
LUIS MARCELINO NARVAEZ MACIAS	JOSE RAMON DOMONTE RODRIGUEZ	PILAR VILA AYERBE
VERONICA GOMEZ MONTERO	INTERMEDIACION FINANCIERA DEL NOROESTE SL	DAVID GONZALEZ BECEIRO
MARIA JOSE SALGADO ALVAREZ	SONIA LANDROVE MARTINEZ	JOSE MANUEL FURELOS FERREIRA
OSCAR SOTELO SALINAS	SUSANA FARIÑA FERNANDEZ	ANGELINA CUESTA BERAMENDI
MONICA ALVAREZ ALVAREZ	CARLOTA RODRIGUEZ VARELA	TANIA ARAUJO SOTO
CESAR RODRIGUEZ SOTELO	JOSE MANUEL CAPON FERNANDEZ	BORJA MENDEZ VAZQUEZ
JUAN MIGUEL GOMEZ LOPEZ	MARIA CARMEN GONZALEZ BARRAL	BARBARA FARIÑA REBOREDO
ALEJANDRO PIÑOL PEREZ	SILVA&RUA ASOCIADOS SLU	SERVICIOS FINANCIEROS FORCAREI, S.L.
MARIA LUZ IMIA RIVERA	ANGELA MUÑIZ ARROJO	DANIEL VIEIROS CAMPOS
JOSE LUIS EXPOSITO PITA	SOLFIN CONSULTORIA DE MERCADOS SL	LUCIA MARTIN GRANDE
PAULA EIRIZ OTERO	SONIA LOPEZ AZNAR	ANGEL LUIS GONZALEZ CASTRO
LAURA MACIA GONZALEZ	ANXO VAZQUEZ BLANCO	ASESORES FINANCIEROS VIANA SL
CONCEPCION ISOLINA SOMOZA CALVIÑO	JOSE MANUEL AMEAL MAS	MARIA ROCIO LOPEZ TABOADA
PATRICIA SOUTO LOPEZ	MARIA LUISA VALIÑO IGLESIAS	MARIA CRISTINA SANCHEZ UZAL

OFILAR 2020 S.L.	PABLO SEIJO NOVOA	EQUITY CONSULTING FINANCIERO, S.L.
CELIA MONICA MARTINEZ OTERO	ANDREA SAYANS RIVEIRO	JOSE LUIS BECERRA QUIROS
MARIA ELISA CAMBEIRO CAAMAÑO	FABIAN MANTEIGA VARELA	ELVIRA DE CASTRO FERNANDEZ
MONICA GARCIA CAAMAÑO	ALEJANDRO GIADANES TORREIRA	LUIS ALFONSO MARTINEZ JIMENEZ
FRANCISCO FERREIROS LOPEZ	MARIA CARMEN CEREIJO VARGAS	FRANCISCO JAVIER ARTEAGA LOPEZ
MANUEL MARIA GARCIA FERNANDEZ	TATIANA RODRIGUEZ FERNANDEZ	JOSE ANTONIO LOPEZ LOPEZ
MANUEL ARTURO DOVALE VAZQUEZ	MIGUEL ANGEL FUENTE REGO	MARIA ANGELICA CORTES CORTES
IVAN GONZALEZ MARTINEZ	CARLOS GONZALEZ FERNANDEZ	FRANCISCO FLORES ROMERO
ADRIAN TELLA VILLAMARIN	DAVID VALIN ANTON	ARREAZA SERVICIOS FINANCIEROS, S.L.
LUCIA ALVAREZ GONZALEZ	ADRIÁN MONTERO VARELA	JUAN JOSE TAMUREJO CARDOSO
QUIRINO MASCITTI	BRAIS MIDON LOPEZ	CARLOS ARCAS CHECA
OSCAR JUSTO ALVAREZ	JOSE MANUEL SOBREDO SIGUEIRO	ANA MARIA RODRIGUEZ MORENO
AS NEVES & ARBO S.L.	JOSE MANUEL VAZQUEZ BERTOIA	SERGIO GONZALEZ RUISECO
CANDIDO JUNCAL RUA	ANABEL PALLAS FUENTES	DIEGO FERNANDEZ MARCOTE
CELAVEDRA S.L.	NATALIA LOPEZ LOPEZ	MARIA ANGELES GONZÁLEZ IBÁÑEZ
NIEVES NUÑEZ PUGA	JAVIER NOVIO MIDON	PEDRO LUIS CORTES BLANCO
BLANCA FERNANDEZ MURAS	GREGORIO LEAL MORALEDA	JUAN ANGEL ALCAZAR VERGARA
MIRIAM SAMPAYO IGLESIAS	PEDRO JESUS ROLDAN PRIETO	GEMMA GUTIERREZ BAJO
RICARDO CORREA FOLGAR	MARIA JIMENEZ GONZALEZ	ALFONSO ILLAN GARCIA ROJAS
GHG COPERNICO, S.L.L.	CRISTINA GOMEZ GUTIERREZ	MARIA LOPEZ MARTINEZ
SERVIBAN OURENSE, S.L.	JOSE JUAN SANCHEZ SORIANO	JAVIER GUTIERREZ ARAGON
ANA BELEN DUARTE FIGUEIRAS	RAFAEL ROMERO RODRIGUEZ	RUBEN LOPEZ CARMONA
SERVICIOS FINANCIEROS SOUTELO SL	ANTONIO SANCHEZ ARGÜELLES	MIGUEL ANGEL GARCIA RODRIGUEZ

ARACELI CARAVANTES CASTILLO	CRISTINA TORIJA PRIETO	HECTOR CANO DEL SAZ
CARMELO PACHECO MARIN	SONIA ARNAO VILLANUEVA	MIGUEL MORENO ALONSO
ROSA ARCE LANDETE	JOSE LUIS HERNANDEZ-SONSECA MIRANDA	MARIA LUISA SANGUINO GUTIERREZ
BEATRIZ ARROYO AVILA	FRANCISCO DAVID SAIZ CANO	MIGUEL GARCIA TAPIA
TERESA ROLDAN QUINQUER	CECILIO PARRO CORTES	JESUS MATEO HIDALGO MARTIN
FELIPE CHILLARON CASTILLO	LETICIA MARÍA MARTINEZ ABAD	BEATRIZ LOPEZ MONTEJO
MONICA CANO CANO	JOSE CARLOS LOZANO CANO	JOSE LUIS BLAZQUEZ FERNANDEZ
ASIS DE FEREZ S.L.	LUIS JAVIER NAVARRO SIMON	VICENTE CANO CAMARA
VILLASEQUILLA AP SL	MARIA TRINIDAD SORIANO RAMIREZ	LUCIA CARO ESPARCIA
NURIA DEL AMO LETON	JUAN MONTERO RODENAS	JUAN FRANCISCO GARCIA JUNCOS
CARLOS MORENO LOPEZ SOLORZANO	SANDRA ORTEGA QUILON	JESSICA MARIA SEGADOR RISCO
YEBEGEST S.L.	MARIA PAZ CULEBRAS RAMOS	BRAULIO ALMENA AMARO
ARANCHA LOPEZ SANTOS	LUCIA PEREZ CUELLAR	BEATRIZ BLANES RUIZ
INMACULADA TORRES BERMUDEZ	DAVID MOYA LUCAS	MARIA JOSE PACHECO GALLEGO
ANA MARIA RODRIGUEZ VARGAS	AROA GOMEZ LOZANO	EMPRESA GESTORA JUAN JOSE MUÑOZ S.L.
CRISTOBAL NAVARRO DE VEGA	MARTA TRIGUERO RUIZ	ESTHER PEIRO ORTEGA
BNT 2008 AGENTES FINANCIEROS SL	DIEGO GALLEGO VALVERDE	ANA CRISTINA MUÑOZ ALVAREZ
ASESORAMIENTOS FINANCIEROS TEM 2012, S.L.L.	ANGELA ZURITA MARTINEZ	ANTONIO MOTOS RECUENCO
EVA LEON BELINCHON	MARIA DEL PILAR MUÑOZ GONZALEZ	PATRICIA MONTERO DURAN
PAULA MARTINEZ GARCIA	MARTA LUJAN FERNANDEZ	MARIA TERESA OLMEDA PICAZO
IVAN QUINTANA ROJAS	MARIA EUGENIA DE LA CRUZ DE LA ROSA	JAVIER MONGE LOPEZ
PEDRO CARO CANO	SARA PULIDO PANADERO	JUAN CARLOS LAZARO BERDEJO
DIANA DIAZ ANGELINA	JESUS ALVARADO CAMARA	BARRIOS DE LA CRUZ, S.L.

AGUADO Y ORTEGA ASESORES S L	RAUL VEGA ROMERO	MARIA DE LAS NIEVES CALDERON IZQUIERDO
JAIME VALDES BRAVO	MARIA LETICIA GUTIERREZ SANZ	MARIA TERESA PEREZ PEREZ DE LAS VACAS
JOSE ANTONIO REAL MUÑOZ	CARLOS ALBERTO PALACIOS MARTIN	PAOLA GARCIA NUÑEZ
ROSA ISABEL BENEITEZ SALINERO	AYZA FINANZAS S.L.	ANDREA PRATS SEGURA
ALFONSO RODRIGUEZ MADROÑAL	ANTONIO BERNAL MERINO	CRISTINA HIDALGO GARCIA
MARIA CARMEN SANCHEZ PEÑA	MARIA DEL PILAR MARTIN SANCHEZ	ANGELA MARTIN PUENTES
SANDRA COFRADES SANCHEZ	ALVARO FERNANDEZ ROCAMORA	JESUS MAILLO NIETO
FERNANDO GARCIA BARATAS	JUAN CARLOS FUSTER DE CACERES	FINANCIAL ADVANTAGES SL.
MARIA DEL CARMEN PALMERO MORENO CID	FERNANDO DOMINGUEZ RUIZ	EDUARDO GOMES HORCAJUELO
NURIA BRAOJOS SANCHEZ	MARTA ZAMBRANO PEREZ	MARIA PILAR PEREZ NAVARRO
SONIA MELGUIZO BEJAR	DANIEL NAVAS ALONSO	MARIA LUZ SANZ DELGADO
CARMEN CARLA PEREZ CUESTA	LASTRAS AGENTE FINANCIERO SLP	ROBERTO BLANCO GARCIA
SAGRARIO MAQUEDA RUIZ	FINANZAS NUEVA ERA S.L.	JESSICA LIMA BLANCO
JOSE MARIA FERNANDEZ RAMIREZ	ZONA 4 SERVICIOS FINANCIEROS S.R.L.	ANPADU INVERSIONES, S.L.
MARCOS GARCIA-DIES PASTRANA	BUZABRIN, S.L.	MARIA-TERESA JIMENEZ PACIOS
MIGUEL ANGEL ORTIZ DE MIGUEL	DE-TWO Y MAS INVESTMENT SERVICES S.L.	BEATRIZ TORREÑO NIETO
LUIS ALBERTO MASEDO DEL CASTILLO	COFARESA SERVICIOS FINANCIEROS COMPLEMENTARIOS, S.A.U.	ALFONSOCRIADO SL
ALEJANDRA SANCHEZ JUAN	G.S.G. GRUPO CORPORATIVO DE SERVICIOS S.L.	DIEGO CAÑAMERO NAVARRO
DAVID RUIZ MARCHESI	BANFORTUNIA S.L.	RUBEN BERNALDO DE QUIROS DE DOMPABLO
ALEJANDRO GARCIA GUERRERO	SOLUCIONES DE PATRIMONIO E INVERSIÓN, S.L.	PATRICIA CONDE GARCIA BLANCO
TAGOAN JUAREZ SL	TABULA AGO,S.L.	LUCIA DIAZ PRUDENCIO
ALBERTO ANDION ACEDOS	OFISFIN S.L.	JOSE MANUEL TORRES MIGUEL
LUIS CARLOS SEPULVEDA SANCHEZ	MARIA FERNANDEZ RUFO	PALOMA MILAGROS BLANCO GONZALEZ

FRANCISCO JAVIER RIVAS VALENZUELA	EDER SERVICIOS FINANCIEROS SL	YOLANDA CASTILLO VILA
MARIA TERESA GUTIERREZ GALERON	OSCAR CAUDELÍ BOLO	MARIA TERESA BROCH RUBERT
MARIA ALMUDENA MORENO NAVARRO	FRANCISCO JAVIER MORALES MURCIA	SILVANA JAIME GARCÉS
IEA SERVICIOS FINANCIEROS S.L.U.	JOAN MARÍA MANSANET RIPOLL	LIDIA CARRASCO MARIN
IMANOL IPARRAGUIRRE JAUREGUI	ENRIQUE SATURNINO MORENO	MIRIAM PEREZ SORIA
MKS GESTION FINANCIERA S.L.	BASKY INVERSIONES FINANCIERAS SL	TRAKZIONA INVEST SL
UNAI LEKUBE ARAMBERRI	FORUM 20 S.L.	ENRIQUE MARTINEZ MORENO
MAIALEN SAEZ SEGUROLA	ALEXANDRA FRANCH CANALDA	JOSE ANTONIO SANCHEZ NAVARRO
MIGUEL LLANO ABAITUA	MANSANET RIPOLL SL	PIC LLOCH MONTGO SOCIEDAD LIMITADA
ALFREDO ROLDAN FERNANDEZ	CASTEL GANDOLFO S.L	RUBEN TRAVER SALES
MARIA MANUELA GONZALEZ CUESTA	VIVANCOS ROS SL	ANDRES RIVERO JIMENEZ
JUAN JOSE ARAGONESES MARTINEZ	FINANZAS E INVERSIONES ALBAL S.L.	JUAN ANTONIO CANTERO SANCHEZ
JESUS RAMON HERNANDEZ GARCIA	ROSA CARRERES LUCAS	MR2 Servicios Financieros S.L.
NEREA SOBRADILLO TRUEBA	ENRIQUE CHACON FERNANDEZ	SONIA BELLMUNT SAURA
AGURTZANE ITZIAR AGUIRRE COLECHA	JEC INVERSIONES EN CAPITAL SOCIEDAD LIMITADA	JOSE MANUEL AYALA ARNALDOS
JAVIER COBO MENA	ALICANTE VALLEY SERVICIOS FINANCIEROS S.L.	JOAN ANDREU GABARRI LLOP
IÑIGO MARTINEZ GARCIA	RUBEN MARTI CALATAYUD	JAVIER GONZALVEZ BOTELLA
JOSE MANUEL MUÑOZ EZQUERRO	VICENTE MANUEL MARTI SEGARRA	JUANA MARTINEZ MARTINEZ
CRISTINA NAVARRO MACHIN	JOSE IGNACIO CANTO PEREZ	SONIA ZAPLANA VERGARA
BRUNO MARTIN GARCIA	RAFAEL BELLMUNT BELLMUNT	BENISSA C M SERVICES S.L.
OSCAR CAÑIBANO ALVAREZ	CONCEPCION MORATA HOMBRIA	INMACULADA LATORRE CANA
XUELING HOU	FERNANDO DONET ALBEROLA	ALBERTO SAEZ CLEMENTE
AZAHARA MAGARIN CADARSO	MARIA JOSE CABALLERO GRAU	MISTERA BUSINESS SOLUTIONS S.L.

SAMAI FINANZAS S.L.U.	VANESA GONZALEZ VILA	DIEGO MARTINEZ OTON
LUBESAGA SL	FERNANDO GABARRON FERNANDEZ	MARIA DELS DESAMPARATS ROSELLO MORELL
ALBERO PAYA FINANCIEROS, S.L.	ROCIO NAVARRETE MARTÍNEZ	MIGUEL ANGEL VIDAL JOVER
VANESSA SORO GINER	ARANTXA CARDENAL FERNANDEZ	VEGUILLAS Y VEGUILLAS SL
ROSA MARIA BLAY PASCUAL	MIGUEL ANGEL RIOS MUT	JOSE ALFONSO TARI ESCLAPEZ
SANDRA CHOVER GOMEZ	RAMON DANIEL MUNUERA SANZ	MAGDALENA JOVER SELLER
NURIA MANUEL CERVERA	MARIA MERCEDES SABATER JIMENEZ	PAULA GRACIA CABRERA COLONQUES
JOSE FERMIN MOMPO VIDAL	SANMAFRAILES SL	GESFINPRO, S.L
MARGARITA LUZ BOLINCHES IBAÑEZ	GRATIANA TORRES ROSA	BEATRIZ PEREZ GARCIA
DRIMTY S.L.	SERGIO VIVANCOS ALVARO	MIGUEL ALCALDE PITARCH
VERIS SERVICIOS FINANCIEROS S.L.	IVÁN LÓPEZ DURÁ	ANTONIO LUIS CASTELLO APARISI
TRAMYGEST FINANCIERA S.L.	IVAN GODINEZ GUERRERO	MARTA FAUS BLANES
SAVINGS ELX 2014, S.L.	SUSANA DONAT DE LA CRUZ	JUAN ANTONIO ALCAIDE NAVARRO
C M FINANCIAL SERVICES S.L.	MUNICH FINANZ S.L	MIGUEL GARCIA ABAD
ANDRES MINGUEZ LUJAN	CARMEN RODRIGUEZ-BUSTELO GONZALEZ	VICENTE MOSCARDI TORRES
ASEMAR FINANCIERA, S.L.	JOSE JOAQUIN APARISI GRAU	JUAN JOSE MONTEAGUDO MARTINEZ
GESTIONES FINANCIERAS FERRER Y GARCIA 2015, S.L.	ISABEL CARMEN DOMINGUEZ ZANON	SEMAGERIA, S.L.L.
AGENTES XIRIVELLA, S.L.	CARLES ROYO DELPOZO	ALESA CAPITAL, S.L.
HOTRARESCON SL	BEATRIZ GARCIA ESTELLER TORRES	AYALA MARTINEZ MELERO, SLL
VIMAGARMA A.F. SL	MIGUEL ANGEL FERNANDEZ MENDEZ	ISABEL CARBONELL SERNA
CAROLINA GARCIA BELMONTE	MIREYA GARCIA MARTINEZ	ALEJANDRO SANTAELLA FERRER
EUGENIA DURAN HERNANDEZ	ALEJANDRO SANCHEZ BERMUDEZ	JOSE JUAN FERRANDEZ SANCHEZ
JOSE SANTAMARIA CABRERA	ANA MARIA LOPEZ MARTINEZ	BEATRIZ SALA GARCIA

LAURA ERES FUENTES

JAVIER VENEGAS LAGUENS

JOSE LUIS PRIETO PARADA

MARTA HERREROS LOPEZ

SR SANTANDER GESTION SL

JOSE ANGEL RODRIGUEZ PRIETO

ANA DURAN HERNANDEZ

MARTA MARIA GARCINUÑO
CASELLES

JOSE LUIS FARIÑAS PEREZ

SILVIA GARCIA SENDRA

CARLOS GARCIA RODRIGUEZ

ANA VANESA VILLASECA GARCIA

EMILIO SANCHEZ ALCARAZ

SILVIA SAURET VENTOSA

FRANCISCO RICARDO BELLO
GOMEZ

NURIA FERNANDEZ REYES

XAVIER RAMOS ANGLADA

DAVID ALMIÑANA ESCODA

MADIVISAN S.L.U.

ELISABET PUGA JODAR

MARÍA CRUZ GARCÍA-ESTELLER
TORRES

FRANCISCO JOSE GARCIA MORA

PAU FONT RODES

Directors' report

Banco Santander, S.A.

1. Introduction

Banco Santander, S.A. ('the Bank' or 'Banco Santander') is a Spanish bank, incorporated as a sociedad anónima in Spain and is the parent company of Grupo Santander or Santander. Banco Santander, S.A. operates under the commercial name Santander.

Banco Santander operates through a branch network distributed in Spain and abroad.

On 7 June 2017, Banco Santander acquired the entire share capital of Banco Popular Español, S.A.U. ('Banco Popular') in an auction in connection with a resolution plan adopted by the European Single Resolution Board (the European banking resolution authority) and executed by the FROB (the Spanish banking resolution authority) following a determination by the European Central Bank that Banco Popular was failing or likely to fail, in accordance with Regulation (EU) 806/2014 establishing a framework for the recovery and resolution of credit institutions and investment firms. On 24 April 2018, Banco Santander announced that the boards of directors of Banco Santander, S.A. and Banco Popular Español, S.A.U. had agreed to an absorption of Banco Popular by Banco Santander. The legal absorption was effective on 28 September 2018.

The directors' report has been prepared based on the accounting and Management records of Banco Santander, S.A.

The financial information included in this directors' report has been prepared in conformity with the Bank of Spain Circular 4/2017 of 27 November on Public and Reserved Financial Information Regulations and Financial Statements Forms, and subsequent modifications.

2. Situation of Banco Santander

Santander is one of the largest banks in the eurozone. At the end of 2022, we had EUR 1,734,659 million in assets and EUR 1,255,660 million in total customer funds. Santander was the second largest financial entity in the eurozone by market capitalization at EUR 47,066 million as of 30 December 2022.

Our purpose remains the same; to help people and businesses prosper in a way that is Simple, Personal and Fair. We do not merely meet our legal and regulatory obligations, but also aspire to exceed expectations. We strive to support our customers in their green transitions, while promoting financial inclusion at the same time.

We engage in all types of typical banking activities, operations and services. Our track record, business model and strategic execution drive our aim to be the best open digital financial services platform, by acting responsibly and earning the lasting loyalty of our stakeholders (customers, shareholders, people and communities).

2022 was another challenging year, as certain adverse social and economic effects of the covid-19 pandemic continue to impact the macroeconomic environment and Santander. Moreover, the current context, in part as a result of the war in Ukraine, is geopolitically and economically more complex, volatile and uncertain. In 2022, we continued to play an active role in economic recovery and continued to support our 160 million customers and society.

Regarding our 206,462 **employees** at the year end, we continue to work towards our goal of being an employer of choice, chosen for our purpose, culture and responsible way to achieve results. Our strategic priorities pivot around Talent and Culture, ensuring we have the talent we need, encouraging and empowering them, while developing their skills and providing an excellent experience.

In 2022, we launched our new T.E.A.M.S. corporate behaviours, and adopted a new "Your Voice" model to provide a tool for our employees to share their thoughts, ideas and experiences. Throughout this first year, Your Voice has addressed issues such as engagement, flexibility, relationships between peers, inclusion, wellbeing and culture. The global response eNPS (employee Net Promoter Score) rate of Santander's employees stood well above the companies' average in this global engagement survey.

We interact with our **customers** through several channels to ensure access to financial services. At the year end, we have 9,019 branches which we have been improved in recent years. These include specialist centres or branches, for example, Work Café, SmartBank and Ágil branches, as well as, for certain customer segments, such as businesses, Private Banking or universities. We are also promoting new collaborative spaces with greater digital capabilities.

Additionally, our contact centres, which provide best-in-class service quality, continue to serve our customers.

Amid faster digitalization, our aim, now more than ever, is to continue to offer customers digital products and services that will meet their needs and support them in their digital journey.

Santander continues to invest in ensuring access to financial services for our customers who prefer in-person access to banking services, but also for those who do not have an office nearby or do not know or feel comfortable using mobile phones or new digital channels. Our priority is to ensure that no one is left behind and everyone has the opportunity to access our products and services offered.

Some examples of our commitment to financial inclusion are our initiatives in rural Spain. Through our branches, ATMs and network of financial agents in communities with under 10,000 inhabitants and Correos Cash, we provide access to financial services to customers in these rural areas that might otherwise have been left off the grid. In 2022, we also joined the Asociación Española de Banca's (AEB) agreement to make further headway in financial inclusion. In Mexico, around 80% of our Tuio (our microfinance programme) customers were able to grow their business through our loans and 48% of them were able to hire more employees.

As another example, Santander has been working on enhancing services for our elderly customers and on preventing digitalization from becoming an obstacle to accessing financial services. Our cross-functional team has put in place measures that include extending the hours of counter/teller services and creating senior ambassadors to make sure senior citizens receive the best possible service.

In addition to these improvements in the way we serve our customers, we are simplifying our retail and commercial banking products and automating processes, while working to lower our cost to serve and increase our local competitiveness.

This is reflected in customer growth and enhanced customer experience and satisfaction. In terms of NPS, we are one of the top three banks in eight markets (including ranking first in Chile and Argentina).

The number of digital and loyal customers as well as digital activity continued to increase. We now have more than 27 million loyal customers (+8% year-on-year), mainly due to the increase in individuals. Digital customers rose 8% to over 51 million. Digital sales accounted for 55% of total sales (54% in 2021, 44% in 2020 and 36% in 2019) and 80% of transactions carried out were digital (+4 pp in 2022).

We promote financial inclusion as part of our ESG strategy, in a society that is increasingly aware of its importance. Because we have an opportunity and a responsibility to do things the right way, we embed ESG factors in all our businesses.

At the core of our success is our effort and ability to attract a diverse and talented workforce, our culture of teamwork and our promotion of financial inclusion.

Grupo Santander has a balanced diversification in three geographical between mature and emerging markets, and operates mainly in 10 core units, where it has significant market shares.

3. Financial performance

3.1 Economic outlook:

In 2022, Santander operated in an environment marked by global inflation picking up to levels not seen in decades. The war in Ukraine fanned geopolitical tensions and global supply chain bottlenecks and disruptions stemming from the covid-19 pandemic and geopolitical situation waned but, nonetheless, persisted.

In response, the major central banks raised interest rates to try to contain inflationary pressures; some countries are expected to consolidate monetary policy in 2023, which may lead to a gradual slowdown in global economic activity.

Economic performance in the Eurozone and Spain was as follows:

- Eurozone (GDP: +3.5% in 2022). The end of pandemic restrictions in Q2'22 boosted services sector activity, but the war in Ukraine, which caused energy and basic food prices to rise, hampered post-pandemic recovery and created a recession risk. The labour market was resilient, as the unemployment rate continued to fall to historical lows (6.6%). Inflation rose steadily to above 10% after the summer, although ended the year at 9.2%. The European Central Bank (ECB) responded by beginning to raise interest rates in July, increasing the official interest rate from -0.50% to 2% at year end.
- Spain (GDP: +5.5% in 2022). Normalization of the service sector and tourism activity following the pandemic boosted growth in 2022. Despite economic deceleration, the labour market remained robust and the number of part-time contracts fell. Inflation peaked above 10% but declined to 5.8% in December, due to falls in energy prices. However, core inflation continued to rise (7.5% in December).
- To complete the information with the performance indicators of the rest of geographies where the Group is present, see the Consolidated Directors' Report.

3.2 Balance sheet and results:

Banco Santander, S.A. is the Parent Bank of a financial group that operates in different countries through different businesses therefore its financial statements not only reflect its commercial activity in Spain, but also the activity derived from being the head of the Group. This last aspect makes it difficult to analyse its evolution without distinguishing the results obtained from the commercial activity from those more directly related to its holding nature.

Despite the challenging macro-economic environment, we increased our customer base more than 700 thousand customers in 2022, recording growth in every quarter.

In individuals, we saw record new mortgage lending in Q3 and sustained business dynamics in consumer finance and insurance during the year. In wholesale banking, we consolidated our leadership in the syndicated and leveraged finance market. In corporate lending, short term financing reached record highs while demand for long-term loans contracted.

Regarding the balance sheet, as of 31 December 2022, the **total assets** of Banco Santander stood at EUR 750,026 million, with an increase of 13.99% over the previous year.

Loans and advances to customers at the end of the year stood at EUR 325,282 million, with an increase of 5.49% over the previous year driven by the growth of mortgages and consumer loans.

Customer deposits, at the end of the year, stood at EUR 387,304 million with an increase of 25.41% over the previous year. Demand deposits increased by 3.52% and time deposits increased by 142.82% with growth in both corporates and households.

Net interest income in 2022 stood at EUR 4,198 million, 15.97% higher than the previous year due to the positive evolution of the balance sheet and interest rates.

Income from equity instruments amounted to EUR 9,166 million in 2022. This line includes **dividends** received from the Group subsidiaries.

Net fee income increased by 3.06% compared to 2021 to 2,657 million euros, highlighting the strong growth in commissions from wholesale banking.

Gains/losses on financial transactions (including exchange differences) reflected gains of EUR 199 million as compared to 253 million in the previous year, due to the higher sales results of ALCO portfolios produced in 2021.

General administrative expenses (personnel and other administrative expenses) were EUR 4,683 million, increasing only 0.21% as compared to the previous year, thanks to continuous efficiencies measures and despite high inflation.

Impairment losses on financial assets (net) in 2022 accounted for EUR 1,397 million, 0.36% of financial assets at fair value with changes in other comprehensive income plus financial assets at amortized cost.

On the other hand, **the impairment of investments in subsidiaries, joint ventures or associates and non-financial assets** in 2022 amounted to EUR 512 million and **losses of non-current assets held for sale** amounted to EUR 40 million.

Distribution proposal of the Bank's profit

The board applied for the 2022 results a shareholder remuneration policy consisting in paying out approximately 40% of the Group's underlying profit, split approximately in equal parts in cash dividend payments and share buybacks.

- Interim remuneration. On 27 September 2022 the board agreed to:
 - Pay an interim cash dividend of 5.83 euro cents per share (equivalent to approximately 20% of the Group's underlying profit in H1'22), charged against 2022 results; it was paid on 2 November 2022; and
 - Implement the First 2022 Buyback Programme worth approximately 979 million euros (approximately 20% of the Group's underlying profit in H1'22) which was approved by the ECB on 17 November 2022. It ran from 22 November 2022 to 31 January 2023. Banco Santander bought back 340,406,572 shares, which was 2.03% of its share capital at that time. The First 2022 Buyback Programme aimed to reduce share capital by cancelling the shares that were acquired. Under the share capital reduction agreement approved at the AGM, on 1 February 2023 the board agreed to reduce the share capital by EUR 170,203,286 (cancelling the 340,406,572 shares acquired).
- Final remuneration. On 27 February 2023, per the 2022 shareholder remuneration policy, the board of directors decided to:
 - Submit a resolution at the 2023 AGM to approve a final cash dividend in the gross amount of 5.95 euro cents per share entitled to receive dividends. If approved at the AGM, the dividend would be payable from 2 May 2023.
 - Implement a Second 2022 Buyback Programme worth 921 million euros, for which the appropriate regulatory authorization has already been obtained and that will be executed from 1 March 2023.

Once the above mentioned actions are completed, the shareholder remuneration for 2022 will have been 3,842 million euros (approximately 40% of the underlying profit in 2022) split in approximately equal parts in cash dividends (1,942 million euros) and share buybacks (1,900 million euros). These amounts have been estimated assuming that, after the execution of the Second 2022 Buyback Programme, the number of

outstanding shares entitled to receive the final dividend will be 16,190,866,119. Therefore, the total dividend will be higher if fewer shares than planned are acquired in the buyback programme and will be lower in the opposite scenario.

See more information in section 9.2 Dividend policy.

4. Trend information

This director's report contains certain prospective information on the directors' plans, forecasts and estimates, based on what they consider to be reasonable assumptions. Readers of this report should take into account that such prospective information must not be considered a guarantee of our future performance. As the plans, forecasts and estimates are subject to numerous risks and uncertainties, our future performance may not match initial expectations. These risks and uncertainties are described in the Risk management chapter of this report and in note 49 of the consolidated financial statements.

Despite considerable factors of uncertainty in 2023 economic outlooks (such as geopolitics, in particular its impact on the supply of energy in Europe, and the restoration of global supply chains), our base scenario assumes inflation will begin to decelerate gradually in 2023 as a result of more restrictive central bank monetary policies and the easing of geopolitical tensions and global supply chain bottlenecks.

The expected economic cooling should slow down economic growth. This could result in a mild recession in some countries. We do not expect the slowdown to affect unemployment significantly. Until inflation shows clear signs of slowing down, we believe that central banks will continue to trend towards tighter monetary policy, and that interest rates in 2023 will remain around current levels. The only exception could be in Latin America, where some countries could start to cut rates in the second half of the year.

The macroeconomic forecast for 2023 by country/region is as follows:

Eurozone

A high inflationary environment that is eroding household purchasing power, monetary policy that still needs tightening, and the war in Ukraine (which seems unlikely to be resolved in the near future) are shaping 2023. However, concerns regarding the security of energy supply have subsided and global supply chain functioning has improved. As a result, although we expect slower economic growth in 2023 than in 2022, the outlook is better than it was a few months ago. The euro area's GDP is expected to grow modestly, around 1%. Inflation should fall but is likely to remain far from the ECB's 2% target. We therefore expect tighter monetary policy with higher official interest rates and measures to reduce the ECB's balance sheet.

Fiscal policy could turn slightly expansive as governments are extending some measures implemented in 2022 to offset the impact of higher energy prices. Consistency between monetary and fiscal policy will be a challenge. Eurozone tax reforms (suspended due to the pandemic) are underway, but won't take effect until 2024.

Geopolitics will be particularly important in the eurozone. Economic growth might be affected by the war in Ukraine and the EU's response to energy security and defence challenges.

Spain

We expect growth to slow down in 2023 due to lower household consumption as real incomes are squeezed. Energy price uncertainty and tighter financial conditions may delay some investment. We expect inflation to decrease, though we believe core inflation will take longer to do so. The unemployment rate may increase due to economic slowdown at the beginning of the year, but we expect it to be transitory.

Our strategy in Europe is to continue maintaining the focus on customer experience and service quality, while continuing to deliver a more common operating model. Our key priorities for 2023 are to deliver:

- Sustainable top line growth by being customer centric, achieving best-in-class customer experience in all countries through simpler and better propositions, end-to-end delivery channel transformation and by leveraging our scale (e.g. global businesses growth and improved connectivity).
- Strong cost discipline by containing cost growth below inflation and improving efficiency, by delivering a more common operating model (e.g. common shared services and platforms).
- Excellent risk management by continuing to lower the CoR and NPL ratio.
- Active capital management by focusing on capital deductions and reducing portfolios with lower profitability.
- Green finance leadership for retail and corporates; and
- Attract and retain the best talent and continue improving employee engagement to be a reference in the sector.

Our strategy in Spain remains centred on our customers. We want to attract more customers and increase engagement. We will focus on:

- Improving customer experience, with the aim of being market leaders in NPS, by developing new products and grater connectivity with the other countries.
- Growing our business in high-value segments by leveraging our global and regional scale.
- Achieving operational excellence through simple and digital end-to-end processes that enable us to structurally reduce our cost to serve.

- Developing our customer relationship model that offers a unique omni-channel experience and better service more efficiently.
- Continuing active and forward looking cost of risk management.

See more information in the Consolidated Directors' Report.

5. Non-financial information

This Statement of Non-Financial Disclosures of Banco Santander, S.A., which is part of the Separate Directors' Report, contains the non-financial disclosures set out in the Consolidated Directors' Report of Grupo Santander together with other material useful comparative information for Banco Santander, S.A. that is appropriate for an understanding of the trends, results, status and impact of the activities of Banco Santander, S.A., including information on matters of the environment, society, human rights, the fight against corruption and bribery, and personnel.

When drawing up the non-financial information contained in this Separate Statement Of Non-Financial Disclosures, Banco Santander performed a materiality analysis, in line with the international reporting framework developed by the Global Reporting Initiative (GRI), which enabled it to identify the most important aspects about which to inform its stakeholders in accordance with the GRI standards.

General information

The purpose of Santander Group is to help people and businesses prosper.

Our business model is based on three pillars:

- Customer focus: Deepening the relationships with our customers through a simpler value proposition, superior customer experience and our digital proposition
- Our scale: Local scale and leadership.
- Diversification. Our geographic and business diversification allow us to overcome regional challenges in our footprint and business lines.

Building on our technology to further strengthen our customers' loyalty.

As a responsible bank, we focus on areas where our activity can have the greatest impact and support an inclusive and sustainable growth.

To achieve this, and in compliance with the international best practices regarding sustainability and responsible banking, Banco Santander has a sound corporate governance structure, with the board of directors as the maximum decision-making body of the Banco Santander, with the exclusive power to approve Grupo and Banco Santander general policies and strategies, including those regarding sustainability.

It also has a Responsible banking and sustainability policy that defines our general sustainability principles and our voluntary commitments with the aim of generating long-term value for our stakeholders, and with a new environmental and social risk management policy that governs the Groups's financial activity in sectors such as energy, mining/metals and soft

commodities (e.g. palm oil, soya and timber). It also has a defence sector policy outlining the criteria for the group's operations with companies that perform defence-related activities. Likewise, the Bank has a sensitive sector policy that sets down guidelines for assessment and decision making about Banco Santander's participation in certain sectors, whose potential impact could lead to reputational risks. These policies are reviewed annually.

Banco Santander's responsible banking strategy is also underpinned by other internal regulations such as the general code of conduct, the corporate culture policy (which includes principles of diversity and inclusion governing the Group), the conduct risk with customers management model, the cybersecurity policy, or the Third-party certification policy (which includes the principles on the responsible behaviour of suppliers).

Moreover, Banco Santander has a sound corporate governance, both to ensure it is compliant and to help address its ESG agenda.

The responsible banking, sustainability and culture committee (RBSCC) has been created which will help the board of directors to comply with its responsibilities regarding the definition and supervision of the responsible banking, sustainability and culture strategy.

The committee is supported by the Responsible banking forum. It executes the responsible banking agenda across the Group, drives decision-making on responsible banking issues and, ensures the execution of any mandates from the RBSCC, other Board committees and the board of directors. It also ensures alignment on key issues, including the review and escalation of reports to the RBSCC.

The Group's responsible banking corporate unit and RB network work jointly to deliver on our strategy in a co-ordinated way across the Group

In addition, metrics and medium and long-term public commitments have been established to drive Santander's ESG agenda and embed sustainability into the heart of Group business strategy (these public commitments are carved out throughout the report).

The identification of non-financial risks associated with its activity is a priority for Banco Santander.

Banco Santander has procedures in place for their identification, analysis and assessment in transactions subject to Group policies and to external commitments such as Equator Principles, an initiative the Bank joined in 2009.

In this sense, Banco Santander recognises the right of communities to a clean and healthy environment and undertakes to minimise the environmental impact of its operations, which means:

- Assuming, in line with the bank's commitment to the Equator Principles, the obligation to analyse, identify

and correct, during the analysis of the risks of financing activities and consistently with the guidelines approved by the International Finance Corporation, the negative social and environmental impacts, including those affecting local communities.

- During due diligence prior to signing agreements for financing or of any other kind and complying with the Equator Principles and social and environmental risk management policies, Santander undertakes, as part of its analysis, to assess the human rights policies and practices of its counterparties.
- Establish specific policies governing the requirements for offering financing to those sectors, activities or potential customers that present a special risk in respect of social, environmental or human rights issues.

Banco Santander is part of the main initiatives at international level regarding sustainability (United Nations World Agreement, Banking Environment Initiative, World Business Council for sustainable Development, UNEP FI, Equator Principles, Responsible Banking Principles, CEO Partnership for Financial Inclusion, etc.). In addition, we are one of the founding signatories of the United Nations Principles of Responsible Banking. The aim is to contribute to the fight against climate change and the achievement of the United Nations' Sustainable Development Goals.

In 2021 we also joined the Glasgow Financial Alliance for Net Zero, Net Zero Asset Management and were co-founders to the Net Zero Banking Alliance. Within GFANZ, we co-led the Net Zero Public Policy and their call to action launched in October.

In Spain, we are member of Foretica, of the Green Growth Spanish Group as well as Fundación SERES.

In addition, Banco Santander forms part of the main stock market indices that analyse and evaluate companies' actions on sustainability.

2022 highlights:

- **CDP.** We were placed in the highest score band (Climate Change A List - Leadership level), improving on governance, risk disclosure, targets and portfolio impact.
- **Sustainalytics** We improved to 22.4 points, maintaining on "medium risk", improving on business ethics, ESG integration, data privacy and human capital.
- **ESG Corporate Rating by ISS.** We improved to 55.6 points, maintaining the ESG performance on "C", above the sector-specific "Prime" threshold;
- **Bloomberg Gender Equality Index (BGEI).** We improved to 92.87 points, above the financial sector average (74.11). Highest ranked among banks and second company overall.

- We maintained our positioning on the **MSCI World Index**. And we've consecutively featured in the **S&P DJSI World and Europe indices** since 2002 and in the **FTSE4Good** since 2003.

Information about environmental issues

At Santander, we want to play our part in supporting our customers and the global economy to be zero by 2050.

We are offering our customers decarbonization solutions to help them fulfil their climate goals. We are aligning our portfolios with the Paris Agreement Goals and keeping our operations carbon-neutral. Integrating climate within our risk management is key to tracking our plan's robustness.

We have a four-pronged climate strategy and public commitments to:

1) align our portfolio with the Paris Agreement Goals and set sector portfolio alignment targets in line with the NZBA and with the NZAMi: to ensure projected carbon emissions will contribute to limiting warming to a 1.5°C rise above pre-industrial levels.

2) help customers transition to a low-carbon economy, with the commitment to raise EUR 120bn in green finance between 2019 and 2025 and EUR 220bn by 2030; offer our customers guidance, advice and specific business solutions; and enable them to invest in a wide-ranging ESG proposition according to their sustainability preferences.

Some environmental products and services delivered by Banco Santander in Spain are:

- Funding renewable energy projects.
- Management of credit lines in relation to energy efficiency in collaboration with multilateral institutions such as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD).
- Financing of low-emission vehicles, Banco Santander offers Ecological Car loans for the purchase of hybrid or electric cars with reduced interest rates.

3) reduce our impact on the environment by remaining carbon neutral and sourcing all our electricity from renewable energy by 2025.

Banco Santander continues to hold the ISO 14001 environmental certificate for the Santander Group City in Boadilla, the bank's headquarters. It has also obtained the LEED GOLD certificate for the new headquarters of Santander España (Luca de Tena), the Abelias building and the DPC in Santander.

4) embed climate in risk management; understand and manage the sources of climate change risks in our portfolios.

In 2022 we continued to make progress in meeting the public targets:

- Financing or facilitating the mobilisation of EUR 120 billion up to 2025 and EUR 220 billion up to 2030. Since 2019 we have already mobilised EUR 94.5 billion.
- Since 2020 we are carbon neutral in our own operations.
- That 100% of the electricity we use comes from renewable sources by 2025. At the end of 2022, 88% of the energy consumed in the Group (10 main geographies) came from renewable sources. In Spain it is 100%.

Information about labour questions and employees

Banco Santander aims to be one of the best banks to work for, able to attract and retain the best global talent, enabling it to accelerate the transformation and helping people and society prosper.

Human resources strategy is based on:

- Ensuring that we have the best culture, and a great employee experience – delivered through initiatives such as diversity, equity & inclusion, culture, health & wellbeing
- Attracting and engaging the best talent and encouraging our people to learn through great leadership, a strong focus on development and having a strong employee value proposition
- Having the best organisation design, making data driven decisions, and, utilizing new ways of working to drive value for all stakeholders

a) Employment

At 31 December 2022, Banco Santander, S.A., had a headcount of 22,105 employees, with an average age of 45, of whom 49.7% were women and 50.3% men.

Some 99.9% of labour contracts are permanent full-time.

The gender pay gap at Banco Santander S.A. in Spain is 15.1% (in median) and the difference in compensation for identical positions is 4.3%. The difference in comparison with the Group (1%) is due mainly to the legacy of the mergers carried out in recent years and to changes in functions or the fact that some positions are not equivalent.

Employees with a disability account for 2% of the total (+0.6 vs 2021).

b) Work organisation

At Santander we believe our diverse organization must adapt to the needs and characteristics of its teams.

We enabled managers to take charge of deciding where their people can work, each area and business has implemented new ways of working based on the characteristics of the team and its needs.

In addition, the Banco Santander has measures aimed at facilitating the work-life balance of its employees through the different agreements signed with the relevant unions' representatives. Santander has committed to promoting a rational management of working time and its flexible application, as well as the use of technologies that allow a better organisation of the work of our professionals, specifically addressing the employees' right to digital disconnection.

c) Health and safety

The health of its employees is a priority for the bank. In 2022, we published our Global Health, Safety and Well-being policy, which can be found on our corporate website.

Our health and well-being strategy sets out how we protect the health, safety and well-being of all employees, associates and customers; promote a healthy lifestyle; and create long-term value.

It includes a set of common guidelines to ensure a consistent, group-wide approach to mental and emotional health, digital downtime, nutrition and obesity and other matters.

We have collective agreements at bank and sector level, under which employee health and occupational risk prevention are considered.

The BeHealthy initiative aims to make Banco Santander one of the healthiest companies in the world and to offer employees health and wellbeing benefits.

In 2022, we adapted our Covid-19 strategy to address the severity of the Omicron variant early in the year before the pandemic began to subside.

We undertook a gradual process to normalize our operations and return to the office, cutting back our COVID-related measures strictly within the labour laws in each country.

Banco Santander has a plan for the prevention of workplace risks that is available to all employees on the corporate intranet.

Banco Santander also **promotes a healthy work/life balance through flexible work policies and services** to satisfy employees' personal and family needs. The general code of conduct highlights our ethical principles, including the importance of encouraging a working environment that is compatible with employees' personal and family life.

d) Labour relations

Banco Santander has made a **formal commitment to foster workforce labour** relations in its code of conduct.

The code of conduct establishes the obligation to respect the internationally recognised rights of unionisation, association and collective bargaining, and the activities carried out by the unions that represent employees, in

accordance with the functions and areas of responsibility legally attributed to them.

In addition, the responsible banking and sustainability policy describes Banco Santander's principles and commitments with respect to relations with the Bank's employees. These commitments are fostered through social dialogue and include:

- Preventing discrimination and practices that are harmful to people's dignity.
- Rejecting forced and child labour.
- Respecting freedom of association and collective bargaining.
- Protecting employees' health.
- Offering decent work

Also, in meetings of the European Works Committee, various declarations have been signed together with legal representatives of employees in the main European countries in which the Group Santander operates (Spain, Portugal, Germany, the UK, Italy, Poland and Nordics).

In addition, the collective labour agreement for the banking sector, negotiated and signed by the bank, contains various declarations about promoting labour dialogue.

The dialogue with employees' representatives is maintained through numerous bilateral meetings and specific committees.

These specific meetings with the unions are held to inform them about significant Banco Santander projects and to obtain their feedback, in the understanding that their support is necessary and is directly related to the satisfactory implementation of these projects.

In Spain, practically 100% of the workforce is covered by a collective labour agreement.

e) Training

We value continuous learning so our employees can adapt to an ever-changing environment and help accelerate our transformation.

Our Global learning and development policy sets the standards for designing, reviewing, launching, overseeing and enhancing training and development programmes.

We are developing a common catalogue of learning solutions that focuses on the most critical skills our business demands, based on input from strategic workforce planning tool, the employees' skills gap assessment and the business challenges identified with subsidiaries' L&D teams and business stakeholders through the learning needs assessment.

We encourage our employees to take the lead in their own learning development and we ensure that their skills and knowledge stay relevant.

We promote employee learning on our digital ecosystem for lifelong learning, with a vast array of study plans and “roadmaps” for employees to upskill and reskill and be in charge of their training and personal development.

Furthermore, each subsidiary's Learning and Development team pinpoints specific learning needs relating to its geography and designs training courses consistent with Dojo's standards.

f) Accessibility

Improving access to our products and services is a key aspect of Banco Santander's commitment to be a bank that is Simple, Personal and Fair.

The corporate works manual includes minimum accessibility criteria based on Design for All (DfA) principles. These criteria, which refer to office architecture, furniture, lighting, signage and the functional allocation of spaces, are applied by default in new offices and in those upgrades in which this is technically possible.

Banco Santander also wants to provide maximum accessibility for all the users of its various websites. In this respect, both in the development and maintenance of its websites, the bank applies the accessibility guidelines established by the Web Accessibility Initiative (WAI) working group of the World Wide Web Consortium (W3C), at level AA.

g) Equality

Banco Santander believes that diversity enriches human capital, resulting in an inclusive and diverse work environment that achieves better solutions and offers added value.

The board of directors of Banco Santander is a clear example of diversity in all its aspects. It has diversity of gender (40% of board members are women) and nationality (Spanish, British, American and Mexican) and a broad industry representation (finance, retail, technology, infrastructure and academia).

In managing employee talent, Santander considers all existing sources of diversity, including gender, race, age, national origin, disability, culture, education, and professional and life experience.

Our commitment to a diverse and inclusive work environment is a cornerstone of our corporate strategy. Our global D&I executive working group and D&I expert network of local representatives perform a vital role in driving and cascading the importance of diversity and inclusion across Grupo Santander.

Our public targets are:

- To have between 40% - 60% women members on our Group Board. We have closed 2022 with 40% women on the board.

- To have 30% women in senior leadership positions by 2025. We have closed 2022 with 29.3% women on senior leadership positions at group level.

Banco Santander is one of the leading companies in the *Bloomberg Gender-Equality Index 2022*, We are the first bank, and the second highest rated company.

Information about Human Rights

In line with its corporate culture, Banco Santander undertakes to respect and promote human rights in its sphere of operations, and to prevent or minimise any violation directly caused by its activity.

Banco Santander has a responsible banking and sustainability policy that includes commitment to human rights, in accordance with the strictest international standards, especially the UN's Guiding Principles on Business and Human Rights of 2011.

This policy is in line with Banco Santander's General Code of Conduct and its other policies in respect of sustainability.

Information about the fight against corruption

Banco Santander is staunchly committed to fighting any kind of corruption in the public and private sectors alike. In order to comply with this pledge, Banco Santander has drawn up this Anti-Corruption Policy which lays down all the anti-corruption elements which the Grupo Santander must comply with.

Banco Santander considers it a strategic objective to have a system for the prevention of money-laundering and terrorist financing that is advanced and effective, permanently adapted to the latest international regulations and able to deal with new techniques employed by criminal organisations.

It also has a corporate framework that lays down principles for acting in this respect and sets minimum standards applicable to local units. The latter are responsible for directing and co-ordinating procedures for the prevention of money-laundering and terrorist financing, and for investigating and issuing alerts about suspicious transactions and responding to requests for information from the supervisors.

As a signatory of the ten principles of the UN's Global Compact, Banco Santander undertakes to work against corruption in all its forms, including extortion and bribery.

In addition, Banco Santander has whistle-blowers' channels for employees, which form part of the general code of conduct, and for suppliers, designed for reporting inappropriate behaviour by bank employees in matters regarding corruption and bribery that are contrary to internal regulations, to the compliance function.

By category, the main concerns reported related to issues of workplace harassment, breaches of corporate

behaviour (SPF) and labour regulations, as well as internal fraud and marketing of products and services.

In 2022, 93 equal opportunity and non-discrimination complaints were received in the Group, 11 of which resulted in disciplinary action, including 8 dismissals. In Banco Santander SA only 4 equal opportunity and non-discrimination complaints were received, none resulted in disciplinary action.

We also received reports of 18 alleged cases of corruption in the year, resulting in 1 dismissal. In Banco Santander SA only 4 cases were received, with no disciplinary action.

Information about society

a) The bank's commitments to sustainable development

Banco Santander contributes to economic and social development through initiatives and programmes that promote education, entrepreneurship, employability and social wellbeing.

Banco Santander has, as one of its priority lines of action to contribute to sustainable development, the financial empowerment of people. Our goal is to include and financially empower 10 million people by 2025. Three main focuses of action:

- We help unbanked, underbanked and vulnerable people to access and use basic financial services.
- We offer specific products and services to low-income people, people with financial problems, and vulnerable groups.
- We promote financial education programs

In total, by 2022 we financially empowered more than 5 million people (over 600,000 people in Spain). And we have met our public target three years ahead of schedule.

Through Santander Universities, a unique initiative in the world, we focus our efforts on supporting education, employability and entrepreneurship. Banco Santander developed the largest scholarship programme ever launched by a private entity.

Grupo Santander has over 1,300 agreements with universities and academic institutions in 25 countries. Banco Santander SA has agreements with 108 academic institutions.

During 2022 Banco Santander invested a total of EUR 100 million to support higher education. Of which 62 million was disbursed by Santander Spain and the Corporate Centre.

The bank also supports the communities where it operates through numerous local programmes, encouraging the participation of bank employees as a way of promoting solidarity, motivation and pride in belonging, maintaining proximity and ties with their surroundings. In total, in 2022, Banco Santander

invested more than EUR 63 million, EUR 16 million in social programs in Spain, helping more than 680,000 people.

Also, through the Banco Santander Foundation, the bank works to build a fair, inclusive and sustainable society by financing and developing various cultural, educational, social and environmental projects.

b) Outsourcing and suppliers

Banco Santander has a supplier management model and policy that establishes a common methodology for all units about the selection, certification and assessment of suppliers. In addition to price, quality of service and other traditional criteria, it includes ESG factors, such as diversity and inclusion, human rights and sustainability.

The third-party certification policy include the responsible behaviour principles for suppliers. These principles lay down the minimum conditions that Banco Santander expects of its suppliers around ethics (ethics and conduct), labour matters (human rights, health and safety, and diversity and inclusion) and the environment.

Similarly, Banco Santander has a whistle-blowers' channel for suppliers through which suppliers who provide services to the Bank or any of its subsidiaries in Spain can report inappropriate conduct by Group Santander employees which does not conform to the framework of the contractual relationship between the supplier and the general principles of conduct of the Banco Santander.

c) Consumers

For Banco Santander a key characteristic of a responsible bank is that it manages and oversees the marketing and commercialization of products and services and consumer protection appropriately.

Our customer conduct risk model sets out the lines of action and standards for managing and mitigating conduct risk in service design, sales, post-sales and execution.

Our Product Governance & Consumer Protection function, is responsible for ensuring appropriate management and control in relation to products and services and consumer protection.

Within this function, the Product Governance Forum protects the customers by validating products and services and preventing the launch of inappropriate ones.

In addition, we have a vulnerable customer and special case management model.

Appropriate management of complaints is another important aspect of a responsible banking strategy. Banco Santander has a procedure for complaint management and root cause analysis whose objective is to issue standards to all the units for proper complaint management, ensuring compliance with the local and

industry-wide regulations applicable in each case, and offering the best possible service to customers. In 2022 Banco Santander received a total of 76,272 complaints, 36.9% lower than in 2021.

Banco Santander also constantly monitors its customers' opinions and their experiences. This information reveals how the range of services offered can be improved and helps to measure customer loyalty. To measure customer loyalty and satisfaction, Banco Santander uses the Net Promoter Score (NPS). In 2022 we have performed well, maintaining our 2nd position in Spain, and being top 3 in 8 of the main markets in which we operate at a group level..

d) Tax information

Banco Santander pays its fair share in taxes in every jurisdiction where we operate. Our tax strategy, which has been approved by the Board, sets out the principles by which the entire Group Santander operates. It is published on our website.

Banco Santander contributes economically and socially to the countries in which it operates by paying all taxes borne directly by the Grupo Santander (taxes paid by the Group⁶) and collecting or withholding taxes from third parties generated through business activity, cooperating as required with the local tax authorities (taxes from third parties⁷).

The total taxes collected and paid by Banco Santander in Spain in 2022 amounted to EUR 4,258 million, of which 2,892 million were the bank's own taxes and EUR 1,366 million were third-party taxes.

6. Research, development and innovation

Research, development and innovation activities

Innovation and technological development are crucial to Santander's strategy. We focus on operational excellence and customer experience to meet the challenges that stem from digitalization.

The information we gather on new technology platforms helps us better understand the customer journey and design a more accurate digital profile which boosts confidence and increases customer loyalty.

In addition to competition from other banks, we must be mindful of new entrants to the financial system that use new technology to stand out from the crowd and gain a competitive advantage.

Developing a sound strategic technology plan must provide:

- greater capacity to adapt to customers' needs (customized products and services, full availability and excellent, secure service on all channels);
- enhanced processes for Santander's professionals to ensure greater reliability and productivity; and
- proper risk management that provides teams with the means to spot and assess all business, operational, reputational, regulatory and compliance risks.

As a global systemically important bank, Santander and its subsidiaries face increasing regulatory demands that impact system models and underlying technology, which require considerable investments to guarantee compliance and legal certainty.

As in previous years, the European Commission's 2022 EU Industrial R&D Investment Scoreboard (based on 2021 data) recognized our technological effort, we were best company in Spain, and our R&D investment where we were the second best bank globally.

The equivalent investment in R&D&I to that considered in the ranking was EUR 1,325 million.

Technological strategy

To aid the Group's strategy to become the best open digital platform for financial services, our technology must boost efficiency and minimize risk through optimization, growth and value creation.

Our IT strategy is based on simplification, reusable components and composable architecture. It is

⁶ Including net corporation tax payments, VAT and other non-recoverable indirect taxes, employer's social security contributions and other withholding taxes, as well as other charges and tariffs.

⁷ Including net payments for salary withholdings and employees' social security contributions, recoverable VAT, tax deducted at source on capital, non-resident taxes and others.

consistent with the Group's strategic initiatives, global business and operating models.

To ensure our technology strategy is consistent in all Group entities, the Santander Architecture Review Board (SARB) holds monthly meetings that bring together units' chief technology officers (CTOs) to actively make key architecture decisions. It oversees the analysis of potential assets, migration to the cloud and the review of data lake reference architectures.

Consequently, Santander Common Architecture is flexible for the Group and enables the use of a global front- and back-end technology stack. It guides technological development and integration with such new digital capabilities as agile methodologies, the public and private Cloud, core systems development, and advanced technological skills (API - application programming interface-, artificial intelligence, robotics, blockchain, etc.) and data.

To implement our technology strategy, we use internal regulation, the Group's commitment and experience in working with our entities, and a governance model that defines projects and initiatives to shape the strategy across our footprint.

The development of our technology and operations (T&O) model will help us cultivate new business, with a particular focus on global products and digital services. Some 6,000 Santander Global Technology & Operations professionals (SGTO) in Spain, the UK, Portugal, Poland, the US, Mexico, Brazil and Chile are gradually incorporating the global product portfolio agreed by the Group's entities, our global businesses and the T&O division. They guarantee not only the quality of digital services and products, but also their security.

SGTO has reaffirmed its commitment to R&D&I with technology that enables us to transform and modernize complex systems, such as core banking, to help

Technological infrastructure

Santander has a network of high-quality data centres (CPDs) interconnected by a redundant communications system. They are spread across strategic markets to support and develop our operations. They combine traditional IT systems with the capabilities of a private, on-site cloud, which, thanks to its swift adoption, enables us to integrate management of the business areas' technology, accelerate digitalization and achieve significant cost savings.

Santander has migrated more than 90% of its technology infrastructure to the cloud and expects to complete migration in 2023. Our cloud strategy enables us to enhance processes, innovate quickly and improve service quality. Our local Cloud Centres of Excellence (CCoEs), coordinated by Global CCoE, guarantee consistent and rigorous Cloud adoption across our entities. This minimizes risk in accordance with our Public Cloud policy. Migration will also contribute

towards Santander's responsible banking goals as we expect it to reduce the energy our technology infrastructure consumes by 70%.

Cybersecurity

Cybersecurity is one of Santander's main priorities. It is crucial to support our purpose of helping people and businesses prosper, and to offer customers excellent digital services.

The new cyber services and capabilities we created under our three-year Security Transformation Plan (completed in 2020) have become business as usual (BAU) operations in line with the Group's Cybersecurity Framework.

We must continuously adapt cyber defences against more sophisticated threats and attack techniques. In 2021, we established key strategic cyber security pillars and initiatives to develop our cyber defences and avert new threats with cutting-edge technology.

In 2022, Santander took preventive measures to strengthen defence capabilities in a complex geopolitical backdrop. In particular, we developed control frameworks for Ransomware and Distribution Denial of Service (DDoS) threats, which dominated the external cyber threat landscape. We also adopted measures to make supply chains more secure, prevent data exfiltration and build up internal controls.

Internal and external auditors periodically review our information systems. The Group proactively identifies IT assets, systems and information (even those of third parties) and assesses their risk and protection levels to detect and remedy any potential weaknesses by using vulnerability scanning, penetration testing and red team simulations of real cyber-attacks.

Santander takes part in coordinated cyber exercises with public and private organizations. In September, Santander and FS-ISAC organized a "Capture the Flag" (CTF) competition among 35 teams - including two from Santander - from 28 organizations and financial institutions around the world.

In addition to regular testing and reviews, independent certification authorities, such as the International Organization for Standardization (ISO) 27001 and the Statement on Standards for Attestation Engagements (SSAE) 18, review us regularly and have certified our critical cyber security services.

Investing in specialized cybersecurity companies to drive technology and innovation is fundamental to our mission to generate value and trust in society and help create a more secure ecosystem. In 2022, Santander and Forgepoint Capital, a leading venture capital firm specializing in cybersecurity, announced a strategic alliance to drive investment and innovation in cybersecurity in Europe and Latin America.

See more information in the Consolidated Directors' Report.

7. Customer service and customer defence

Customer Service Annual Report

In accordance with article 17 of order ECO / 734/2004 of March 11 of the Ministry of Economy on the departments and services of Customer Service and the Customer Ombudsman of Financial Institutions, the directors' report summarizes the Annual Report to be presented by the holder of the Service on the Board of Directors in March 2023.

Customer service and customer defence service

In compliance with Law 44/2002 on Measures for the Reform of the Financial System of the 734/2004 Order of the Ministry of Economy on Departments and Services of Customer Service and the Customer Ombudsman of Financial Institutions and in accordance with Article 37 Of the Regulations of the Customer Claims and Attention and Defence Service in Grupo Santander, below is a summary of the activity developed by the said Service during 2022, in relation to the management of complaints and claims.

This complaint and customer service department has managed during 2022 the claims of 20 companies of Grupo Santander in Spain, after the approval by the Board of Directors of the group on November 29, 2022 of the adhesion of the companies Banco de Albacete, SA y Pagonxt Onetrade España, EDE, SL.

Global evolution of complaints and claims received by Banco Santander in 2022

In 2022, 86,664 claims were accepted in the complaint and customer service department. Of these, 1,996 came through the Customer Ombudsman, 2,367 through the Bank of Spain, 173 through the National Securities Market Commission (CNMV) and 105 through the General Directorate of Insurance and Pension Funds (DGSFP).

Analysis of claims by affected products

The following is the classification of complaints received in 2022 according to the type of product:

Number of complaints	2022	2021
Assets	25,031	47,442
Liabilities	15,151	31,314
Services	16,513	18,063
Insurances	1,615	2,178
Funds and Plans	1,529	1,407
Payment methods	22,995	23,503
Securities / Capital Markets / Treasury	1,853	5,326
Others	1,977	1,736
	86,664	131,029

Resolution of claims and complaints

As of 31 December 2022, 96.5% of the complaints and claims received had been resolved.

The average resolution time in 2022 was 19 calendar days. 53% of the complaints and claims resolved have required a processing time of more than 15 calendar days.

In 28% of cases, the resolutions have been favourable to customers.

Entities

The following are the companies adhering to the Regulation of the Customer Service of Complaints, Care and Defence of Grupo Santander and their corresponding number of complaints and claims received.

Entities	Admitted to processing	Non-admitted to processing
BANCO SANTANDER, S.A.	70,204	6,460
SANTANDER CONSUMER FINANCE, S.A.	10,392	2,363
OPEN BANK, S.A.	2,708	32
SANTANDER SEGUROS Y REASEGUROS CÍA. ASEGURADORA,SA	1,598	110
SANTANDER ASSET MANAGEMENT, S.A., S.G.I.I.C.	666	55
SANTANDER PENSIONES, S.A., E.G.F.P.	550	28
GETNET EUROPE, EP, SL	264	5
ALTAMIRA SANTANDER REAL ESTATE, S.A.	192	35
SANTANDER LEASE, S.A., E.F.C.	33	1
SANTANDER FACTORING Y CONFIRMING, S.A., E.F.C.	32	—
EURO AUTOMATIC CASH	18	—
TRANSOLVER FINANCE, E.F.C., S.A.	7	—
PAGONXT ONETRADE ESPAÑA, EDE, SL	—	—
SANTANDER REAL ESTATE, S.A.	—	—
SANTANDER INTERMEDIACIÓN CORREIDURÍA DE SEGUROS, S.A.	—	—
LURI 6, S.A.U.	—	—
SANTANDER INVESTMENT, S.A.	—	—
SANTANDER PRIVATE BANKING GESTIÓN, S.A., S.G.I.I.C	—	—
SANTANDER CAPITAL DESARROLLO, S.G.E.I.C., S.A.U.	—	—
BANCO DE ALBACETE, SA	—	—
Total	86,664	9,089

The network of branches and the different channels of relationship solve, in the first instance, the requests, disconformities or incidents that the clients communicate to Banco Santander, trying to avoid that they become complaints to other instances.

8. Risk management, solvency and capital

See notes 49 and 1.e) on risk and capital to the Bank Annual Accounts. See more information in the Consolidated Directors' Report.

9. Other relevant information

9.1 Treasury shares:

See note 30 to the Bank Annual Accounts.

The acquisition of treasury shares was last authorized at our April 2020 AGM, for five years and subject to these provisions:

- Treasury shares held at any time cannot exceed 10% of Banco Santander's share capital, which is the legal limit set under the Spanish Companies Act.
- The purchase price cannot be lower than the nominal value of the shares nor exceed 3% of the last price on the Spanish market for any trades in which Banco Santander does not act on its own behalf.
- The board may establish its purposes and the procedures in which it may apply.

The board put to a vote at the 2023 AGM the renewal of the authorization for the acquisition of treasury shares.

On 27 October 2020, the board approved the current treasury shares policy, which dictates that treasury share transactions may be carried out for these purposes:

- Provide liquidity or supply of securities in the market for Banco Santander shares, which gives this market depth and minimizes any temporary imbalances in supply and demand.
- Take advantage, (for the benefit of all shareholders, of weakness in the share price due to its medium-term outlook.
- Meet our obligations to deliver shares to our employees and directors.
- Serve any other purpose authorized by the board within the limits set at the general meeting. In this regard, Banco Santander has made during the year the donations to Fundación Banco Santander indicated below in the context of its Responsible Banking Policy.

Among other things, the policy also provides for:

- The principles to uphold in treasury share trades, which include protecting financial markets' integrity and prohibiting market manipulation and insider trading.
- The rules on how treasury share trades must be carried out, unless in exceptional circumstances as per the policy. These rules include:
 - Responsibility for execution of these trades, which falls on the Investments and Holdings department, which is kept separate from the rest of Santander.
 - Venues and types of trades. Trades must generally be carried out in the orders market of the *mercado continuo* (continuous market) of Spanish stock exchanges.

- Volume limits, which in general must not exceed 15% of the average daily trading volume for Banco Santander shares in the previous 30 sessions in the *mercado continuo*.
- Price limits. In general, (a) buy orders should not exceed the greater of the price of the last trade in the market between independent parties and the highest buy order price in the order book; and (b) sell orders should not be lower than the lesser of the price of the last trade in the market by independent parties and the lowest sell order price in the order book.
- Time limits, including a 15-day black-out period that applies before each quarterly results presentation.
- Disclosure to the markets of treasury shares trading.

The policy applies to the discretionary trading of treasury shares irrespective of whether they are carried out in regulated markets, in multilateral trading facilities, outside the orders market, either through blocks or through special transactions, or under buy-back programmes. Furthermore, buy-back programmes shall comply with all the applicable specific regulations, such as regulation on market abuse and their relevant implementing rules. The policy does not apply to transactions on Banco Santander's shares carried out to hedge market risks or provide brokerage or hedging for customers.

The full treasury shares policy is available on Banco Santander's corporate website.

Execution of the buyback programmes charged against 2021 results

According to the 2021 shareholder remuneration policy, the April 2022 AGM agreed to reduce Banco Santander's share capital by cancelling the repurchased shares in the first buyback programme of 2021, for an amount of EUR 129,965,136.50. It was based on authorization by shareholders at the April 2020 AGM. On 25 April 2022, the capital reduction was registered with the Commercial Registry.

In the second buyback programme of 2021 (from 15 March to 6 May 2022), once the required European Central Bank (ECB) regulatory authorization was obtained, we acquired 286,309,445 treasury shares — 1.676% of Banco Santander's share capital at such time — at a weighted average price per share of EUR 3.0212. On 1 July 2022 the public deed of capital reduction through the cancellation of repurchased shares, in the terms agreed by the April 2022 AGM and for an amount of EUR 143,154,722.50, was registered with the Commercial Registry.

First 2022 Buyback Programme

Under the 2020 AGM approval and according to 2022 shareholder remuneration policy, on 27 September 2022 the board resolved that it would execute a new share buyback programme worth EUR 979 million (approximately 20% of the Group's underlying

attributable profit in H1 2022) as shareholder remuneration charged against 2022 results once it had obtained the required regulatory authorization.

In the First 2022 Buyback Programme (from 22 November 2022 to 31 January 2023), once the required regulatory authorization was obtained, we acquired 340,406,572 treasury shares —2.03% of Banco Santander's share capital at such time, at a weighted average price per share of EUR 2.8754.

The purpose of the First 2022 Buyback Programme 2022 was to reduce Banco Santander's share capital by cancelling the repurchased shares in the terms agreed by the April 2022 AGM. On 1 February 2023, the board resolved to reduce, subject to the required regulatory authorization from the ECB, the share capital in the amount of EUR 170,203,286, by cancelling the 340,406,572 repurchased shares.

Second 2022 Buyback Programme

Under the same AGM approval, on 27 February 2023 the board resolved that it would execute a new share buyback programme worth EUR 921 million as shareholder remuneration charged against 2022 results for which the appropriate regulatory authorization has already been obtained. The execution of the Second 2022 Buyback Programme will start on 1 March 2023.

The purpose of the Second 2022 Buyback Programme is to reduce Banco Santander's share capital by cancelling purchased shares, for which the board submitted a resolution for a vote at the 2023 AGM.

As of 31 December 2022, Banco Santander and its subsidiaries held 243,689,025 shares, which accounted for 1.45% of the share capital (compared to 277,591,940, 1.601% of the share capital, at 31 December 2021).

9.2 Dividend policy:

As required in Banco Santander's by-laws, each year the shareholder remuneration policy is submitted for approval by the AGM.

Distribution charged against 2022 results

The board applied for the 2022 results a shareholder remuneration policy consisting in paying out approximately 40% of the Group's underlying profit, split approximately in equal parts in cash dividend payments and share buybacks.

- Interim remuneration. On 27 September 2022 the board agreed to:
 - Pay an interim cash dividend of 5.83 euro cents per share (equivalent to approximately 20% of the Group's underlying profit in H1'22), charged against 2022 results; it was paid on 2 November 2022; and

- Implement the First 2022 Buyback Programme worth approximately 979 million euros (approximately 20% of the Group's underlying profit in H1'22) which was approved by the ECB on 17 November 2022. It ran from 22 November 2022 to 31 January 2023. Banco Santander bought back 340,406,572 shares, which was 2.03% of its share capital at that time. The First 2022 Buyback Programme aimed to reduce share capital by cancelling the shares that were acquired. Under the share capital reduction agreement approved at the AGM, on 1 February 2023 the board agreed to reduce the share capital by EUR 170,203,286 (cancelling the 340,406,572 shares acquired).

- Final remuneration. On 27 February 2023, per the 2022 shareholder remuneration policy, the board of directors decided to:

- Submit a resolution at the 2023 AGM to approve a final cash dividend in the gross amount of 5.95 euro cents per share entitled to receive dividends. If approved at the AGM, the dividend would be payable from 2 May 2023.

- Implement a Second 2022 Buyback Programme worth 921 million euros, for which the appropriate regulatory authorization has already been obtained and that will be executed from 1 March 2023.

Once the above mentioned actions are completed, the shareholder remuneration for 2022 will have been 3,842 million euros (approximately 40% of the underlying profit in 2022) split in approximately equal parts in cash dividends (1,942 million euros) and share buybacks (1,900 million euros). These amounts have been estimated assuming that, after the execution of the Second 2022 Buyback Programme, the number of outstanding shares entitled to receive the final dividend will be 16,190,866,119. Therefore, the total dividend will be higher if fewer shares than planned are acquired in the buyback programme and will be lower in the opposite scenario.

9.3 Stock market information:

Banco Santander shares are listed on Spanish stock exchanges (Madrid, Barcelona, Bilbao and Valencia, under the trading symbol 'SAN'), the New York Stock Exchange (NYSE) as American Depositary Shares (ADS) under the trading symbol 'SAN' (each ADS represents one Banco Santander share), the London Stock Exchange as Crest Depositary Interests (CDI) under the trading symbol 'BNC' (each CDI represents one Banco Santander share), the Mexican Stock Exchange under the trading symbol 'SAN', and the Warsaw Stock Exchange under the trading symbol 'SAN'.

2022 was marred by the war in Ukraine, strong inflationary pressure, central banks' tightening of monetary policy to halt rising prices, slow growth in China, by covid outbreaks and lockdowns, and fears of an upcoming global recession.

Central banks continued to raise interest rates that began in 2021, albeit more moderately. The European Central Bank set its official interest rate at 2%, suggesting that it may surpass 3%. The Bank of England left its official interest rate at 3.5%; but it is expected to peak at 4%. The Federal Reserve raised its fed funds rate to 4.25%-4.50% and expects to take it to 5-5.25% or even higher.

In this context, main indices closed the year in the red, despite a strong rebound in Q4. European banking indices closed the year positively, having benefited from interest rate hikes. Banco Santander's share ended Q4 with a positive total return of 19.5%, slightly above the 18.5% of Europe's main banking index, the DJ Stoxx Banks.

Our share price ended the year with a return of -0.8%, slightly below the eurozone's main banking index, the EuroStoxx Banks (up 1.8%) and the DJ Stoxx Banks (up 2.5%). Meanwhile, the MSCI World Banks fell 9.4%, the Ibx 35 2.0% and the DJ Stoxx 50 1.1%.

By 30 December 2022, Banco Santander's market capitalization of EUR 47,066 million was the second largest in the eurozone and 36th largest in the world among financial institutions.

14,217 million Banco Santander shares traded in the year for an effective value of EUR 40,2625 million and a liquidity ratio of 84%.

The Santander share closed 2022 at 2.803 euros.

9.4 Average period of payment to suppliers:

The average period of payment to suppliers during 2022 is 10 days, term which is below the maximum established in applicable regulations.

10. Events after the reporting period

No significant events occurred from 1 January 2023 to the date on which these financial statements were authorized for issue, other than those described in these annual accounts.

11. Annual corporate governance report and Annual report on directors' remuneration

According to articles 540 and 541 of the Spanish Companies Act, Banco Santander, S.A. has prepared the annual corporate governance report and the annual report on directors' remuneration for the year ended 31 December 2022 (that are part of the directors' report of that financial year) with the contents determined by Order ECC/461/2013, of 20 March, and by Circular 3/2021, of 28 September, of the National Securities Market Commission (CNMV), that modifies Circular 5/2013, of 12 June, that defines the annual corporate governance report model for listed companies, and Circular 4/2013, of 12 June, that defines the annual report on directors' remuneration model for listed companies.

The annual corporate governance report includes a section that refers to the compliance of the corporate governance recommendations in Spain.

The annual corporate governance report and the annual report on directors' remuneration are included, as a separate section, in the individual directors' report in accordance with the provisions of article 538 of the Corporate Enterprise Act. The aforementioned reports are sent individually, as other relevant information, to the CNMV, and are included in the consolidated directors' report as a separate section. They are available on the Bank's corporate website (www.santander.com) and on the CNMV website (www.cnmv.es).

Pursuant to Article 253, section 1 of the revised Spanish Companies Act (*Ley de Sociedades de Capital*), the board of directors of Banco Santander, S.A. draws up the individual financial statements (comprising the balance sheet, the income statement, the statement of recognized income and expense, the statement of changes in total equity, the statement of cash flows and the notes to the individual financial statements) and the individual directors' report for the 2022 fiscal year in eXtensible HyperText Markup Language (XHTML) format, which conforms to the single electronic reporting format required under Directive 2004/109/EC and Delegated Regulation (EU) 2019/815.

The directors of Banco Santander, S.A., listed below with an indication of their respective positions, declare that, to the best of their knowledge, the company's individual financial statements for the 2022 financial year were drawn up in accordance with the applicable accounting principles and give a true and fair view of the assets, liabilities, financial position and profit or loss of the company, and that the directors' report includes a fair review of the development, performance and position of the company, together with a description of the principal risks and uncertainties that it faces.

Boadilla del Monte (Madrid), 27 February 2023

ANA PATRICIA BOTÍN-SANZ DE SAUTUOLA Y O'SHEA
Chair

HÉCTOR BLAS GRISI CHECA
Chief Executive Officer

BRUCE CARNEGIE-BROWN
Vice Chair

JOSÉ ANTONIO ÁLVAREZ ÁLVAREZ
Vice Chair

MEMBERS:

HOMAIRA AKBARI

FRANCISCO JAVIER BOTÍN-SANZ DE SAUTUOLA
Y O'SHEA

SOL DAURELLA COMADRÁN

HENRIQUE MANUEL DRUMMOND BORGES
CIRNE DE CASTRO

GERMÁN DE LA FUENTE ESCAMILLA

GINA LORENZA DÍEZ BARROSO

GLENN HOGAN HUTCHINS

LUIS ISASI FERNÁNDEZ DE BOBADILLA

RAMIRO MATO GARCÍA-ANSORENA

BELÉN ROMANA GARCÍA

PAMELA ANN WALKDEN