5

Risk management report

168 Executive summary
172 European Central Bank comprehensive assessment
175 Corporate principles of risk management
177 Corporate governance of the risk function
181 Management model and control of risks
192 Risk environment
194 Credit risk
223 Trading market risks and structural risks
245 Liquidity risk and funding
259 Operational risk
268 Compliance, conduct and reputational risk
274 Model risk
275 Capital management
281 Appendix: EDTF transparency

Executive summary

Grupo Santander's risk management and control principles

pages 177 to 178

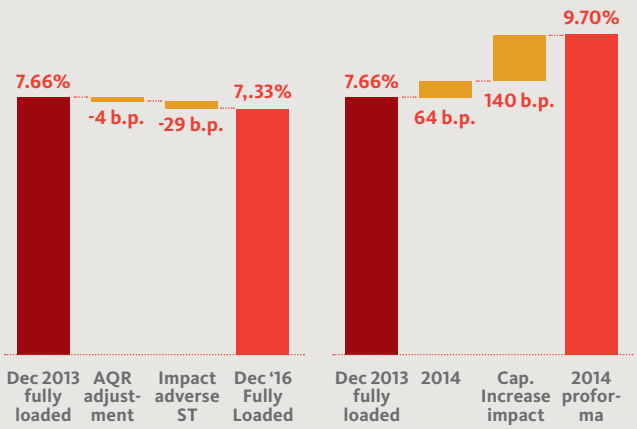
- Group Wide Risk Management (GWRM): comprehensive risk management integrated at all levels of the Group, efficiently aligning the strategic business objectives with a medium-low and stable risk profile.
- Integration of the risk culture throughout the Group, driven by senior management and with remuneration frameworks aligned with the risk appetite.
- The risk function is independent of the business functions.
- Powers and attributions with collegiate decisions that ensure opinions are contrasted.
- Formulation and monitoring of the risk appetite, analysis of scenarios using advanced models and metrics, establishing a framework of control, reporting and scaled that identifies the risks.

Regulatory capital

pages 275 to 280

CET1 fully loaded

Comprehensive Assessment CET1 evolution 2014

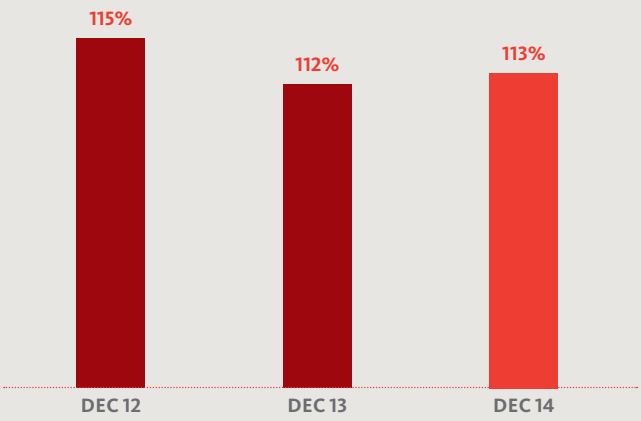


- The CET1 (Base III fully loaded) was 9.7% following the January 9, 2015 capital increase of EUR 7,500 million to support the Group's organic growth plans.
- The Comprehensive Assessment underscored the resilience of the Group's balance sheet.
  - Marginal adjustment (4 b.p. in CET1) of the AQR, reflecting correct classification of the risks and adequate coverage.
  - CET1 deterioration of only 29 b.p. in the stress tests, the smallest impact among our euro zone peers.

Liquidity risk and funding

pages 245 to 258

Net loan-to-deposit ratio total Group



Note: 2012 and 2013 figures on a like-for-like basis

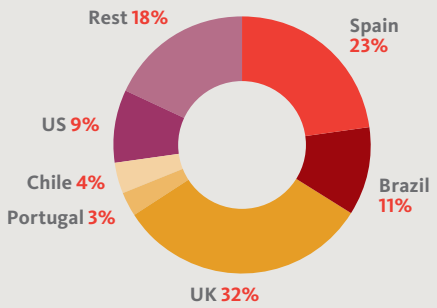
- Santander has a comfortable liquidity position, backed by its commercial strength and model of autonomous subsidiaries, with a high level of customer deposits.
- The net loan-to-deposit ratio at the Group level remained at very comfortable levels (113%).
- In a more favourable market environment, with abundant liquidity at lower cost, greater recourse in 2014 to medium and long-term wholesale funding: 18 units issuing in 15 countries and 13 currencies.
- Compliance ahead of schedule with the regulatory requirements, and further rise in the Group's liquidity reserve to EUR 230,000 million.

Improved credit risk profile

pages 194 to 222

Credit risk with clients by geographic areas

%

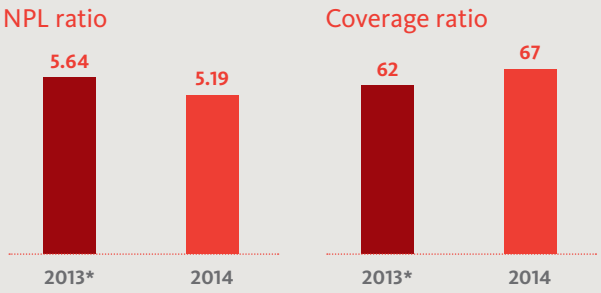


- More than 80% of risk is with commercial and retail banking.
- High geographic diversification and by sectors
- Better risk profile:
  - Group NPL ratio of 5.19%, 45 b.p. lower than in 2013. Of note Brazil (-59 b.p.), UK (-19 b.p.) and Spain (-11 b.p.).
  - Coverage ratio of 67% (+5 p.p.).
  - Provisions at the end of the year stood at EUR 10,562 million, and fell in all the large units.
  - Cost of credit 1.43% (1.53% end of 2013).

Main magnitudes

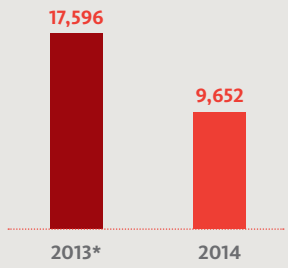
NPL ratio and coverage ratio

%



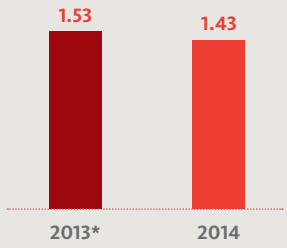
Net entries

Million euros



Cost of credit[1]

%



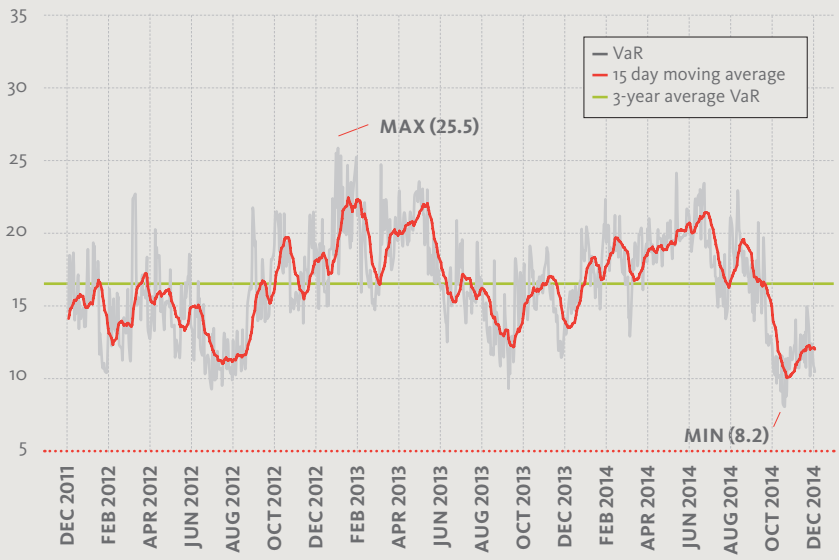
1. Cost of credit: 12 month loan-loss provisions/average lending.
* Excluded SCUSA.

Market trading and structural risks

pages 223 to 244

Evolution of VaR 2012- 2014

Million euros. VaR at 99%, with a time frame of one day



- The average VaR in trading activity of global wholesale banking remained at low levels due to the customer service focus and geographic diversification.
- The balance sheet structure enabled the changes in interest rates to have a low impact on net interest income and equity value.
- Coverage levels of the core capital ratio at around 100%, in the face of exchange rate movements.

This management report provides extensive information on the risks facing the Group, the way in which they are managed and controlled and how they are affecting the Group's activity and results. The actions taken by the Bank to minimise their occurrence and mitigate their severity are also set out.

In line with the best market practices, a map is included for navigating that enables the reader to track the main issues discussed in this risk management report through various documents published by the Group: Annual report, Auditor's report and annual consolidated accounts and Pillar 3. In this same line of fostering transparency, the IPR includes a glossary of terms that set out the basic terminology of risks used in this chapter, as well as in the IPR itself.

The appendix at the end of this report has a table showing the location in the information published by Grupo Santander of the recommendations of the Enhanced Disclosure Task Force (EDTF), promoted by the Financial Stability Board.

Map for navigating Grupo Santander's documents with risk management and control information

Block	Points	Annual Report	Audit Report & Annual accounts	IPR (Pillar III)
ECB comprehensive assessment	ECB comprehensive assessment	Page 174	Note 54.10	Section 5
Corporate principles	Corporate principles of risk management and control	Page 177	Note 54.1	Section 5
Corporate governance of the risk function	Corporate governance of the risk function	Page 179	Note 54.2	Sections 5 and 6
Management model and control of risks	Map of risks	Page 182	Note 54.3	Section 13
	Group Wide Risk Management (GWRM)	Page 183		
	Risk assessment	Page 183		
	Risk appetite and structure of limits	Page 184		
	Analysis of scenarios	Page 187		
	Viability plans and living wills	Page 188		
	Independent reporting	Page 188		
	Internal control framework	Page 189		
	Risk culture	Page 190		
Risk environment	Risk environment	Page 192		
Credit risk	Introduction to the treatment of credit risk	Page 194	Note 54.4 and other notes and related information	Sections 7 and 8
	Main magnitudes and evolution (risk map, evolution, conciliation, geographic distribution and segmentation, management metrics)	Page 194		
	Detail of main markets: UK, Spain, Brazil	Page 203		
	Other risk credit risk optics (credit risk by activities in financial markets, concentration risk, country risk, sovereign risk and environmental risk)	Page 210		
	Credit risk cycle (pre-sale, sale and post sale)	Page 218		
	Risk study and process of credit rating, and planning and setting of limits (analysis of scenarios)	Page 218		
	Decision on operations (mitigation techniques of credit risk)	Page 219		
	Monitoring, measurement and control	Page 220		
	Recovery management	Page 222		
Trading market risk and structural risk	Activities subject to market risk and types of market risk	Page 223	Note 54.5 and other notes and related information	Section 9
	Trading market risks	Page 224		
	Main magnitudes and evolution	Page 224		
	Methodologies	Page 234		
	System for controlling limits	Page 235		
	Structural risk balance sheet	Page 236		
	Main magnitudes and evolution	Page 236		
	Methodologies	Page 240		
	System of control of limits	Page 241		
	Pension, actuarial and fiduciary risks	Page 241		
Liquidity risk and funding	Introduction to the treatment of liquidity and funding risk	Page 245	Note 54.6 and other notes and related information	Section 10
	Liquidity management framework. Monitoring and control of liquidity risk (organisational and governance model, analysis of the balance sheet and liquidity risk measurement, management adapted to business needs)	Page 246		
	Financing strategy and evolution of liquidity in 2014	Page 250		
	Funding outlook for 2015	Page 258		
Operational risk	Definition and objectives. Corporate governance and organisational model	Page 259	Note 54.7 and other notes and related information	Section 11
	Risk management model and control of operational risk (management cycle, identification model, measurement and risk assessment, implementation of the model, reporting system)	Page 260		
	Evolution of the main metrics. Mitigation measures. Business continuity plan	Page 263		
	Other aspects of control and monitoring of operational risk	Page 266		
Compliance, conduct and reputational risk	Definitions and objectives. Corporate governance and organisational model	Page 268	Note 54.8 and other notes and related information	Section 12
	Risk appetite model and regulatory risk assessment exercise	Page 269		
	Risk management model (anti-money laundering and terrorist financing, marketing of products and services, conduct in the securities markets, corporate defence, relationship with supervisors)	Page 269		
Model risk	Model risk	Page 274	Note 54.9	
Capital management and capital risk control	New regulatory framework	Page 277	Note 54.10 and other notes and related information	Sections 2 and 5
	Economic capital	Page 277		
	Planning of capital and stress test	Page 279		
Appendix: EDTF transparency	EDTF table of recommendations	Page 281		

1. ECB comprehensive assessment

ECB comprehensive assessment

The European Central Bank began in October 2013 its comprehensive assessment with a view to launching as of November 4, 2014 the Single Supervisory Mechanism. This exercise submitted banks to an assessment of their risk, an analysis of their asset quality and a stress test. Its objective is to enhance transparency, control and credibility, so that the results strengthen private sector confidence in the solvency of European banks and in the quality of their balance sheets.

The EU's main banks participated, on the basis of meeting at least one of the following criteria: (1) Assets of more than EUR 30,000 million, (2) assets of more than 20% of the GDP of their country of origin and (3) being one of the three largest banks in a Member State.

The comprehensive assessment was based on three pillars:

- **Risk Assessment:** prior evaluation of the business model and the most relevant risks, including those related to liquidity, leverage and funding. Each bank's risk profile was taken into account, their relationship with other banks and their vulnerability to external factors.

- **Asset Quality Review (AQR):** qualitative and quantitative analysis of credit and market exposure at the end of 2013, including off-balance sheet assets, non-performing loans, refinancings and sovereign risk. Its objective is to assess whether the provisions and valuation of the collateral of credit exposure are adequate, as well as assess the complex instruments and high-risk assets. It was structured in three phases:

  - Portfolio selecion: at the proposal of each country's authorities, the portfolios to be included in the analysis were selected, complying with criteria on coverage at the bank level.

  - Execution: validation of the integrity of the data provided, assessment of the guarantees, and recalculation of the provisions and risk weighted assets.

  - Verification: analysis of the consistency in order to ensure the comparability of the results of all the portfolios and all banks in the European Union. Also included was an analysis of the control of quality, guidelines and definitions.

- **Stress Test:** analysis of the capacity of each bank to withstand an adverse scenario, carried out in conjunction with the European Banking Authority (EBA).

The exercise establishes baseline and adverse scenarios which impact a bank's performance, including its risks (credit, market, sovereign, securitisation and cost of funding), with a three-year time scale (2014-2016), using data at the end of 2013 and adjusted by the asset quality review. The adverse macroeconomic scenario took into account some systemic risks for the banking sector such as an increase in global bond yields, especially those linked to emerging economies or a further deterioration of asset quality in countries with weaker fundamentals and vulnerable financial sectors.

The minimum capital (CET1) is set at 8% in the baseline scenario and 5.5% in the adverse scenario, in accordance with the definition of Basel III (CRD IV/CRR) and its gradual schedule of introduction (phase-in).

The stress test results are based on scenarios defined in the methodology and are not forecasts of financial performance or capital ratios. The stress test is based on common methodology designed by the European Banking Authority, which includes a key hypothesis for simplifying the exercise (for example, a static balance sheet, a dividend distribution similar to the average of the last three years and valuation adjustments in sovereign debt).

Stress test 2014 basic data for the European Union as a whole (EBA perimeter)

Sample	Impact CET1 fully loaded	Capital shortfall
• 123 banks • EUR 28 trillion of assets (70% of EU banking system)	• AQR: -40 p.b. • Adverse scenario: -230 p.b. • Total: -270 p.b.	• Maximum: EUR 24.6 billion • Current: EUR 9.5 billion (after 2014 measures)

Results of the ECB's comprehensive assessment of Banco Santander

The ECB's comprehensive assessment of Banco Santander underscored the quality of its portfolios, the correct valuation of assets and adequate provisions, as well as the strength of its business model in the event of adverse macroeconomic scenarios.

As regards the **Asset Quality Review**, 16 large credit portfolios of several countries and various segments (residential, SMEs, corporates) which represented more than 50% of credit risks were analysed. Procedures and policies were revised, samples taken and cases reviewed, properties and guarantees assessed, as well as reviewing assessment of the trading portfolio.

The adjustment required as a result of this exhaustive analysis was marginal on the CET1 (-4 b.p.), the smallest impact among our peers and far from the average for the Spanish banking system (-40 b.p.). All of this reflects the correct classification and valuation of assets, as well as the adequate level of provisions for risks.

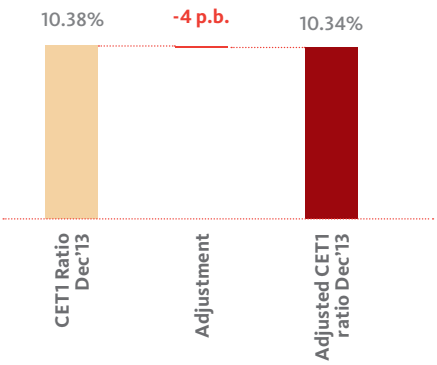
Furthermore, in terms of level 3 assets we are the bank with the least weight among the large European banks (0.13% of total assets), resulting from the low complexity of our balance sheet and our retail banking model.

As regards the **stress tests**, Santander comfortably exceeded the scenarios, particularly the adverse (and unlikely) one.

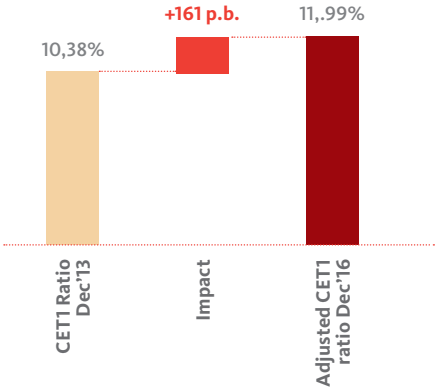
In the baseline scenario, Santander is one of the banks that generates the most capital in the three-year period (+161 b.p.). Its CET1 ratio reaches 12% in 2016. The surplus of capital over the minimum required in this scenario (8%) is around EUR 22,000 million, among the highest.

In the adverse scenario, Santander is the bank with the least negative impact among the major European banks. Its CET1 ratio in 2016 drops by 143 b.p. to 8.95%, which represents a surplus of 345 b.p. or EUR 19,456 million over the minimum requirement (5.5%). This is also among the system's highest.

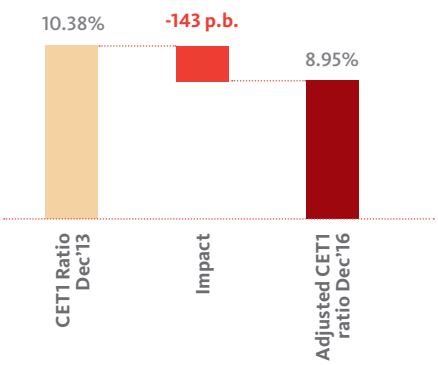
CET1 AQR ratio (%)



CET1 ST Baseline ratio (%)



CET1 ST Adverse ratio (%)

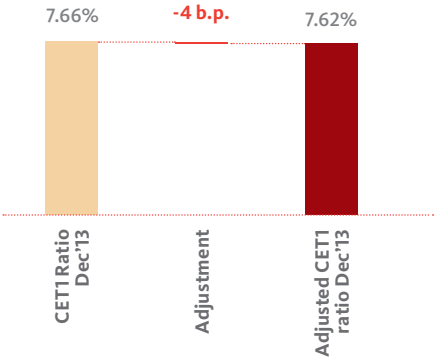


Considering the fully loaded version of the CET1 ratio, i.e., anticipating the Basel III impact, the results continue to be very satisfactory for the Group:

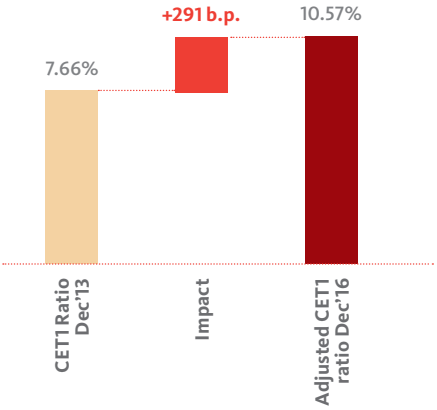
- In the baseline scenario, Santander is the second bank that generates the most capital over the period (+291 b.p.). Its CET1 ratio reaches 10.57% in 2016, which represents a surplus of around EUR 14,000 million over the minimum requirement in this scenario.

- In the adverse scenario, Santander is the bank with the least negative impact among the big European banks. Its CET1 ratio drops by only 33 b.p. to 7.33%, which represents a surplus of 183 b.p. or EUR 10,320 million over the minimum requirement (5.5%).

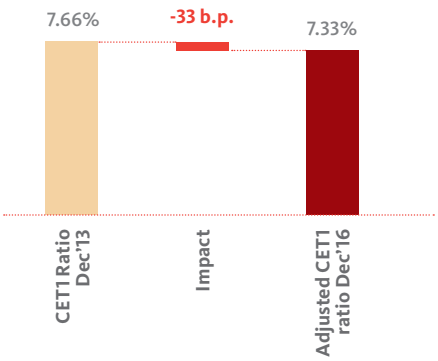
CET1 fully loaded ratio Asset Quality Review (%)



CET1 fully loaded baseline stress test (%)



CET1 fully loaded adverse stress test (%)



In short, the marginal adjustments from the AQR, the low impact in the scenarios envisaged in the stress tests and the capital surpluses make Grupo Santander stand out among its peers and confirm that it is operating with adequate levels of capital for its business model and medium-low risk profile.

The comprehensive assessment was the latest stress test to which Grupo Santander was submitted during the recent economic crisis. All of them showed that, largely thanks to its business model and geographic diversification, Banco Santander will continue to generate profits for its shareholders and comply with the most demanding regulatory requirements in the face of the severest macroeconomic scenarios.

In addition, the internal stress tests carried out by the Bank since 2008 within its self-assessment capital process (Pilar II) have also underscored Grupo Santander's capacity to meet the most difficult scenarios at both the global level as well as in the main countries where it operates. Also noteworthy is that in all cases and despite the severity of the latest crisis, the reality was not as harsh as the scenarios defined (for more details, see section 12.3).

2. Corporate principles of risk management and control

High quality management of risk is one of Grupo Santander's hallmarks and thus a priority in its activity. Throughout its more than 150 years, Santander has combined prudence in risk management with use of advanced risk management techniques, which have proven to be decisive in generating recurrent and balanced earnings and creating shareholder value.

Grupo Santander's risk policy focuses on maintaining a medium-low and predictable profile for all its risks. Its risk management model is a key factor for achieving the Group's strategic objectives.

The economic situation during the last few years has particularly tested the processes of identification, assessment, management and control of risks. In this context, management of the various risks has been positive when compared to the performance of the sector in these markets, which, combined with the high international diversification of the Group's businesses, enabled it to produce broadly satisfactory results. The experience resulting from confronting this adverse economic environment served to reaffirm the principles on which the Group's risk management model is based, as well as improve those aspects of the risk management systems which are necessary to ensure their adequate contribution to the Group's global results.

The activity of risks is governed by the following principles, which are aligned with Grupo Santander's strategy and business model and take into account the recommendations of the supervisory bodies, regulators and the market's best practices.

- A **culture of risks** integrated throughout the organisation. It embraces a series of attitudes, values, skills and ways of acting toward risks that are integrated into all processes, including taking decisions on change management and strategic and business planning. It is developed by **strongly involving senior management** in managing and taking decisions on risks, **remuneration frameworks aligned with the risk appetite**, training processes at all levels, robust control mechanisms and a complete and detailed framework of the policies and processes for managing and controlling risks.

- **Independence of the risk function,** covering all risks and providing an adequate separation between the risk generating units and those responsible for its control and supervision, and having the sufficient authority and direct access to the management and governance bodies which are responsible for setting and supervising the risk strategy and policies.

- **Comprehensive approach to all risks** as the objective for adequate management and control of them, including risks directly as well as indirectly originated (for example, from internal as well as external suppliers) but which can affect it. It is vital to have the capacity to draw up an all comprehensive view of the risks assumed, understand the relations between them and facilitate their overall assessment, without detriment to the differences of nature, degree of evolution and real possibilities of management and control of each type of risk, adapting the organisation, processes, reports and tools to the features of each one.

- **An organisational and governance model** that assigns to all risks those responsible for control and management, conserving the principle of independence and with clear and coherent reporting mechanisms both in each subsidiary of the Group as well as these with the corporation.

- Decision-taking is articulated by granting powers and attributions to each risk management unit, mainly via **collegiate bodies**, which are considered to be an effective instrument for facilitating adequate analysis and different perspectives to be taken into account in risk management, The decision-making process includes an ordered contrasting of opinions, proportionate to the potential impact of the decision and the complexity of factors affecting it.

- The Group promotes the use of **common management instruments among the different local units**, without detriment to their adjustment to regulations, the requirements of supervisors and the degree of progress of each unit.

- These instruments include formulating and monitoring the **risk appetite**, for which the Group determines the amount and type of risks considered reasonable to assume in the execution of its business strategy and its development in objective limits, contrastable and coherent with the risk appetite for each relevant risk; the use of **analysis of scenarios** and a vision that anticipates the risks in the management processes, using advanced **models and metrics** and establishing a **framework of control, reporting and grading** which enables risks to be identified and managed from different perspectives. In addition, the regular processes of identification and risk assessment and the contingency, business continuity and viability and resolution plans complete the essential management tools which, together with the rest of the instruments and principles, make up the components of group wide risk management.

The following sections develop the components common to all risks, leaving to the last ones to analysis of the components and the specific risk profile for each type of risk.

3. Corporate governance of the risk function

3.1. Structure of risk corporate governance

The board is responsible for approving the Bank's general policies and strategies and, in particular, the general policy of risks.

In addition to the executive committee, which pays particular attention to risks, the board is assisted by the committee of risk supervision, regulation and compliance.

The committee of risk supervision, regulation and compliance

The purpose of this committee is to assist the board in the sphere of risk supervision and control, define the Group's risk policies, relations with the supervisory authorities and matters of regulation and compliance.

By agreement of the 2014 general shareholders' meeting and at the proposal of the board, this committee was created in line with the European directive CRD IV and the market's best practices. It is made up of non-executive directors (mostly independent ones) and is chaired by an independent director.

The functions of the committee of risk supervision, regulation and compliance are:

- Support and advise the board in defining and assessing the risk policies that affect the Group and in determining the risk propensity and risk strategy. The Group's risk policies must include:

  i. Identifying the various types of risk which the Group faces, including among the financial or economic ones contingent liabilities and other off-balance sheet risks

  ii. Setting the risk appetite that the Group deems acceptable.

  iii. The measures envisaged for mitigating the impact of the risks identified, in the event that they materialise.

  iv. The information and internal control systems that will be used to control and manage these risks.

- Provide assistance to the board for overseeing implementation of the risk strategy.

- Systematically review the exposures with the main clients, economic sectors, geographic areas and types of risk.

- Know and assess the management tools, improvement measures, evolution of projects and any other relevant activity related to risk control, including the policy on internal models of risk and their internal validation.

- Support and advise the board as regards supervisors and regulators in the various countries where the Group operates.

- Supervise compliance with the general code of conduct, the anti-money laundering and terrorist financing manuals and procedures and, in general, the rules of governance and the Company's compliance programme and make the necessary proposals for its improvement. In particular, it is the committee's responsibility to receive information and, where necessary, issue reports on the disciplinary measures for senior management.

- Supervise the Group's policy and rules of governance and compliance and, in particular, adopt the actions and measures that results from the reports or the inspection measures of the administrative authorities of supervision and control.

- Monitor and assess the proposed regulations and regulatory developments that result from their implementation and the possible consequences for the Group.

1. The committee of risk supervision, regulation and compliance held its first meeting on July 23, 2014.

The executive risk committee (ERC)

This committee is a body with risk management powers delegated by the board and adopts decisions in the sphere of these powers to ensure that the Group's risk profile derived from the business strategy is aligned with the risk appetite limits and global policies approved by the board. Under these powers, the ERC approves risk operations, sets the risk policies and monitors the profile of global risks, ensuring that the Group has the structure, resources and necessary systems for managing and controlling risks adequately.

The ERC is chaired by an executive vice-chairman and four other of the Bank's directors also form part of it. The committee held 96 meetings in 2014, underscoring the importance that Grupo Santander pays to managing and controlling its risks adequately.

The committee's main responsibilities are:

- Resolve the operations that exceed the powers delegated to organs lower down the hierarchy, as well as the global limits of pre-classifications in favour of economic groups or in relation to exposures by classes of risk.
- Provide the committee of supervision of risks, regulation and compliance with the information needed to comply with the functions assigned to it by law, the By-laws and the board's regulations, without detriment to the obligation to keep the board regularly informed of its activities in the sphere of risk management.
- Monitor the general profile of the Group's risks consisting of all the risks set out in the risk map (see section 4.1 of this report).
- Manage exposures to different clients, economic sectors, geographic areas and types of risk.
- Authorise the management tools, improvement measures, evolution of projects and any other relevant activity related to risk control, including the policy on internal risk models and their internal validation.
- Follow, in the sphere of its activities, the indications formulated by the supervisory authorities in the exercise of its function.
- Ensure that the Group's actions are consistent with the risk appetite previously decided by the board, with the advice of the committee of risk supervision, regulations and compliance, and delegate in other committees lower down the hierarchy or in executives empowered to assume risks.

Basic committees in risk management

The ERC delegates some of its powers in corporate risk committees, structured by risk type and activity, which facilitates an adequate process for taking final decisions and continuous monitoring of the risk profile.

Each type of risk has its own framework of committees. Credit risk, for example, is governed by committees on the basis of the customer segment and market risk by the global committee of market risks. Actuarial and pension risks are governed by the committee of global business risks.

Management of operational risk was very important during 2014, promoting the participation of the first lines of defence and strengthening the figure of operational risk coordinator within the first lines of corporate defence. These coordinators participate actively in managing this risk and support managers in their tasks of management and control. The governance framework defined envisaged first line committees, which deal with the most relevant issues in relation to the management of the operational risk of each division, and a control committee (corporate committee of operational risk) that reviews the profile of this risk.

More information on the governance of liquidity and compliance risks can be found in the sections on liquidity risk and funding, and compliance, conduct and reputational risk in this report.

3.2. Model of responsibilities in the risk function

Lines of defence

Banco Santander's management and control model is based on three lines of defence.

The first line is constituted by the business units and the support areas (including those specialised in risk) which as part of their activity give rise to the Bank's risk exposure. These units are responsible for managing, monitoring and reporting adequately the risk generated, which must be adjusted to the risk appetite and the various limits of risk management. In order to tend to this function, the first line of defence must have the resources to identify, measure, manage and report the risks assumed.

The second line of defence is made up of teams of control and supervision of risks including the compliance function. This line vouches for effective control of the risks and ensures they are managed in accordance with the level of risk appetite defined.

Internal audit is the third line of defence and as the last layer of control in the Group regularly assesses the policies, methods and procedures to ensure they are adequate and are being implemented effectively.

The three lines of defence have a sufficient level of separation and independence to not compromise the effectiveness of the general framework. They operate in coordination with one another in order to maximise their efficiency and strengthen their effectiveness.

Over and above the defence lines, the board's committees and the executive risk committees, (see section 3.1 on the structure of committees) at both corporate level and in the units are responsible for adequate management and control of risks from the highest level of the organisation.

Structural organisation of the risk function

The chief risk officer (CRO) is responsible for the risk function and reports to the Bank's executive vice-chairman, who is a member of the board and chairman of the executive risk committee.

The CRO advises and challenges the executive line and reports independently in the risk, regulatory and compliance committee and to the board.

The risk management and control model is structured on the following pillars:

- Specialised management of risks, which enables the units to manage the risk they generate in accordance with the policies and limits established.
- Control of financial, non-financial and transversal risks (see the map of risks in section 4.1), verifying that management and exposure by type of risk is in line with what senior management establishes.
- Group wide risk management which involves an aggregated and comprehensive vision, assessing the global risk profile and supervising that it fits into the risk appetite and structure of limits established by the board and ensuring that the risk management and control systems are adequate and in line with the most demanding criteria and best practices observed in the industry and/or required by regulators.
- Develop in the sphere of risks regulations, methodologies and information infrastructure.
- Planning and internal governance.
- Internal validation of risk models in order to assess their suitability for management and regulatory purposes. Validation involves reviewing the model's theoretical foundations, the quality of the data used to build and calibrate it, the use to which it is put and the process of governance associated.
- Control and coordination of regulatory projects in order to supervise the design and implementation of the best regulatory risk management standards in the Group and comply with regulatory requirements in all countries consistently and effectively.

3.3. The Group's relationship with subsidiaries in risk management

Regarding the alignment of units with the corporation

The management and control model shares, in all the Group's units, basic principles via corporate frameworks.

Over and above these principles and basics, each unit adapts its risk management to its local reality, although they are based on corporate policies and structures, which enables a risk management model to be recognised in Grupo Santander.

One of the strengths of this model is the adoption of the best practices developed in each of the units and markets in which the Group operates. The corporate risk divisions act as centralisers and conveyors of these practices.

Regarding the structure of committees

The governance bodies of the Group's units are structured in accordance with the local regulatory and legal requirements and the dimension and complexity of each unit, being coherent with those of the Bank, as established in the internal governance framework, thereby facilitating communication, reporting and effective control.

The administration bodies of the subsidiaries, in accordance with the internal governance framework established in the Group, will define their own model of risk powers (quantitative and qualitative). These local models of assigning powers must follow the principles contained in the reference models and frameworks developed at the corporate level.

Given its capacity of comprehensive and aggregated vision of all risks, the Group will exercise a role of validation and questioning of the operations and management policies in the various units, insofar as they affect the Group's risk profile.

4. Management model and control of risks

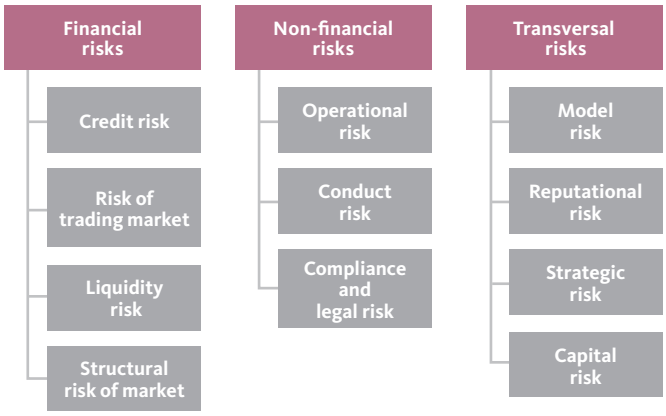
The model of managing and controlling risks ensures the risk profile is maintained within the levels set by the risk appetite and the other limits. It also incorporates the adoption of the necessary corrective and mitigation measures to maintain risk levels in line with the defined objectives.

The elements enabling adequate management and control of all these risks derived from Grupo Santander's activity arte set out below.

4.1. Map of risks

Identifying and evaluating all risks is a corner stone for controlling and managing risks. The risks map covers the main risk categories in which Grupo Santander has its most significant exposures, current and/or potential, facilitating this identification.

The first level includes the following risks:



Financial risks

- **Credit risk:** risk of loss derived from non-compliance with contractual obligations agreed in financial transactions.
- **Trading market risk:** risk that incurred as a result of the possibility of changes in market factors that affect the value of positions in trading portfolios.
- **Liquidity risk:** risk of not complying with payment obligations on time or doing so with an excessive cost.
- **Structural markets risks:** risk caused in managing different balance sheet items, including those related to the sufficiency of equity and those derived from insurance and pension activity.

Non-financial risks

- **Operational risk:** risk of losses due to the inadequacy or failure of procedures, people and internal systems, or external events.
- **Conduct risk:** risk caused by inadequate practices in the Bank's relationships with its customers, the treatment and products offered and their adequacy for each specific customer.
- **Compliance and legal risk:** risk due to not complying with the legal framework, the internal rules or the requirements of regulators and supervisors.

Transversal risks

- **Model risk:** risk of losses resulting from decisions mainly founded on the results of models, due to errors in the conception, application or use of these models.
- **Reputational risk:** risk of damage in the perception of the Bank by public opinion, its customers, investors or any other interested party.
- **Strategic risk:** risk that the results are significantly different from the strategy or the entity's business plan as a result of changes in the general business conditions and risks associated with strategic decisions. It includes the risk of badly implementing decisions or the lack of response capacity to changes in the business environment.

- **Capital risk:** risk that the Group or some of its companies do not have the amount and/or quality of sufficient equity to meet the minimum regulatory requirements set for operating as a bank; respond to the market's expectations as regards their credit solvency and support business growth and the strategic possibilities they present.

4.2. Group Wide Risk Management (GWRM)

The GWRM involves identifyinng, assessing, adequately managing and controlling all risks, with a comprehensive and integrated vision at all levels of the organisation. The implementation and coordinated management of all the elements that comprise it enables the Group's risk profile to be continuously assessed, as well as its global management, improving the capacities in risk management at all levels.

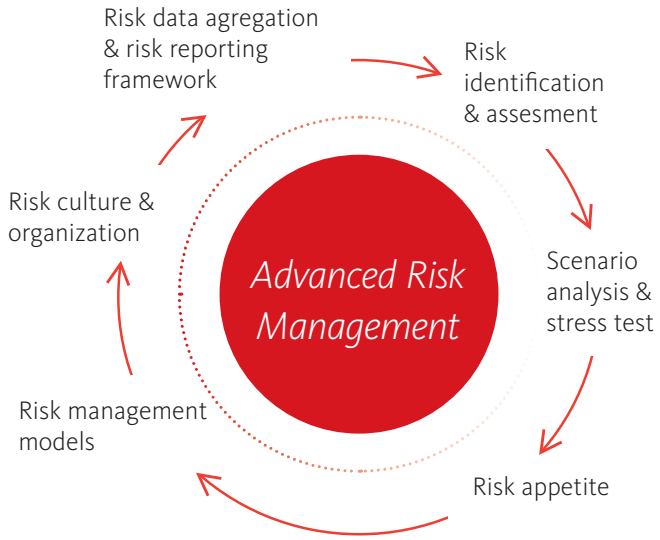
The Group launched the Santander Advanced Risk Management programme to accelerate the implementation of its strategic projects to improve risk management and control capacity, in order to position Grupo Santander as the best market practice in the current financial scenario.

The programme aims to attain excellence in risk management at both the corporate and local levels, always maintaining a vision focused on doing "more and better" business.

The programme is implemented in all the Group's units and ensures homogeneous management principles for the various regulatory and competitive environments.

With Advanced Risk Management Santander aims to be the best in class in risk management, efficiently aligning the strategic business objectives with a medium-low and stable risk profile.

The main development pillars of ARM are:



4.3. Risk Assessment

Banco Santander, as part of its routine management, identifies and assesses the financial and non-financial risks to which it is exposed in the countries in which it operates, and which are inherent in its activity.

In a process of continuous improvement, and in order to provide a more global vision and one consistent with this process, Banco Santander launched at the end of 2014 a corporate project to identify and assess risk. This project was created to increase robustness and standardisation in identifying and assessing the Group's risks and seeks to complement and add other initiatives being worked on until now in a parallel and independent way in the sphere of operational risk (self-assessment questionnaires of operational risk, see 9.2.2.), legal and compliance risk (regulatory risk assessment, see 10.3) and internal control.

The risk identification and assessment methodology enables the Group's residual risks to be identified and assessed by type of risk (in accordance with the risks described in section 4.1 of this report), business segment, unit and at the corporate level. These residual risks are assessed both in current conditions as well as in other potential ones, which involves a full analysis of the risk to which the Bank is submitted in the development of its activity.

The results of the exercise identify, as both the aggregate and granular levels, the Bank's main risks as well as weaknesses in the controls that mitigate them. These results are a base and an important source of information and basis for other key elements in risk management, as shown in the chart below:

4.4. Risk appetite and structure of limits

Santander defines risk appetite as the amount and type of risks considered reasonable to assume for implementing its business strategy, so that the Group can maintain its ordinary activity in the event of unexpected circumstances. Severe scenarios are taken into account that could have a negative impact on the levels of capital, liquidity, profitability and/or the share price.

The board is responsible for annually setting and updating the risk appetite, monitoring the Bank's risk profile and ensuring consistency between both of them. The risk appetite is set for the whole of the Group as well as for each of the main business units in accordance with a corporate methodology adapted to the circumstances of each unit/market. At the local level, the boards of the subsidiaries are responsible for approving the respective risk appetite proposals once they have been validated by the Group.

During 2014, implementing at the local level the risk appetite of the main units was extended to almost all the Group's units. Among other improvements, the capacity for analysis of scenarios was strengthened.

Banking business model and fundamentals of the risk appetite

The definition and establishment of the risk appetite in Grupo Santander is consistent with its risk culture and banking business model from the risk perspective. The main elements that define this business model and which are behind the risk appetite are:

- A general medium-low and predictable risk profile based on a diversified business model, focused on retail and commercial banking and with an internationally diversified presence and with important market shares, and a wholesale banking business model that gives priority to relations with clients in the Group's main markets.
- A stable and recurring policy to generate earnings and remunerate shareholders, on a strong capital and liquidity base and a strategy of diversification by sources and maturities.
- An organisational structure based on subsidiaries that are autonomous and self-sufficient in capital and liquidity, minimising the use of instrumental companies, and ensuring that no subsidiary has a risk profile that jeopardises the Group's solvency.
- An independent risk function with very active involvement of senior management that guarantees a strong risk culture focused on protecting and ensuring an adequate return on capital.
- A management model that ensures a global and inter-related view of all risks, through an environment of control and robust monitoring of risks, with global scope responsibilities: all risk, all businesses, all countries.
- Focus in the business model on those products that the Group knows sufficiently well and has the management capacity (systems, processes and resources).
- The development of its activity on the basis of a conduct model that oversees the interests of clients and shareholders.
- Adequate and sufficient availability of staff, systems and the tools that guarantee maintaining a risk profile compatible with the established risk appetite, both at the global and local levels.
- A remuneration policy that has the necessary incentives to ensure that the individual interests of employees and executives are aligned with the corporate framework of risk appetite and that these are consistent with the evolution of the Bank's long-term results.

Corporate principles of risk appetite

The following principles govern Grupo Santander's risk appetite in all its units:

- **Responsibility of the board and of senior management.** The board is the maximum body responsible for setting the risk appetite and supporting regulations, as well as supervising compliance.

- **Enterprise wide risk, contrasting and questioning of the risk profile.** The risk appetite must consider all significant risks to which the Bank is exposed, facilitating an aggregate vision of the risk profile through the use of quantitative metrics and qualitative indicators. This enables the board and senior management to question and assimilate the current risk profile and that envisaged in business and strategic plans and its coherence with the maximum risk limits.

- **Forward looking view.** The risk appetite must consider the desirable risk profile for the current moment as well as in the medium term, taking into account both the most probable circumstances as well as stress scenarios.

- **Linkage with strategic and business plans, and integration in management.** The risk appetite is a benchmark in strategic and business planning and is integrated into management through a bottom-up and top-down focus:

  - Top-down vision: the board must lead the setting of the risk appetite, vouching for the disaggregation, distribution and transfer of the aggregated limits to the management limits set at the portfolio level, unit or business line.

  - Bottom-up vision: the risk appetite must emanate from the board's effective interaction with senior management, the risk function and those responsible for the business lines and units. The risk profile contrasted with the risk appetite limits will be determined by aggregation of the measurements at the portfolio, unit and business line level.

- **Coherence in the risk appetite of the various units and common risk language throughout the organisation.** The risk appetite of each unit of the Group must be coherent with that defined in the remaining units and that defined for the Group as a whole.

- **Regular review, continuous contrasting and adapting to the best practices and regulatory requirements.** Assessing the risk profile and contrasting it with the limits set for the risk appetite must be an iterative process. Adequate mechanisms must be established for monitoring and control that ensure the risk profile is maintained within the levels set, as well as taking corrective and mitigating measures that are necessary in the event of non-compliance.

Structure of limits, monitoring and control

The risk appetite is formulated every year and includes a series of metrics and limits on these metric (statements) which express in quantitative and qualitative terms the maximum risk exposure that each unit of the Group or the Group as a whole is prepared to assume.

Fulfilling the risk appetite limits is continuously monitored. The specialised control functions report at least every quarter to the board and its risk committee on the adequacy of the risk profile with the risk appetite authorised.

The excesses and non-compliance with the risk appetite are reported by the risk control function to the relevant governance bodies. The presentation is accompanied by an analysis of the causes that provoke it, an estimation of the time they will remain this way as well as the proposed actions to correct the excess when the corresponding governance body deems it opportune.

Linkage of the risk appetite limits with the limits used to manage the business units and portfolios is a key element for making the risk appetite an effective risk management tool.

The management policies and structure of the limits used to manage the different types and categories of risk, which are described in greater detail in sections 6.5.2. planning and establishing limits, 7.2.3. and 7.3.3. systems of controlling limits in this report, have a direct and traceable relation with the principles and limits defined in the risk appetite.

In this way, the changes in the risk appetite are transferred to changes in the limits and controls used in Santander's risk management and each one of the business and risk areas is responsible for verifying that the limits and controls used in their daily management are set in such a way that they cannot fail to comply with the risk appetite limits. The risk control and supervision function will then validate this assessment, ensuring the adequacy of the management limits to the risk appetite.

Pillars of the risk appetite

The risk appetite is expressed via limits on quantitative metrics and qualitative indicators that measure the exposure or risk profile by type of risk, portfolio, segment and business line, both in current and stressed conditions. These metrics and risk appetite limits are articulated in five large areas that define the positioning that Santander's senior management wants to adopt or maintain in the development of its business model:

- The **volatility in the income statement** that the Group is prepared to assume.

- The **solvency** position that the Group wants to maintain.

- The minimum **liquidity** position that the Group wants to have.

- The maximum levels of **concentration** that the Group considers reasonable to assume.

- **Qualitative aspects** and supplementary **metrics**.

Pillars of Appetite and main metrics

Volatility Results	Solvency	Liquidity	Concentration	Supplementary aspects
• Maximum loss that the Group is prepared to assume in a harsh scenario. • Maximum losses from operational risk.	• Minimum capital position that the Group is prepared to assume in a harsh scenario.	• Minimum structural liquidity position. • Minimum position of liquidity horizons that the Group is prepared to assume in various harsh scenarios.	• Concentration by individual client (in absolute and relative terms). • Concentration by Top-N (in relative terms). • Concentration in non-investment grade counterparties. • Concentration by sectors. • Concentration in portfolios with high volatility profile.	• Qualitative indicators on non-financial risks. • Minimum assessment of the state of management of operational risk. • Indicator of compliance and reputational risk. • Qualitative restrictions.

Volatility of results

The volatility pillar determines the maximum level of potential losses that the Bank is prepared to assume in normal conditions and under stress scenarios, in order to be able to analyse the volatility of the income statement in environments of stressed and plausible management.

These stress scenarios mainly affect both the losses derived from the exposure to the credit risk of retail portfolios as well as wholesale ones (taking into account both the loss of direct credit as well as the reduction in spreads), and also the potential unfavourable impact derived from exposure to market risk. After applying these credit and market impacts to the budgeted results, in the context of risk appetite monitoring senior management assesses whether the resulting margin is sufficient to absorb the unexpected effects from operational, compliance, conduct and reputational risk, and establish a maximum ratio of net losses by operational risk on the gross margin (both for the Group as well as each unit). In line with the Basel specifications, the net losses figure includes that which could emanate from compliance risk.

The time frame for materialising the negative impacts for all risks considered is three years generally, and one year for market risk. Compliance with the risk appetite must thus be produced for each of the three following years.

Solvency

Santander operates with a comfortable capital base that enables it not only to meet the regulatory requirements but also have a reasonable capital surplus.

In addition, and with regard to the corresponding tension scenarios referred to in the previous section, Santander's risk appetite measures the unexpected impact of these scenarios on its solvency ratios (CET1).

This capital focus included in the risk appetite framework is supplementary and consistent with the Group's capital objective approved within the capital planning process implemented in the Group and which extends to a period of three years.

Liquidity position

Grupo Santander has developed a funding model based on autonomous subsidiaries that are responsible for covering their own liquidity needs. On this basis, liquidity management is conducted by each subsidiary within a corporate framework of management that develops its basic principles (decentralisation, equilibrium in the medium and long term of sources-applications, high weight of customer deposits, diversification of wholesale sources, reduced recourse to short-term funds, sufficient reserve of liquidity) and revolves around three main pillars (governance model, balance sheet analysis and measurement of liquidity risk, with management adapted to business needs). Section 7 on liquidity risk and funding has more information on the corporate framework of management, its principles and main pillars.

Santander's liquidity risk appetite establishes demanding objectives of position and time frames for systemic stress scenarios (local and global) and idiosyncratic. In addition, a limit is set on a structural funding ratio that relates customer deposits, equity and medium and long term issues to structural funding needs.

Concentration

Santander wants to maintain a widely diversified risk profile from the standpoint of its exposure to large risks, certain markets and specific products. In the first instance, this is achieved by virtue of Santander's retail and commercial banking focus with a high degree of international diversification.

Concentration risk: this is measured by the following metrics upon which risk appetite thresholds are established in terms of the proportion of equity or of lending (general character).

- Client (in proportion to equity): a) net individual maximum exposure to corporate clients (additionally, clients with internal ratings below investment grade and exceeding a certain exposure are also monitored); b) net maximum aggregate exposure with the Group's 20 largest corporate clients (Top 20); c) net maximum aggregate exposure of the exposures considered as large risks (corporate and financial clients); d) maximum impact on profit before tax of a simultaneous failure of the five largest corporate exposures (jump to default Top 5).

- Sector: maximum percentages of the exposure of the portfolio of companies in an economic sector, in relation to lending (at both the total level as well as for the segment of companies).

- Portfolios with high risk profile (defined as those retail portfolios with a percentage of risk premium that exceed an established threshold): maximum percentages of exposure to this type of portfolio in proportion to lending (at both the total and retail levels) and for different business units.

Qualitative aspects and other complementary metrics

This seeks to delimit risk exposures in a complementary way to the previous pillars.

Risk limits expressed both qualitatively (for example, the ban on operating with complex market products) as well as expressed in other quantitative metrics (for example, operational risk indicators) are studied so that relevant risks not considered in the other categories can be controlled. A qualitative indicator on the state of management is incorporated in operational risk, based on the results of indicators on other issues including governance and management, budgetary compliance, quality of the data bases of events, and corporate self-assessment questionnaires on the control environment. An indicator of compliance and reputational risk is also incorporated from an assessment matrix created for the purpose.

4.5. Analysis of scenarios

Banco Santander conducts advanced management of risks by analysing the impact that different scenarios could provoke on the environment in which the Bank operates. These scenarios are expressed both in terms of macroeconomic variables as well as other variables that affect management.

Analysis of scenarios is a very useful tool for senior management as it enables the Bank's resistance to stressed environments or scenarios to be tested, as well as put into effect measures to reduce the Bank's risk profile to these scenarios. The objective is to maximise the stability of the income statement and the levels of capital and liquidity.

This forward looking vision helped Santander to remain among the select group of international banks that throughout the crisis generated profits and maintained its dividend policy.

The robustness and consistency of the exercises of scenario analysis are based on three pillars:

- Developing mathematical models that estimate the future evolution of metrics (for example, credit losses), based on both historic information (internal of the Bank and external of the market), as well as simulation models.
- The inclusion of the expert judgement and know how of risk managers in the year's result, so that it questions and refines the result offered by the models of scenario analysis.
- Back testing the results of the models with the figures observed.

Uses of analysis of scenarios

- **Regulatory uses:** in those that conduct stress scenario exercises under guidelines set by the regulator. In this group of uses are to be found, for example, the resistance tests (comprehensive assessment and stress test) requested in 2014 by the European Central Bank under the methodology set by the European Banking Authority (EBA). For more detail see section 1 on the comprehensive assessment of the European Central Bank.
- **Internal exercises** of self-assessment of capital (ICAAP) or liquidity (ILAAP) in which while the regulator can impose certain requirements, the Bank develops its own methodology to assess its capital and liquidity levels in the face of different stress scenarios. These tools enable capital and liquidity management to be planned.
- **Risk appetite** contains stressed metrics on which maximum levels of losses (or minimum of liquidity) are established that the Bank does not want to exceed. These exercises are related to those of the ICAAP and liquidity, although they have different frequencies and present different granularity levels. The Bank continues to work to improve the use of analysis of scenarios in risk appetite and ensure an adequate relation of these metrics with those used in daily risk management. For more detail see sections 4.4 risk appetite and structure of limits and 8 liquidity risk and funding.
- **Daily management of risks.** Analysis of scenarios is used in processes for budgeting provisions and other balance sheet items by type of risk, in the generation of commercial policies of risk admission, in the global analysis of risks by senior management or in specific analysis on the profile of activities or portfolios. More detail is provided in the section on credit risk (6.5.2. planning and establishing limits), market risk (7.2.1.6. and 7.2.2.3. analysis of scenarios) and liquidity (8.2.2. analysis of the balance sheet and measurement of risk).

Corporate project of analysis of scenarios

In order to respond to the growing regulatory pressure and the needs of advanced risk management so as to be a competitive bank, a project to develop a robust structure of analysis of scenarios at the corporate level began in 2014, which, during 2015, is expected to be extended to the Group's main units. This project has three fundamental pillars:

- **Tool for analysing scenarios:** installation of an advanced tool for estimating losses with greater soundness and computerisation of information handling, with the capacity to aggregate various types of risk and with an environment of multi user execution.
- **Governance:** review of the framework of governance of the exercises of scenario analysis in order to adjust to their growing importance, greater regulatory pressure and best market practices.
- **Stress methodologies:** preparing plans to develop mathematical models of advanced stress that enhance the capacity to predict risk, taking into account the organisation's calculation capacities.

4.6. Recovery and resolution plans (Living Wills)

Grupo Santander was the first globally systemic international bank considered by the Financial Stability Board to present (in 2010) to its consolidated supervisor (the Bank of Spain back then) its corporate recovery plan. Its most important part envisages the measures available to emerge on its own from a very severe crisis.

The fifth version of the corporate plan was prepared in 2014. As with the previous versions from 2010 to 2013, the Group presented the plan in July to the relevant authorities (in 2014 to the core supervisory college, unlike in other years when it was presented to the crisis management group).

This plan comprises of the corporate plan (covering to Banco Santander) and the individual plans for the main local units (UK, Brazil, Mexico, US, Germany, Argentina, Chile, Poland and Portugal), thereby meeting the commitment made by the Bank with the authorities in 2010. It is worth highlighting the cases of the UK, Germany and Portugal where their full development is equally due to local regulatory initiatives.

The Group's senior management is fully involved in preparing and regularly monitoring the content of the plans, through specific committees of a technical nature, as well as monitoring at the institutional level which guarantee that the content and structure of the documents are adapted to local and international regulations in crisis management, which have been in continuous development for the last five years.

The board is responsible for approving the corporate plan or, in exercising its delegated functions, the executive committee and the executive risk committee. The individual plans are approved by the local bodies and always in coordination with the Group, as these plans must be part of the corporate plan.

During 2015, the Group will continue to introduce improvements in the recovery plans, seeking to adopt developments in this domain which are observed in the market (particularly in relation to defining scenarios, early warning indicators and, in general, the very structure of documents), as well as making changes in the plans required by the local authorities in each case.

Regarding resolution plans, the authorities which take part in the Crisis Management Group (CMG) have adopted a common approach on the strategy to follow for the Group's resolution plan that, given the legal and business structure with which Santander operates, corresponds to the so called multiple point of entry (MPE). They have signed the corresponding cooperation agreement (COAG) and have developed the first operational resolution plan for the main countries (Spain, UK and Brazil), The Group continues to cooperate with the competent authorities in the preparation of resolution plans, providing all the information that the authorities might require.

As a case apart, in the US resolution plans are the responsibility of the banks themselves. The Group has presented the second version of the local resolution plans (one for all of the Group's activities in the US, in line with the Federal Reserve's regulations, and the other only covering Santander Bank, as the deposit-taking institution subject to the regulations of the Federal Deposit Insurance Corporation (FDIC).

4.7. Independent reporting

One of the key elements of management is the framework of information on risks that sets standards which ensure a consolidated vision of all risks and enable the board and senior management to take the necessary decisions and actions.

This framework is in permanent evolution in order to reflect the best market practices. In this sense, Santander launched in 2014 a project to ensure that the information on risks for senior management incorporates the basic principles defined the risk data aggregation[2], which is summarised in the following principles:

- **Governance:** establish governance for the life cycle of data and reports, as well as a taxonomy of them.
- **Data base architecture:** guarantees the Bank's capacity to aggregate all the risk data in a reliable way, ensuring it is exact, integrated, complete, traceable, updated at the opportune moment, adaptable to the needs and flexible. It covers all risks on the basis of their materiality.
- **Draw up risk reports for senior management:** ensure that the reports take into account the following requirements:
  - **Exhaustive:** they cover all relevant aspects of the risk principles with the adequate weighting between them.
  - **Identification of emerging risks:** identify emerging risks and supply information in the context of limits and risk appetite.
  - **Focused on decision-taking:** recommend actions on risks when necessary.
  - **Usefulness:** with an adequate balance between data, analysis and qualitative comments. The greater the level of aggregation, the greater the degree of qualitative comments.
  - **Advanced metrics:** incorporate forward-looking measures and not just historic information.
  - **Frequency:** the board and senior management must determine the objectives of the risk reports as well as the frequency, which must increase when there is a crisis.

2. Basel Committee on Banking Supervision, "Principles for effective risk data aggregation and risk reporting".

4.8. Internal control framework

The risk management model has an environment of internal control that guarantees adequate control of all the risks, contributing a comprehensive vision of them. This control is carried out in all the Group's units and for each type of risk in order to ensure that the Group's exposures and global risk profile are within the mandates established by both the board as well as regulators.

The main functions that ensure effective risk control are:

1. **Supervision and aggregated consolidation of all risks.** The risk division, at corporate level as well as in each unit, supervises all risks in order to question or challenge independently the management and risk control mechanisms, contributing value judgements and elements for decision-taking by senior management, based on a series of reports that incorporate an aggregated assessment of all the risks. For more detail see 4.6. Independent reporting.

2. **Assessment of internal control mechanisms.** This consists of a systematic and regular review of all the necessary processes and procedures for control with a view to guaranteeing their effectiveness and validity. This assessment is done annually and is within the principles in the Sarbanes Oxley Law.

3. **Comprehensive control and internal validation of risks**
   The **comprehensive control** function includes among its main activities the following:

   - Verify that the management and control systems of the various risks inherent in Grupo Santander's activity meet the most demanding criteria and the best practices observed in the industry and/or required by regulators.

   - Supervise appropriate compliance in time and form with the recommendations drawn up for risk management matters following inspections by internal audit and by the supervisors to whom Santander is subject.

   The function has global and corporate scope and covers all risks, all businesses and all countries. This function is backed by an internally developed methodology and a series of tools that support this function, in order to systemise its exercise, adjusting it to Santander's specific needs. This enables it to be formalised and make traceable and objectify the application of this methodology.

   The function of **internal validation** of risk models constitutes a fundamental support for the executive risk committee and the local and corporate risk committees in their responsibilities of authorising the use (management and regulatory) of the models and their regular review.

   A specialised unit of the Bank with full independence issues a technical opinion on the adequacy of the internal models for the purposes used, whether they be internal management and/or of a regulatory nature (calculation of the regulatory capital, levels of provisions, etc), and concludes on their robustness, usefulness and effectiveness.

   Santander's internal validation covers all models used in the risk function, be they credit risk, market, structural or operational risk models or capital, economic and regulatory models. The scope of validation includes not only the most theoretical or methodological aspects but also the technological systems and the quality of the data that enable and support their effective functioning and, in general, all relevant aspects in management (controls, reporting, uses, involvement of senior management, etc).

   The function is global and corporate, in order to ensure homogeneous application, and is conducted via five regional centres located in Madrid, London, Sao Paulo, New York and Wroclaw (Poland). These centres have full functional dependence on the corporate centre, which ensures uniformity in the development of activities. This facilitates implementation of a corporate methodology that is supported by a series of tools developed internally in Grupo Santander, which provide a robust corporate framework for all the Group's units, computerising certain verifications in order to ensure that the reviews are carried out efficiently.

   This corporate framework of internal validation is fully aligned with the criteria for internal validation of the advanced models issued by the various supervisors to whom the Group is subjected. In this respect, the criterion is maintained of separating functions between the units of internal validation and internal audit, which is the last layer of control in the Group charged with reviewing the methodology, tools and work conducted by internal validation and expressing its opinion on its degree of effective independence.

4. The control by the **compliance** function that the risks assumed are within the legal framework, the internal regulations and the requirements of regulators and supervisors. For more detail, see section 10 on compliance, conduct and reputational risk.

5. **Assessment by internal audit,** as the third line of defence, provides an independent review of the first two lines of defence, ensuring that the policies, methods and procedures are adequate and integrated in management.

   Internal audit is a corporate function, permanent and independent of any other function or unit of the Group, whose mission, in order to provide security on these aspects to the board and senior management, thereby contributing to protecting the Bank and its reputation, is to supervise:

   - The quality and effectiveness of the internal control processes and systems, of management of all risks and of governance.

   - Compliance with the applicable regulations.

   - The reliability and integrity of financial and operational information.

   - Balance sheet integrity.

4.9. Risk culture

The Group's risk culture is specified in the principles of responsibility, prudence and compliance, as all units and employees (regardless of the function they carry out) are responsible for ensuring that not only does the institution comply, but also it is prudent and responsible in what it does. This risk culture is also based on the principles of Santander's risk management model and is transmitted to all business and management units and is supported, among other things, by the following drivers:

- **Involvement of senior management in risk control and management,** which is shaped in the board's approval of the risk appetite (for more detail, see 4.4 on risk appetite and structure of limits), corporate frameworks that regulate the risk activity and the internal governance framework, and regular revision of the Group's risk profile, the main potential threats and the relevant events produced in the Group and in the banking industry. In 2014 and under the risk data aggregation and risk reporting framework (RDA&RRF), the series of reports that facilitate regular and systematic review by senior management of the profile and risk strategy, the emerging risks and events of low probability but strong impact were reviewed, among others.

  The high frequency with which the corporate bodies of validation and risk monitoring meet (twice a week in the case of the executive risk committee) guarantees intense participation by senior management in the daily management of risks and great agility in identifying alerts, taking decisions and resolving operations, facilitating the clear transfer of a risk culture from senior management, with specific examples of taking decisions. In addition, it enables the grading processes to be efficient and there is an incentive for this, as well as a quick transmission of information between the different functions affected. For more information see section 3, Corporate governance of the risk function.

- **Independence of the control functions (risks, compliance and internal audit),** with sufficient authority and direct access to the governance bodies. These control functions are not conditioned by the business lines, and actively participate in taking important risk decisions.

- Santander **appropriately documents** risk activity, through detailed frameworks, models and policies for risk management and control. Within the systematic review process and updating of risk regulations, the board approved the complete updating of the corporate frameworks that regulate credit, market, structural, liquidity and operational risks and information of risks, as well as the general framework of risks. These documents are considered by the board and senior management as an instrument for disseminating the strategy and risk management fundamentals in the Group, strengthening the Bank's risk culture. They have been agreed by consensus and approved by the boards of the Group's various institutions, thereby ensuring a common and shared model of action and developing an internal governance framework for risk activity.

- The Group has **specific policies for compliance, conduct and reputational risks**, among which is the general code of conduct and the code of conduct in the securities markets, as well as the corporate framework for marketing products and services and the corporate framework for anti-money laundering and terrorist financing. There are also whistleblowing channels and various committees where risks and irregularities are analysed and the corresponding mitigation measures taken.

  For more information see section 10 on compliance, conduct and reputational risk.

- The consistency and **alignment between risk appetite, risk management and the Group's business strategy** is ensured by the budgetary process, governance of approval of operations and quantitative limits in which the risk appetite principles are specified.

- **The main risks are not only analysed when they are originated** or when irregular situations arise in the ordinary recovery process, but also on a continuous basis for all clients. Santander's information and exposure aggregation systems enable daily monitoring of exposures, verifying systematic compliance with the limits approved, as well as adopting, where necessary, the pertinent corrective measures.

- The remuneration and incentives policy **includes performance variables that take into account the quality of the risk** and the Group's long-term results.

  The remuneration policy for executive directors and other members of the Bank's senior management is based on the principle that variable remunerations be congruent with rigorous risk management without bringing about an inadequate assumption of risks and are aligned with shareholders' interests, fostering the creation of long-term value.

  The Group identified in 2014 the collective subject to Capital Requirements Directive IV, in accordance with the criteria stated by the European Banking Authority, and increased significantly over 2013 the number of executives whose variable remuneration is the object of deferment and payment in shares. All the collective identified is subject to the maximum ratio of variable remuneration set out by this directive, ensuring that the fixed remuneration represents a significant percentage of the total remuneration.

  Furthermore, the methodology for determining the variable remuneration of the Group's executives takes into account, as well as quantitative metrics of results and capital management, factors that incorporate adequate risk management, the level of customer satisfaction with respect to that of rival banks and other relevant management factors.

  As well as the functions of the remuneration committee, the Group has a specific committee to assess the risks in remuneration, comprising senior executives of the main functions of control (risk, financial control, financial management, auditing, compliance and human resources), which takes into account the quality of financial results, the risks and regulatory compliance via metrics and other qualitative factors used to calculate the variable remuneration. This committee also analyses the adjustments ex-post, in relation to the clauses of deferment and the release in their case of the amounts of deferred variable remuneration.

For more information see the 2014 report of the Group's remuneration committee.

There are also specific risk development programmes for all the Group's executives and a strategy of risk training and auditing for these divisions through the corporate schools of risks and auditing, which have global and local programmes and disseminate the culture of prudence in risks and control throughout the Group.

Furthermore, the Group has a global strategy for managing talent and planning ahead in order to ensure that the Group has the necessary talent for key positions and accelerates the development of executives in line to take over these positions. This strategy covers the main executive levels, including the control functions.

- **Other procedures** supporting the dissemination of Santander's risk culture are the training activities in the corporate risk schools, strict compliance by employees with the general codes of conduct, monitoring of supervisors' reports and systematic and independent action by the internal audit services whose recommendations are regularly reviewed to ensure their compliance.

Thanks to the strategies and procedures implemented to develop and support the risk culture, Grupo Santander is totally committed to the risk culture indicators identified by the Financial Stability Board in its document *Guidance on supervisory interaction with financial institutions on risk culture* published in April 2014.

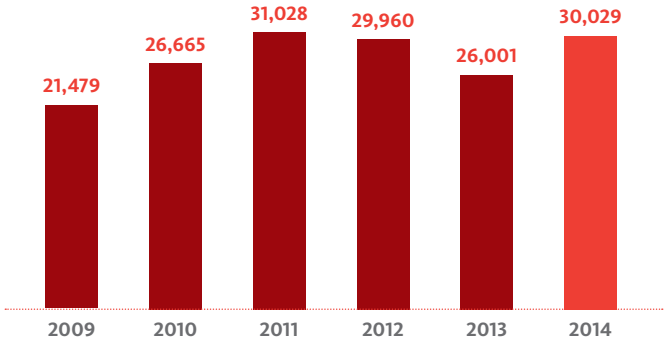
Risk training activities

Santander has risk schools whose objectives are to help to consolidate the risk management culture in the Bank, and guarantee the training and development of all risk professionals with the same criteria, as well participation in other schools to disseminate risk culture in their different practical aspects of application in businesses.

The corporate risk school, which gave a total of 30,029 hours of training to 9,254 employees in 2014 in 87 activities, is a key element for enhancing Santander's leadership in this sphere, continuously strengthening the skills of executives and employees.

The focus in 2014 was operational risk, with the development of a training programme for all employees which included training actions for different levels of the Bank. This explains the increase in the number of employees (from 3,778 in 2013 to 9,254 in 2014) who attended the corporate risk school.

Training hours



Furthermore, the risks corporate school trains professionals from other business areas, particularly retail banking, so as to align the demanding risk management criteria to business goals.

5. Risk environment

As a result of the environment in which Banco Santander operates, there are different potential risks that could threaten the development of business and meeting the Group's strategic objectives. The risk division identifies and assesses these risks and presents them regularly for analysis to senior management and the board, which take the opportune measures to mitigate and control them. The main focuses of risk are:

- **Macroeconomic environment:** at the end of 2014, the main sources of macroeconomic uncertainty were:
  - **Economic slowdown** in Europe.
  - The **adjustment** to the **Chinese economy**, which could impact emerging as well and developed markets.
  - **Change in the US interest rate scenario** and its possible impact on emerging markets (flight to quality).
  - **Evolution of commodity prices** and their possible impact on various economies.

  Banco Santander's business model, based on geographic diversification and a customer-focused bank, strengthens the stability of results in the face of macroeconomic uncertainty, ensuring a medium-low profile.

  The Group uses techniques of scenario analysis and stress tests to analyse the possible evolution of macroeconomic indicators and their impact on the income statement, capital and liquidity. These analyses are incorporated to risk management when planning capital (section 12.3), risk appetite (section 4.4) and risk management of the different types of risk (section 6.5.2 on credit, 7.2.1.6. on market and 8.2.2. on liquidity).

- **Competitive environment:** the financial industry has undergone in the last few years a process of restructuring and consolidation that could still continue in the coming years. These movements are changing the competitive environment, as a result of which senior management continuously monitors the competitive environment, reviewing the Bank's business and strategic plan. The risk division ensures that the changes in the plans are compatible with the risk appetite limits.

- **Regulatory environment:** a regulatory environment for the financial industry more demanding in capital and liquidity has been shaped in the last few years, as well as a greater supervisory focus on risk management and business processes.

  In this line the Single Supervisory Mechanism came into force in November 2014. Previously, during 2014, the European Central Bank, in coordination with the European Banking Authority, conducted a global evaluation to enhance the transparency, control and credibility of European banks (see more detail in section 1 of this chapter). This context will mark the regulatory environment of the coming months. Of note are the following aspects:

  - The entry into force of joint supervisory teams, formed from teams from the relevant national authorities and the European Central Bank.
  - The gradual harmonisation of criteria, concepts, authorisation procedures, etc, seeking an homogenisation that equals the regulation and supervision that affects European banks.
  - In the same line, supervision of all European banks under a common methodology: the Supervisory Review and Evaluation Process (SREP).
  - The importance of the relations established between the Single Supervisory Mechanism and the rest of supervisors in countries where the Group operates, through supervisory colleges and the signing of memories of understanding with them.

The Bank is attaching greater priority to these issues by permanently monitoring the changes in the regulatory environment, which enables it to rapidly adapt to the new requirements. The Group is strengthening teams in all spheres of its activity in order to comply with the supervisors' requirements.

The Group also has a coordination mechanism, fostered and backed by the board and senior management, among the different management areas and countries, in order to ensure a consistent response at Group level and implement the best practices in managing projects with regulatory impact.

Of note, among others, are the projects in order to adjust to:

- The requirements of the Basel capital regulations which have been transposed in most countries where the Group operates, particularly in Europe via the CRR/CRD IV.
- The international standards on risk data aggregation (RDA).
- The US Volcker rule that limits the own account operations that banks can carry out.
- The European investor protection rule (MIFID II) which strengthens the requirements related to the functioning of securities markets and marketing of financial products.

- **Non-financial and transversal risks** (operational, conduct, reputational, strategic, etc): these risks are assumin increasing importance because of the attention paid to them by regulators and supervisors, which see in them a reflection of the way banks behave toward their stakeholders (employees, clients, shareholders, investors and social agents). Of particular note in the financial industry are:

  - With operational risk, **cyber risk** or the risk of suffering attacks by third parties on the Bank's IT systems, which could alter the integrity of the information or normal development of operations. The Bank has been strengthening in the last few years its computer security system and continues to invest in this area in the face of potential threats (for more detail see section 9).

  - **Conduct risk:** in the last few years there has been a growing tightening of regulations regarding the treatment that banks must provide to their customers, These changes in regulations and their application could entail an impact for banks involving potential judicial demands or fines by supervisors as well as the necessary changes to processes and structure that must be carried out to comply with the new standards.

    Banco Santander is strengthening control of this risk and has launched a global plan to improve the marketing of investment products and analysis of the costs incurred (paid or provisioned) as a result of compensation to clients and sanctions.

  - In line with the regulatory recommendations in the corporate governance sphere, the board agreed to appoint an executive vice-chairman to whom the compliance function reports.

    More information is available in the section on compliance, conduct and reputational risk in this report.

6. Credit risk

6.0. Organization of the section

After an **introduction** to the concept of credit risk and the segmentation that the Group uses for its treatment, the **main magnitudes** of 2014 and their evolution are presented (pages 194-202).

This is followed by a look at the **main countries**, setting out the main features from the credit risk standpoint (pages 203-210).

The qualitative and quantitative aspects of **other credit risk matters** are then presented, including information on financial markets, risk concentration, country risk, sovereign risk and environmental risk (pages 210-217).

Lastly, there is a description of the Group's **credit risk cycle**, with a detailed explanation of the various stages that form part of the phases of pre-sale, and post-sale, as well as the main credit risk metrics (pages 218-222).

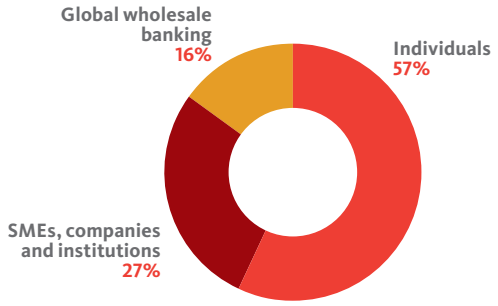
6.1. Introduction to the treatment of credit risk

Credit risk arises from the possibility of losses stemming from the failure of clients or counterparties to meet their financial obligations with the Group.

The Group's risks function is organised on the basis of three types of customers:

- The segment of **individuals** includes all physical persons, except those with a business activity. This segment, in turn, is divided into sub segments by income levels, which enables risk management adjusted to the type of client.
- The segment of **SMEs, companies and institutions** includes companies and physical persons with business activity. It also includes public sector activities in general and non-profit making private sector entities.
- The segment of **global wholesale banking** consists of corporate clients, financial institutions and sovereigns, who comprise a closed list revised annually. This list is determined on the basis of a full analysis of the company (business, countries where it operates, types of product used, volume of revenues it represents for the bank, length of relation with the client, etc).

The following chart shows the distribution of credit risk on the basis of the management model.



The Group's risk profile is mainly retail, accounting for 84% of total risk generated by the retail banking business.

6.2. Main magnitudes and evolution

6.2.1. Global map of credit risk, 2014

The table below sets out the global credit risk exposure in nominal amounts (except for derivatives and repos exposure which is expressed in equivalent credit) at December 31, 2014.

Grupo Santander - Gross exposure to credit risk classified in accordance with legal company criteria

Million euros. Data at 31 December 2014

	Credit to customers		Credit to entities[2]		Fixed income[3]		Derivatives and repos	
	Outstanding[1]	Commitments	Outstanding	Commitments	Sovereign	Private	REC[4]	Total
Continental Europe	**308,089**	**65,637**	**19,892**	**2,353**	**48,726**	**12,183**	**23,671**	**480,551**
Spain	198,175	53,326	14,506	2,219	37,256	7,713	20,032	**333,227**
Germany	30,896	592	1,191	-	-	233	18	**32,929**
Portugal	26,411	4,377	862	104	5,637	3,616	2,748	**43,754**
Others	52,608	7,342	3,333	30	5,833	622	873	**70,641**
United Kingdom	**250,921**	**42,153**	**28,633**	**-**	**6,078**	**6,883**	**14,501**	**349,169**
Latin America	**156,587**	**43,986**	**21,397**	**19**	**25,283**	**6,152**	**11,035**	**264,459**
Brazil	86,892	30,594	12,344	18	17,892	4,940	7,851	**160,532**
Chile	33,291	7,460	1,360	0	1,396	844	1,733	**46,084**
Mexico	27,198	5,685	4,395	-	4,621	341	1,399	**43,639**
Others	9,206	248	3,298	-	1,374	27	52	**14,204**
United States	**73,664**	**28,709**	**7,319**	**69**	**5,159**	**8,038**	**800**	**123,758**
Rest of world	**351**	**30**	**68**	**-**	**-**	**2**	**-**	**450**
Total Group	**789,613**	**180,515**	**77,308**	**2,440**	**85,246**	**33,258**	**50,007**	**1,218,387**
% of total	64.8%	14.8%	6.3%	0.2%	7.0%	2.7%	4.1%	**100.0%**
% change/Dec 13	10.9%	16.7%	-17.9%	28.5%	46.3%	9.8%	-14.4%	**9.8%**

Evolution of gross exposure to credit risk

Million euros

	2014	2013	2012	Var.s/13	Var.s/12
Continental Europe	**480,551**	**473,267**	**540,435**	**1.5%**	**-11.1%**
Spain	333,227	327,900	396,474	1.6%	-16.0%
Germany	32,929	33,481	40,659	-1.6%	-19.0%
Portugal	43,754	41,013	39,243	6.7%	11.5%
Others	70,641	70,872	64,059	-0.3%	10.3%
United Kingdom	**349,169**	**320,571**	**344,413**	**8.9%**	**1.4%**
Latin America	**264,459**	**241,592**	**266,304**	**9.5%**	**-0.7%**
Brazil	160,532	141,119	163,915	13.8%	-2.1%
Chile	46,084	44,147	46,722	4.4%	-1.4%
Mexico	43,639	39,066	37,836	11.7%	15.3%
Others	14,204	17,260	17,832	-17.7%	-20.3%
United States	**123,758**	**73,945**	**79,707**	**67.4%**	**55.3%**
Rest of world	**450**	**265**	**539**	**69.9%**	**-16.4%**
Total Group	**1,218,387**	**1,109,640**	**1,231,398**	**9.8%**	**-1.1%**

1. Balances with customers include contingent risks (see the auditor's report and annual consolidates statements, note 35) and exclude Repos (1,639 million euros) and other customer financial assets (12,832 million euros).
2. Balances with credit entities and central banks include contingent risks and exclude repos, the trading portfolio and other financial assets.
3. Total fixed income excludes the trading portfolio.
4. ECR (equivalent credit risk: net value of replacement plus the maximum potential value. Includes mitigants).

The gross credit exposure (customer loans, entities, fixed income, derivatives and repos) in 2014 was EUR 1,218,387 million, most of it with customers and credit entities (86% of the total).

Risk is diversified among the main regions where the Group operates: Continental Europe (39%), UK (29%), Latin America (22%) and the US (10%).

Credit risk exposure rose 9.8% in 2014, largely due to the combined impact of the increase in lending in UK, Brazil, the US and Spain.

Excluding the exchange-rate impact of the main currencies against the euro, the exposure increased 5% in 2014.

There were various **changes in** 2014 **in the Group's perimeter** of gross credit exposure. Of note was the incorporation of SCUSA, as well as the acquisitions of the portfolio of GE Nordics and Financiera El Corte Inglés (FECI) in the sphere of Santander Consumer Finance, The SCUSA portfolio was integrated globally into the Group, with a coverage ratio of 296%. The main line of business in SCUSA is auto finance, distinguishing between core auto (loans generated via intermediaries) and Chrysler Capital (operations granted via Chrysler dealers and financing of commercial fleets). The acquisition of GE Nordics consolidated the commitment to growth in the business of direct consumer finance in the northern part of Europe, incorporating a portfolio that at the end of 2014 had a coverage ratio of 82%. The agreement with FECI increases the customer base with growth potential (coverage ratio of 109%).

6.2.2. Performance of magnitudes in 2014

The table below sets out the main items related to credit risk derived from our activity with customers.

Grupo Santander -risk, NPLs, coverage, provisions and cost of credit*

Data at 31 December

	Credit risk with customers[2] (million euros)			Non-performing loans (million euros)			NPL ratio (%)		
	2014	2013	2012	2014	2013	2012	2014	2013	2012
Continental Europe	**308,205**	**312,167**	**332,261**	**27,514**	**28,496**	**20,904**	**8.93**	**9.13**	**6.29**
Spain	182,974	189,783	210,536	13,512	14,223	8,093	7.38	7.49	3.84
Santander Consumer Finance[1]	63,654	58,628	59,387	3,067	2,351	2,315	4.82	4.01	3.90
Portugal	25,588	26,810	28,188	2,275	2,177	1,849	8.89	8.12	6.56
Poland	18,920	18,101	10,601	1,405	1,419	500	7.42	7.84	4.72
United Kingdom	**256,337**	**235,627**	**254,066**	**4,590**	**4,663**	**5,202**	**1.79**	**1.98**	**2.05**
Latin America	**167,065**	**146,956**	**155,846**	**7,767**	**7,342**	**8,369**	**4.65**	**5.00**	**5.37**
Brazil	90,572	79,216	89,142	4,572	4,469	6,113	5.05	5.64	6.86
Mexico	27,893	24,024	22,038	1,071	878	428	3.84	3.66	1.94
Chile	33,514	31,645	32,697	1,999	1,872	1,691	5.97	5.91	5.17
Argentina	5,703	5,283	5,378	92	75	92	1.61	1.42	1.71
United States	**72,477**	**44,372**	**49,245**	**1,838**	**1,151**	**1,351**	**2.54**	**2.60**	**2.74**
Puerto Rico	3,871	4,023	4,567	288	253	326	7.45	6.29	7.14
Santander Bank	45,825	40,349	44,678	647	898	1,025	1.41	2.23	2.29
SC USA	22,782	—	—	903	—	—	3.97	—	—
Total Group	**804,084**	**738,558**	**793,448**	**41,709**	**41,652**	**36,061**	**5.19**	**5.64**	**4.54**

	Coverage ratio (%)			Spec. provs. net of recovered write-offs[3] (million euros)			Credit cost (% of risk)[4]		
	2014	2013	2012	2014	2013	2012	2014	2013	2012
Continental Europe	**57.2**	**57.3**	**73.0**	**2,880**	**3,603**	**4,104**	**1.02**	**1.23**	**3.16**
Spain	45.5	44.0	50.0	1,745	2,411	2,473	1.06	1.38	1.34
Santander Consumer Finance[1]	100.1	105.3	109.5	544	565	753	0.90	0.96	1.27
Portugal	51.8	50.0	53.1	124	192	393	0.50	0.73	1.40
Poland	60.3	61.8	68.0	186	167	112	1.04	1.01	1.00
United Kingdom	**41.9**	**41.6**	**44.1**	**332**	**580**	**806**	**0.14**	**0.24**	**0.30**
Latin America	**84.7**	**85.4**	**87.5**	**5,119**	**6,435**	**7,300**	**3.56**	**4.43**	**4.93**
Brazil	95.4	95.1	90.2	3,682	4,894	6,124	4.84	6.34	7.38
Mexico	86.1	97.5	157.3	756	801	466	2.98	3.47	2.23
Chile	52.4	51.1	57.7	521	597	573	1.75	1.92	1.90
Argentina	143.3	140.4	143.3	121	119	108	2.54	2.12	2.05
United States	**192.8**	**86.6**	**95.3**	**2,233**	**43**	**345**	**3.45**	**0.00**	**0.72**
Puerto Rico	55.6	61.6	62.0	55	48	81	1.43	1.13	1.80
Santander Bank	109.4	93.6	105.9	26	(5)	265	0.06	(0.01)	0.61
SC USA	296.2	—	—	2,152	—	—	10.76	—	—
Total Group	**67.2**	**61.7**	**72.4**	**10,562**	**10,863**	**12,640**	**1.43**	**1.53**	**2.38**

* 2013 excludes SCUSA.

1. SCF includes GE Nordics in the 2014 figures.
2. Includes gross loans to customers, guarantees and documentary credits.
3. Bad debts recovered (EUR 1,336 million).
4. Cost of credit= loan-loss provisions 12 months/average lending.

At the end of 2014, credit risk with customers was 9% higher. This growth occurred in all countries except for Spain (although taking into account just customer loans, there was slight growth), Portugal and Puerto Rico. These levels of lending, together with non-performing loans (NPLs) of EUR 41,709 million (-1.4%) reduced the Group's NPL ratio to 5.19% (-45 b.p.).

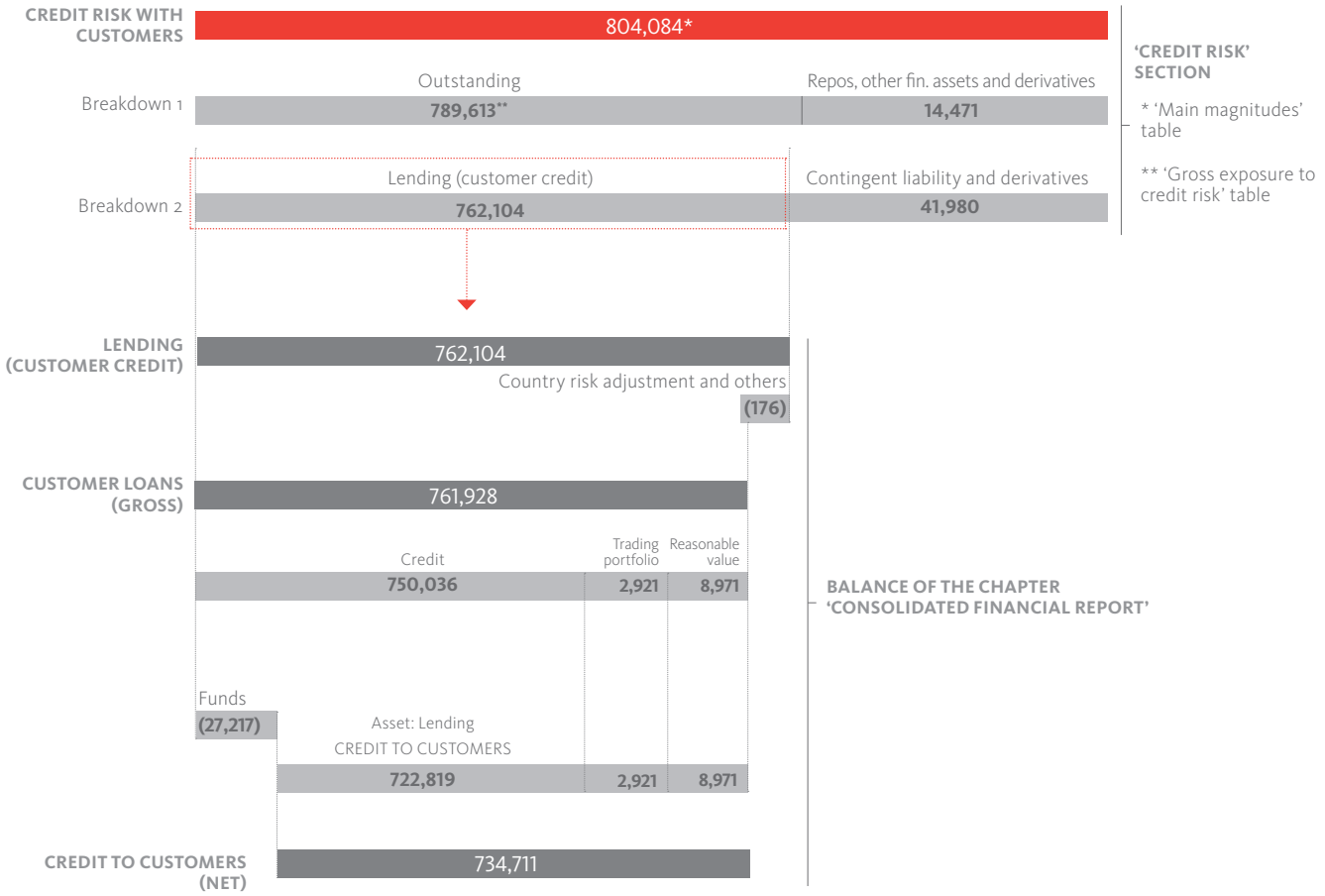
For coverage of these NPLs, the Group recorded net credit losses of EUR 10,562 million (-3%), after deducting write-off recoveries. This decline is materialised in a fall in the cost of credit to 1.43% (10 b.p. less than in 2013).

Total loan-loss provisions were EUR 28,046 million, bringing the Group's coverage ratio to 67%. It is important to bear in mind that this ratio is affected downwards by the weight of mortgage portfolios (particularly in the UK and Spain), which require fewer provisions as they have collateral.

Conciliation of the main magnitudes

The consolidated financial report details the portfolio of customer loans, both gross and net of funds. The following chart shows the relation between the concepts that comprise these magnitudes.

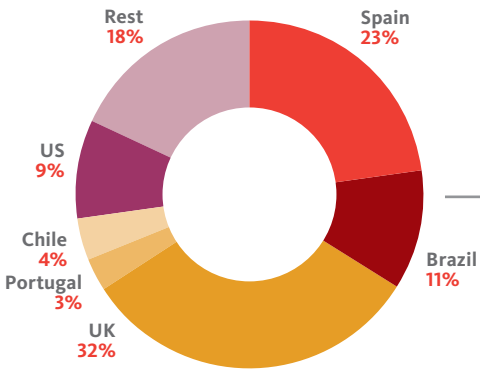
Figures in million euros

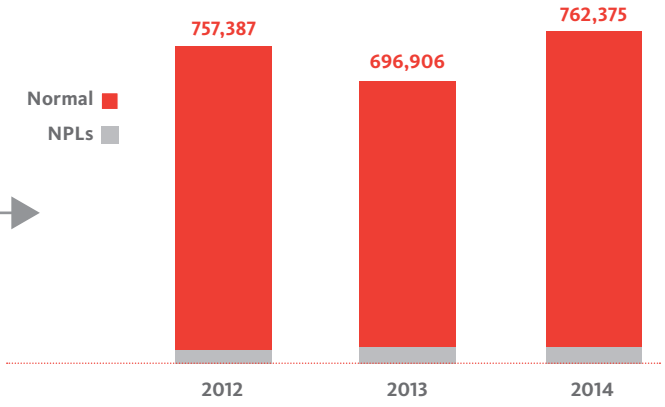


Geographic distribution and segmentation
On the basis of the aforementioned segmentation, the geographic distribution and situation of the portfolio is shown in the following charts. The distribution is as follows:

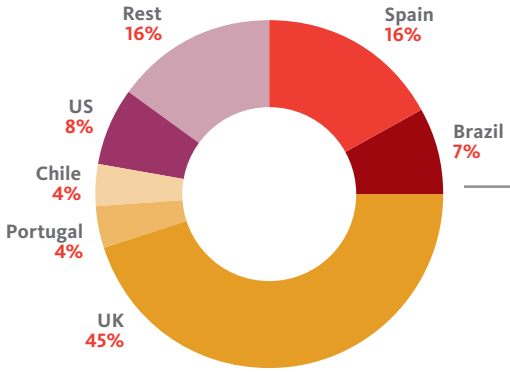
Million euros

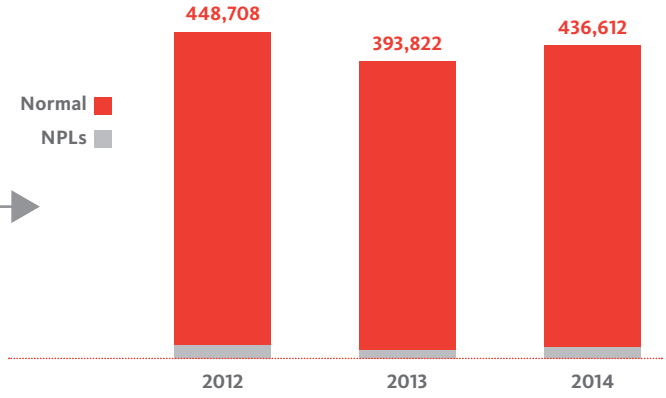
Total



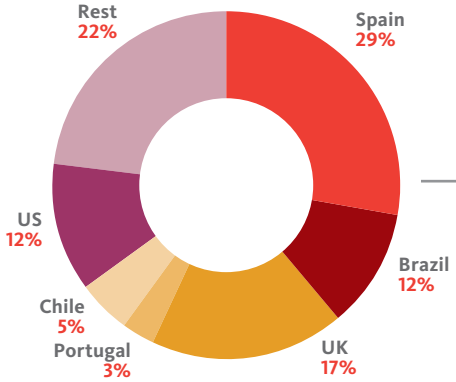


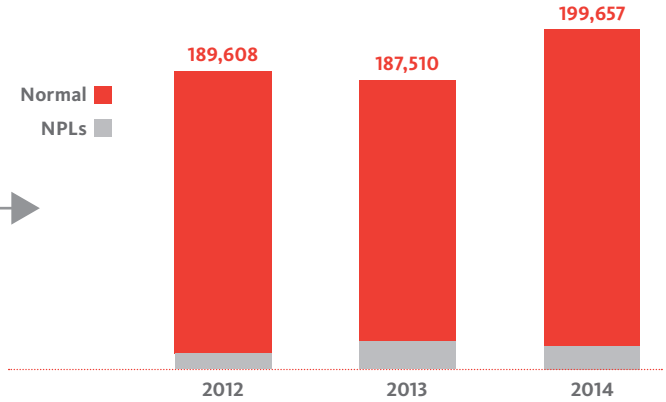
Individuals



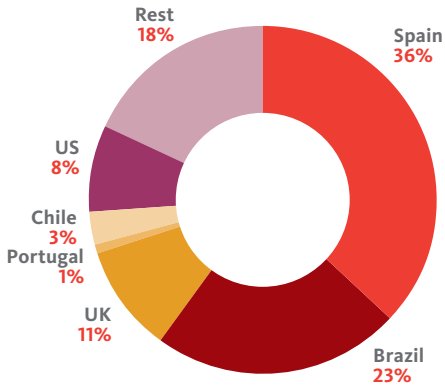


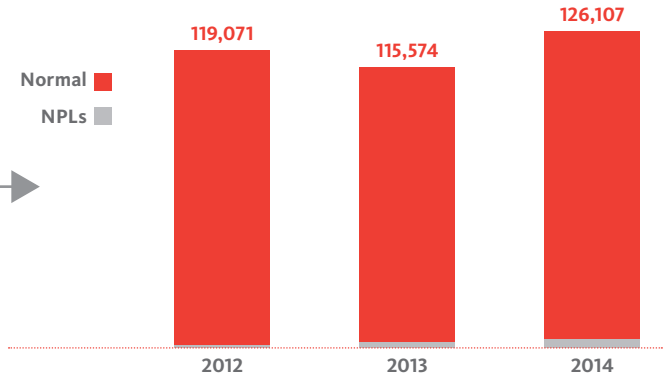
SME+Comp+Inst





Global wholesale





The structure of the main magnitudes by geographic area :

- **Continental Europe**
  - **Spain's** NPL ratio[3] was 7.38%, (11 b.p. lower than in 2013), despite the reduction in the denominator and due to the favourable evolution of NPLs, mainly at companies. The coverage ratio increased to 46%.
  - **Portugal** ended the year with a higher NPL ratio (8.89%). The ratio was partly affected by the decline in lending, in line with the financial system's deleveraging process. The coverage ratio rose by 2 p.p. to 52%.
  - **Poland's** NPL ratio fell to 7.42% (42 b.p. less than in 2013), and is on a path of normalisation after the rise in 2013 following the integration of Kredyt Bank.The coverage ratio was 60%.
  - **Santander Consumer's** NPL ratio, after the increase in the perimeter, was 4.82%, with a good general performance of portfolios in all countries. The coverage ratio was 100%.
- The **UK**[4] reduced its NPL ratio to 1.79% (-19 b.p.), due to the good performance in all segments, particularly retail and especially the mortgage portfolio. The coverage ratio increased to 42% (0.3 p.p. more than 2013).
- **Brazil's** NPL ratio[5] fell to 5.05% (-59b.p.), with a positive performance in most portfolios. The coverage ratio was 95%.
- **Chile** increased its NPL ratio to 5.97% (+ 6 b.p.), although the portfolio's risk premium came down. The coverage ratio was 52%. (+ 1.3 p.p.) Lending grew 6%.
- **Mexico's** NPL ratio increased to 3.84% (+ 18 b.p.), mainly affected by the greater regulatory requirements in the country's financial system and a macroeconomic environment less favourable than envisaged. The coverage ratio dropped to 86% (-11 p.p.).
- The **United States'** NPL ratio declined to 2.54% (-6 b.p.) and the coverage ratio rose to 193% (+106 p.p.).
  - The NPL ratio at Santander Bank was 1.41% (-82 b.p.), as a result of the good performance of the retail and company portfolios, while the coverage ratio was higher at 109%.
  - SCUSA's cost of credit was 10.76%. The high rotation of the portfolio and the unit's active credit management brought the NPL ratio to 3.97% and the coverage ratio increased to 296%.
  - Puerto Rico's NPL ratio increased to 7.45% and the coverage ratio dropped to 56%.

Portfolio in normal situation: matured amounts pending collection

The amounts matured pending collection of three months or less represented 0.42% of total credit risk with customers. The following table shows the structure at December 31 2014, classified on the basis of the maturity of the first maturity:

Matured amounts pending

Million euros. Data at 31 December 2014

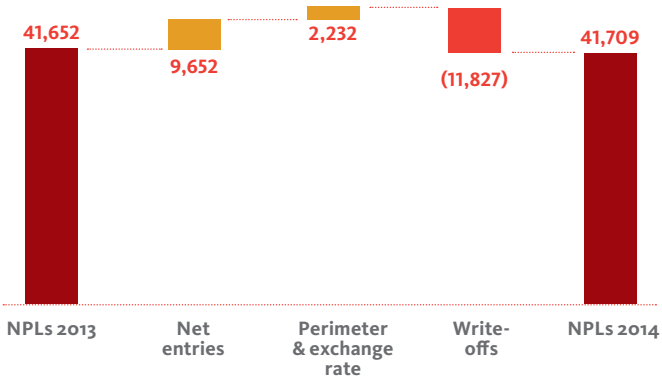
	Less than 1 month	1-2 months	2-3 months
Deposits in credit entities	5	-	3
Customer loans	**2,222**	**710**	**406**
Public administrations	8	0	0
Other private sectors	2,215	710	406
Securities representing debt	-	-	-
Total	**2,228**	**710**	**409**

Doubtful loans and provisions: performance and structure

The table below shows the performance of doubtful balances by the concepts that comprise them:

Evolution of non-performing loans by the concepts that comprise them

Million euros



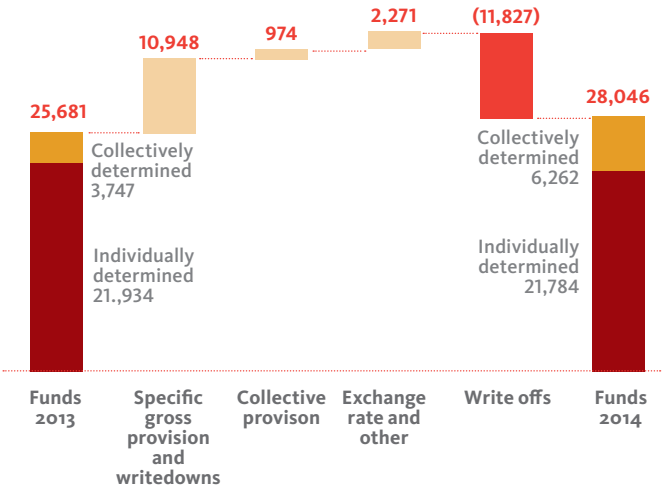
2012-2014 Evolution

	2012	2013	2014
NPLs (start of he period)	**32,006**	**36,061**	**41,652**
Entries	16,538	17,596	9,652
Perimeter	(628)	743	497
Exchange rate and other	(491)	(2,122)	1,734
Write-offs	(11,364)	(10,626)	(11,827)
NPLs (end of period)	**36,061**	**41,652**	**41,709**

3. Excluding run-off real estate activity. More detail at 6.3.2. Spain.
4. More detail at 6.3.1. United Kingdom
5. More detail at 6.3.3. Brazil

Evolution of funds by the concepts that comprise them

Million euros. Data at 31 December 2014



Performance 2012-2014

	2012	2013	2014
Funds (start of period)	**19,531**	**26,111**	**25,681**
Collectively determined	4,058	4,319	3,747
Individually determined	15,474	21,793	21,934
Gross allocation determined individually and writedowns	**19,508**	**12,335**	**10,948**
Allocation	13,869	12,140	10,948
Writedowns	5,639	195	—
Capital gains	**358**	**(212)**	**974**
Exchange rate and other	**(1,939)**	**(1,928)**	**2,271**
Write-offs	**(11,347)**	**(10,626)**	**(11,827)**
Funds (end of period)	**26,111**	**25,681**	**28,046**

Forbearance portfolio

The term forbearance portfolio refers for the purposes of the Group's risk management to operations which the client has presented, or financial difficulties are envisaged for meeting payment obligations in the prevailing contractual terms and, for this reason, steps were taken to modify, cancel or even formalise a new transaction.

Grupo Santander has a detailed corporate policy for forbearance which acts as a reference in the various local transpositions of all the financial institutions that form part of the Group, and share the general principles established in Bank of Spain circular 6/2012 and the technical criteria published in 2014 by the European Banking Authority, developing them in a more granular way on the basis of the level of deterioration of clients.

This corporate policy sets rigorous criteria of prudence for assessing these risks:

- There must be restrictive use of restructurings, avoiding actions that delay recognising deterioration.
- The main aim must be to recover all the amounts owed, which entails recognising as soon as possible the amounts that it is estimated cannot be recovered.
- The restructuring must always envisage maintaining the existing guarantees and, if possible, improving them. Effective guarantees not only serve to mitigate the severity, but also can reduce the probability of default.
- This practice must not involve granting additional financing to the client, serve to refinance the debt of other banks, or be used as an instrument of cross-selling.
- It is necessary to assess all the forbearance alternatives and their effects, ensuring that the results would be better than those likely to be achieved in the event of not doing it.
- Severer criteria are applied for the classification of forbearance operations which prudently ensure the re-establishment of the client's payment capacity, from the moment of forbearance and for an adequate period of time.
- In addition, in the case of clients assigned a risk analyst, individualised analysis of each case is particularly important, both for their correct identification as well as subsequent classification, monitoring and adequate provisions.

The policy also establishes various criteria related to determining the perimeter of operations considered as forbearance, through defining a detailed series of objective indicators that enable situations of financial difficulty to be identified.

In this way, operations not classified as doubtful at the date of forbearance are generally considered as being in financial difficulties if at this date non-payment exceeds a month. If there is no non-payment or if this does not exceed the month of maturity, other indicators are taken into account including:

- Operations of clients who already have problems with other transactions.
- When the modification is made necessary prematurely, without there yet existing a previous and satisfactory experience with the client.
- In the event that the necessary modifications involve granting special conditions such as the need to have to establish a temporary grace period in the payment or, when these new conditions are regarded as more favourable for the client than those granted in an ordinary admission.
- Request for successive modifications over an unreasonable period of time.

- In any case, once the modification is made, if any irregularity arises in the payment during an established period of observation, even if there are no other symptoms, the operation will be considered within the perimeter of forbearance (backtesting).

As soon as it is determined that the reasons giving rise to the modification are due to financial difficulties, two types of forbearance are distinguished for management purposes on the basis of the management situation of these operations in origin: ex ante forbearance when the original operation is considered a doubtful risk and ex post forbearance when arising from a doubtful situation.

In addition, within ex post forbearance treatments applicable for cases of advanced deterioration are distinguished, whose requirements and classification criteria are even more severe than for the rest of forbearance.

Once the forbearance is done, those operations that remain classified as doubtful risk for not meeting at the time of forbearance the requirements for their reclassification to another category, must fulfil a schedule of prudent payments in order to ensure with reasonable certainty that the client has recovered his payment capacity.

If there is any irregularity (non-technical) in payments during this period, the observation period is begun again.

Once this period is over, conditioned by the customer's situation and by the operation's features (maturity and guarantees granted), the operation is no longer considered doubtful, although it remains subject to a test period with special monitoring.

This tracking is maintained as long as a series of requirements are not met, including: a minimum period of observation, amortisation of a substantial percentage of the amounts pending and having met the unpaid amounts at the time of forbearance.

The forbearance of a doubtful operation, regardless of whether, as a result of it, the transaction remains current in payment, does not modify the date of non-payment considered for determining the provisions. At the same time, the forbearance of a doubtful operation does not give rise to any release of the corresponding provisions.

The total volume of forbearance stood at EUR 56,703 million at the end of 2014 (7% of the Group's total customer loans), with the following structure [6]:

Million euros

			Risk	
	Non-doubtful	**Doubtful**	**Total**	
	Amount	Amount	Amount	% spec. cov.
Total	**33,135**	**23,568**	**56,703**	**21%**

On a like-for-like basis with 2013, the Group's level of forbearance declined 6% (-EUR 3,229 million), continuing the reduction of the previous year.

As regards loan classification, 58% is non-doubtful. Of note is the high level of guarantees (75% with real guarantees) and adequate coverage through specific provisions (21% of the total forbearance portfolio and 45% of the doubtful portfolio).

Management metrics[7]

Credit risk management uses other metrics to those already commented on, particularly management of non-performing loans variation plus net write-offs (known in Spanish as VMG) and expected loss. Both enable risk managers to form a complete idea of the portfolio's evolution and future prospects.

Unlike non-performing loans, the **VMG** refers to the total portfolio deteriorated over a period of time, regardless of the situation in which it finds itself (doubtful loans and write-offs). This makes the metric a main driver when it comes to establishing measures to manage the portfolio.

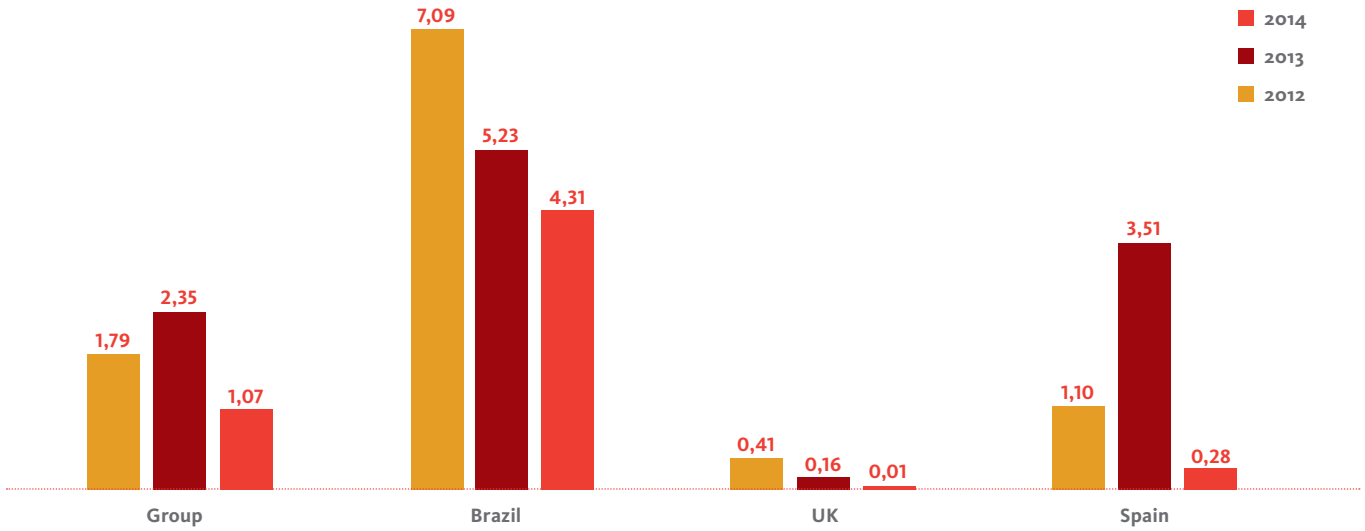
6. The figures of the non-doubtful portfolio include the portfolio in normal and substandard classification of Bank of Spain circular 4/04. For more detail, see note 54 of the auditor's report and annual financial statements.

7. For more detail on these metrics see 6.5.5. measurement and control, in this section.

The VMG is frequently considered in relation to the average loan that generated them, giving rise to what is known as the **risk premium**, whose evolution can be seen below.

Risk premium (Change in doubtful loans plus net write-offs over average balances)

%. Figures at constant exchange rates



The Group's risk premium dropped sharply, in a context of growth in lending.

Unlike the loss incurred, used by the Group to estimate loan-loss provisions, **the expected loss** is the estimate of the economic loss which will occur during the following year in the existing portfolio at a given moment. Its forward-looking component complements the view provided by the VMG when analysing the portfolio and its evolution.

The expected loss reflects the portfolio's features as regards the exposure at default (EaD), the probability of default (PD) and the severity or recovery once the default occurs (loss given default, LGD).

The table below sets out the distribution by segments in terms of EaD, PD and LGD. For example, it can be seen how the consideration of the LGD in the metrics makes the portfolios with mortgage guarantee generally produce a lower expected loss, fruit of the recovery that occurs in the event of a default via the mortgaged property.

The expected loss with clients of the portfolio in normal situation is 1.01% (down from 1.20% in 2013) and 0.82% for the whole of the Group's credit exposure (0.98% in 2013), which underscores the medium-low risk profile assumed.

Segmentation of the credit risk exposure

Segment	EAD[1]	%	Average PD	Average LGD	Expected loss
Sovereign debt	150,890	14.3%	0.02%	46.90%	0.01%
Banks and other fin. instit.	64,271	6.1%	0.32%	51.81%	0.17%
Public sector	21,150	2.0%	1.87%	8.29%	0.16%
Corporate	149,339	14.2%	0.61%	32.48%	0.20%
SMEs	156,424	14.8%	3.15%	38.60%	1.22%
Individual mortgages	325,181	30.8%	2.60%	8.46%	0.22%
Consumer credit (individuals)	125,580	11.9%	6.59%	52.61%	3.47%
Credit cards (individuals)	42,499	4.0%	3.49%	63.58%	2.22%
Other assets	19,849	1.9%	3.05%	50.08%	1.52%
Memorandum item[2]	*820,173*	*77.7%*	*2.98%*	*33.73%*	*1.01%*
Total	**1,055,182**	**100.0%**	**2.40%**	**34.28%**	**0.82%**

Data at December 2014.

1. Excludes doubtful loans.

2. Excludes sovereign debt, banks and other financial institutions and other assets.

6.3. Detail of the main countries

The portfolios with the largest concentration of risk are set out below, based on the figures in 6.2.2. Performance of magnitudes in 2014.

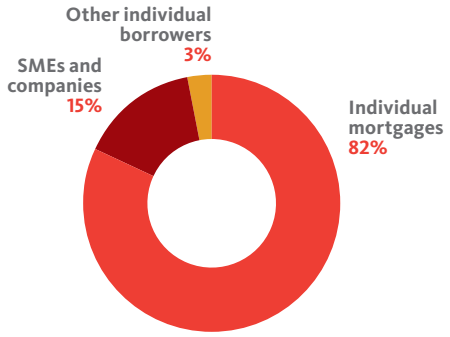
6.3.1. United Kingdom

6.3.1.1. General view of the portfolio

Santander UK's total outstanding was EUR 256,337 million at the end of 2014 (32% of the Group's total), with the following distribution by segments:

Segmentation of the portfolio

%



6.3.1.2. Mortgage portfolio

Because of its importance not just for Santander UK but for all of the Group's outstanding, it is worth highlighting the mortgages' portfolio, which stood at EUR 193,048 million at the end of 2014.

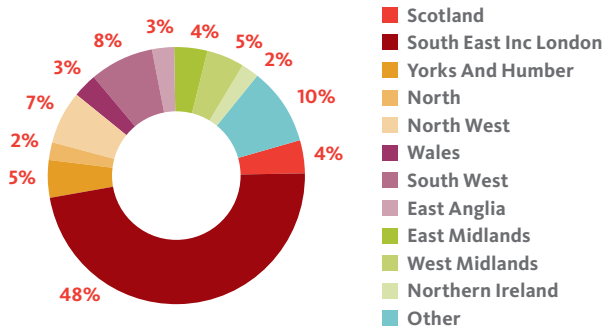
This portfolio consists of mortgages for acquisition or reforming homes, granted to new as well as existing clients and always constituting the first mortgage. There are no operations that entail second or successive charges on mortgaged properties.

The mortgaged property must always be located within UK territory, regardless of the destiny of the financing except in the case of some one-off operations in the Isle of Man. Mortgages can be granted for properties outside the UK, but the collateral for such mortgages must consists of a property in the UK.

Most of the credit exposure is in the south east of the UK, and particularly in the metropolitan area of London, where housing prices are more stable even during periods of economic slowdown.

Geographic concentration

%



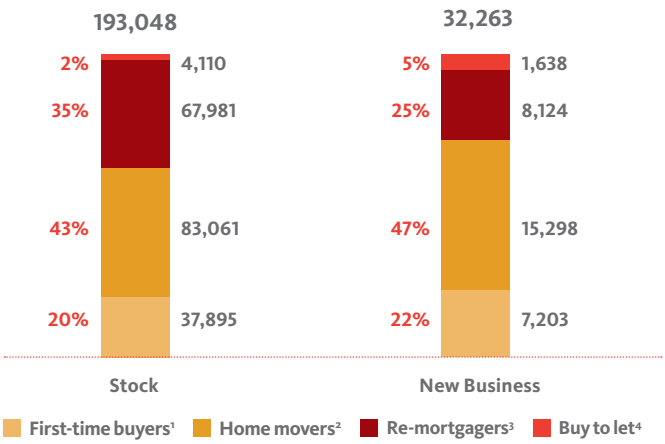
All the properties are valued independently before each new operation is approved, in accordance with the Group's risk management principles.

Mortgages that have already been granted are subject to a quarterly updating of the value of the property in guarantee, by an independent agency, using an automatic valuation system in accordance with the market's usual practices and in compliance with prevailing legislation.

The distribution of the portfolio by type of borrowers is shown in the chart below:

Typology of loans of the mortgage portfolio

Million euros



1. *First time buyer*: clients who acquire a home for the first time.
2. *Home mover*: clients who change home, with or without changing the bank that granted the loan.
3. *Remortgage*: clients who transfer the mortgage from another bank.
4. *Buy to let*: Homes acquired with the purpose of renting them out.

There are varies types of products with different risk profiles, all of them subject to the limits inherent in the policies of a prime lender such as Santander UK. The features of some of them (in brackets the percentage of the portfolio of UK mortgages they represent):

- Interest only loans (41.1%)*: The customer pays every month the interest and amortises the capital at maturity. An appropriate repayment vehicle such as a pension plan, mutual funds, etc is needed. This is a regular product in the UK market for which

* Percentage calculated on the total or some component of interest only.

Santander UK applies restrictive policies in order to mitigate the risks inherent in it. For example, maximum LTV of 50%, higher cut-off in the admission score or the evaluation of the payment capacity simulating the amortization of capital and interest payments instead of just interest.

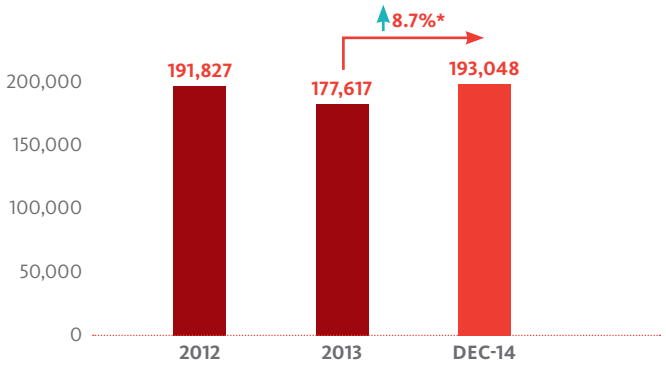
- Flexible loans (14.2%): This type of loan contractually enables the customer to modify the monthly payments or make additional provision of funds up to a pre-established limit, as well as having disbursements from previously paid amounts above that limit.

- Buy to Let (2.2%): Buy to let mortgages (purchase of a property to then rent it out) account for a small percentage of the total portfolio. Admission was halted between 2009 and 2013 when it was reactivated following the improvement in market conditions and approval with strict rick policies. In 2014, these mortgages represented around 5% of the total monthly admission.

The evolution of the mortgage portfolio over the last three years is shown below:

Evolution of the mortgage portfolio

Million euros

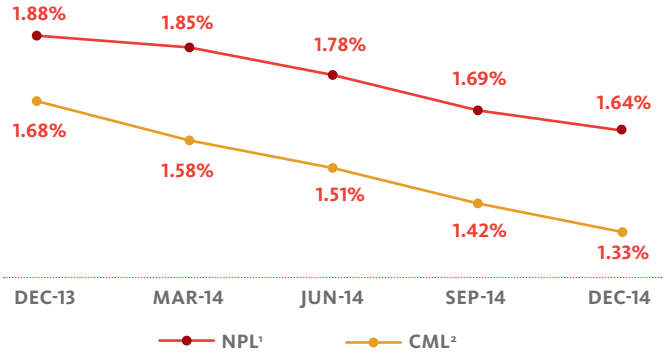


* Real growth, discounting the exchange rate impact, was 1.3%

There was slight growth of 1.3% (discounting the exchange rate impact) in 2014, accompanied by a favourable environment partly sustained by the UK government's help to buy scheme. This programme enables first residency buyers, as well as those who are already property owners, under a series of conditions, to acquire a home by contributing a minimum of 5% of its value and obtaining financing for the rest, The government guarantees lenders if the value of the property falls by up to 15%.

In 2014, as can be seen in the chart below, the NPL ratio of this portfolio dropped from 1.88% in 2013 to 1.64%, slightly above that of the UK banking industry as a whole, according to the Council of Mortgage Lenders (CML).

Evolution of the NPL ratio of the mortgage portfolio



1. Figures of Santander UK in accordance with the amount of the cases.
2. CML figures in accordance with the volume of cases.

The decline in the NPL ratio was sustained by the evolution of non-performing loans, which improved significantly thanks to a more favourable economic environment, as well as the increased NPL exits due to the improvements in the efficiency of the recovery teams. NPLs fell 11.9% to EUR 3,162 million (growth of 1.1% in 2013).

It is also necessary to point out the more conservative focus adopted in Santander UK's definition of a NPL, in line with the criteria set by the Bank of Spain and Grupo Santander, with regard to the standard applied in the UK market. This focus includes the classification as doubtful of the following operations:

- Clients with payment delays of between 30 and 90 days and who have been declared publically insolvent (via bankruptcy process) in the previous two years.

- Operations in which once the maturity date is reached there is still capital of the loan pending payment with a maturity of more than 90 days, although the client remains up to date with the monthly payments.

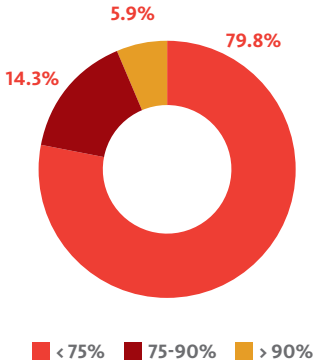
- Forbearance operations which, in accordance with the corporate policy, are considered as "payment agreements" and thus classified as doubtful.

Excluding these concepts, which are not included for calculating the NPL ratio in the UK market, and under which EUR 419 million were classified as NPLs at the end of 2014, the ratio of the mortgage portfolio was 1.42%, well below the aforementioned 1.64% and close to that published by the Council of Mortgage Lenders.

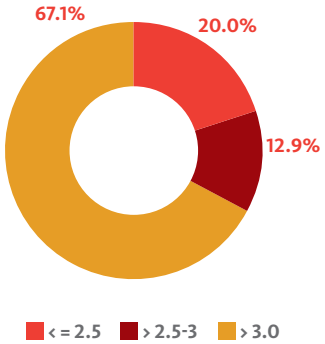
The strict credit policies limit the maximum loan-to-value (LTV) to 90% for those loans that amortize interest payments and capital, and to 50% for those that amortize interest regularly and the capital at maturity. Applying these policies enabled the simple arithmetic average LTV of the portfolio to be 47.2% and the average weighted LTV 42.8%. The proportion of the portfolio with a LTV of more than 100% was reduced to 2.4% from 4.4% in 2013.

The following charts show the LTV structure for the stock of residential mortgages and the distribution in terms of the income multiple of new loans in 2014:

Loan-to-Value (average 47,2%)[1]



Income multiple (average 2.9%)[2]



1. *Loan to value*: Relation between the amount of the loan and the appraised value of the property. Based on indices.
2. *Income multiple*: Relation between the total original amount of the mortgage and the customer's annual gross income declared in the loan request.

The credit risk policies explicitly forbid loans regarded as high risk (subprime mortgages) and establish demanding requirements for credit quality, both for operations and for clients. For example, as of 2009 mortgages with a loan-to-value of more than 100% have not been allowed.

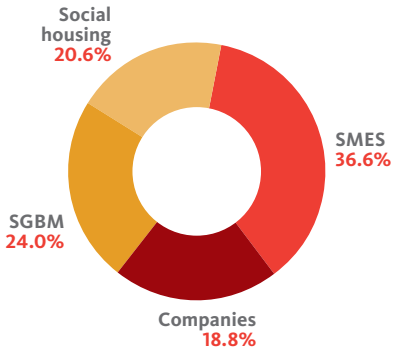
An additional indicator of the portfolio's good performance is the reduced volume of foreclosed properties, which in 2014 amounted to EUR 75 million, less than 0.1% of the total mortgage exposure. Efficient management of these cases and the existence of a dynamic market for this type of housing enables sales to take place in a short period of time (around 18 weeks on average), contributing to the good results.

6.3.1.3. SMEs and companiess

As shown in the chart on the segmentation of the portfolio at the beginning of this section, lending to SMEs and companies (EUR 47,674 million) represented 15.4% of the total at Santander UK.

The following sub-segments are included in these portfolios:

SMEs and company portfolio segments



SMEs: This segment includes those small firms which, from the risk management standpoint, are in the standardised model. Specifically, those belonging to the business lines of small business banking and regional business centres. Total outstanding at the end of 2014 was EUR 17,427 million, with a NPL ratio of 4.4% (5.9% at the start of the year).

Companies: This includes companies who have a risk analyst assigned. Also included are portfolios considered as not strategic (legacy and non-core). Outstanding at the end of 2014 was EUR 8,978 million, with a NPL ratio of 3.1% (3.6% at the start of the year).

SGBM: This includes companies under the risk management model of Global Wholesale Banking. Outstanding was EUR 11,457 million at the end of 2014 (NPL ratio of 0.03%).

Social housing: This includes lending to companies that build, sell and rent social housing. This segment is supported by local governments and the central government and has no NPLs. Outstanding stood at EUR 9,810 million at the end of 2014.

In line with the objective of becoming the reference bank for SMEs and companies, the most representative portfolios of this segment grew by around 6% in 2014 in net terms.

6.3.2. Spain

6.3.2.1. General view of the portfolio

The total credit risk (including guarantees and documentary credits) in Spain (excluding the run-off real estate unit, commented on later) amounted to EUR 182,974 million at the end of 2014 (23% of the Group), with an adequate level of diversification by both product and customer segment.

The year 2014 was a turning point in the downward trend in total credit risk. Although in annual terms it still fell 4%, it rose moderately in the second part of the year, reflecting the economic situation and the various strategies implemented.

Million euros

	2014	2013	2012**	Var 14/13	Var 13/12
Total credit risk*	**182,974**	**189,783**	**210,536**	**-4%**	**-10%**
Home mortgages	49,894	52,016	52,834	-4%	-2%
Rest of loans to individuals	17,072	17,445	20,042	-2%	-13%
Companies	96,884	106,042	119,808	-9%	-11%
Public administrations	19,124	13,996	17,852	37%	-22%

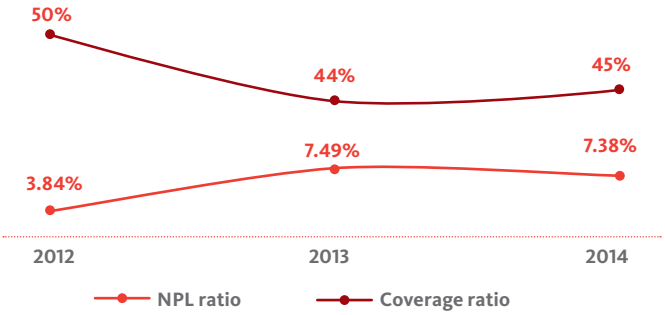
* Including guarantees and documentary credits.

** In order to facilitate like-for-like comparisons with prior years the figures for 2012 have been restated.

The NPL ratio for the total portfolio was 7.38%, 11 b.p less than in 2013. The fall in lending (which increased the NPL ratio by 26 b.p.) was offset by the better NPL figure (which reduced the ratio by 37 b.p.). This was largely due to the lower NPL entries (-40% on average below 2013 in all portfolios), and to the clean-up period of part of the substandard operations reclassified in June 2013 in the mortgage portfolio.

The coverage ratio increased by one p.p. to 45%, after the decline in 2013 as a result of the reclassification of substandard operations.

NPL ratio and coverage ratio



Below are the main portfolios.

6.3.2.2 Home mortgages

Lending to households to acquire a home in Spain amounted to EUR 50,388 million at the end of 2014 (27% of total credit), of which 99% has a mortgage guarantee.

Lending to households to acquire homes*

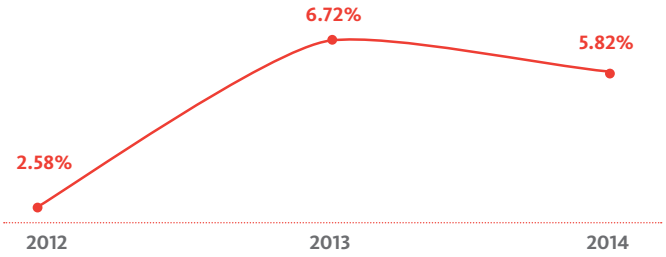
Million euros

	2014	2013
Gross amount	**50,388**	**52,879**
Without mortgage guarantee	493	863
With mortgage guarantee	49,894	52,016
Of which doubtful	**2,964**	**3,956**
Without mortgage guarantee	61	461
With mortgage guarantee	2,903	3,495

* Excluding the mortgage portfolio of Santander Consumer Spain (EUR 2,555 million in 2014), with doubtful loans of EUR 95 million.

The NPL ratio of mortgages to households to acquire a home was 5.82%, 90 b.p.less than in 2013, supported by gross NPL entries that were 50% lower and the clean-up period of part of the operations classified in June 2013 as doubtful for subjective reasons.

NPL ratio of mortgages for homes in Spain



The portfolio of mortgages for homes in Spain kept its medium-low profile and with limited expectations of a further deterioration:

- All mortgages pay principle right from the start.
- Early amortization is usual and so the average life of the operation is well below that in the contract.
- The borrower responds with all his assets and not just the home.
- High quality of collateral concentrated almost exclusively in financing the first home.
- Average affordability rate of close to 29%.
- Some 73% of the portfolio has a loan-to-value of less than 80% (total risk/latest available valuation of the home). In 2014, an appraisal took place which covered almost all the mortgage portfolio, in line with the supervisor's requirements.

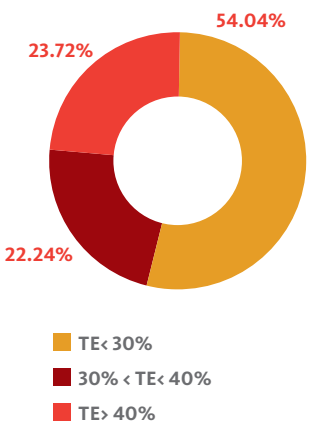
Ranges of total LTV*

Million euros

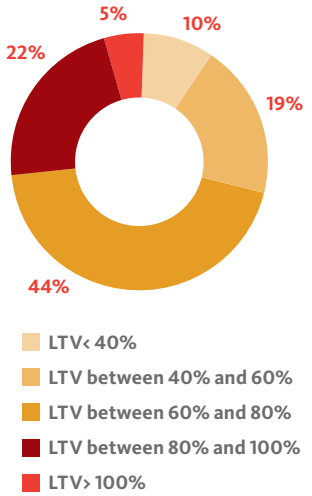
	2014	2013
Gross amount with mortgage guarantee	**49,894**	**52,016**
LTV < 40%	4,773	12,339
LTV between 40% and 60%	9,566	16,105
LTV between 60% and 80%	22,036	17,364
LTV between 80% and 100%	10,985	5,392
LTV > 100%	2,535	815
of which doubtful	**2,903**	**3,496**
LTV < 40%	85	273
LTV between 40% and 60%	223	634
LTV between 60% and 80%	671	1,335
LTV between 80% and 100%	681	931
LTV > 100%	1,242	323

* Excluding Santander Consumer Spain.

Affordability rate
Average: 29.41%



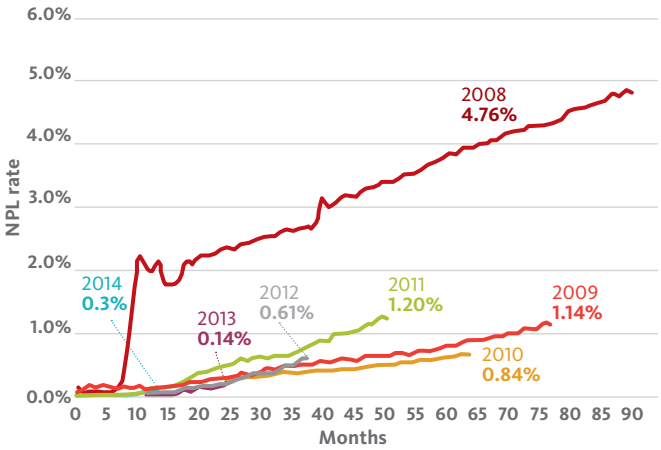
Loan to value
%



Loan-to-value: Percentage total risk/amount of the latest valuation appraisal.
Affordability rate: relation between the annual quotas and the customer's net income.

Despite the economic situation and the gradual deterioration over the last few years, the loan admission measures implemented in admission since 2008 and a change in demand toward better profiles produced a good evolution of vintages as of then.

Maturity of mortgage vintages. Santander Branch Network Spain

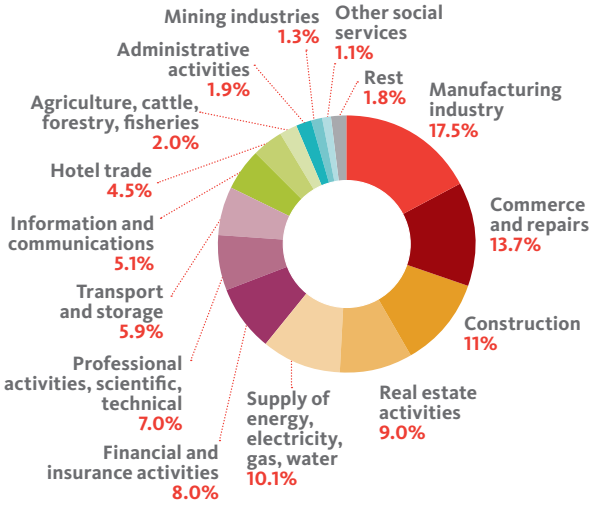


6.3.2.3 Companies' portfolio
Credit risk assumed directly with SMEs and companies (EUR 96,884 million) is the main segment in lending in Spain (53% of the total).

Most of the portfolio (94%) corresponds to clients who have been assigned a analyst who monitors the borrower continuously throughout the risk cycle. In 2014, as part of the Santander Advance project, the criteria of clients with an individual analyst was changed and the number of clients with continuous monitoring increased.

The portfolio is well diversified, with more than 192,000 active clients and no significant concentrations by sector.

Distribution of the companies' portfolio without real estate purpose



The NPL ratio of this portfolio was 8.91% at the end of 2014, mainly affected by the fall in lending.

6.3.2.4. Run-off real estate activity in Spain
The Group manages in a separate unit run-off real estate activity in Spain[8], which includes loans to clients mainly for real estate promotion, and has a specialised management model, stakes in Sareb[9] and foreclosed assets.

The Group's strategy in the last few years has been to reduce the volume of these loans which at the end of 2014 stood at EUR 8,114 million in net terms (around 3% of loans in Spain and less than 1% of the Group's loans). The portfolio's composition is as follows:

- Net loans of EUR 3,787 million, EUR 1,948 million less than in 2013 and with a coverage of 54%.
- Net foreclosed assets ended 2014 at EUR 3,533 million, with coverage of 55%.
- The value of the stake in Sareb was EUR 794 million.

8. For more detail on the real estate portfolio see note 54 of the auditor's report and the annual financial statements.
9. As of the end of 2014, the stake in Metrocavesa was consolidated by global integration.

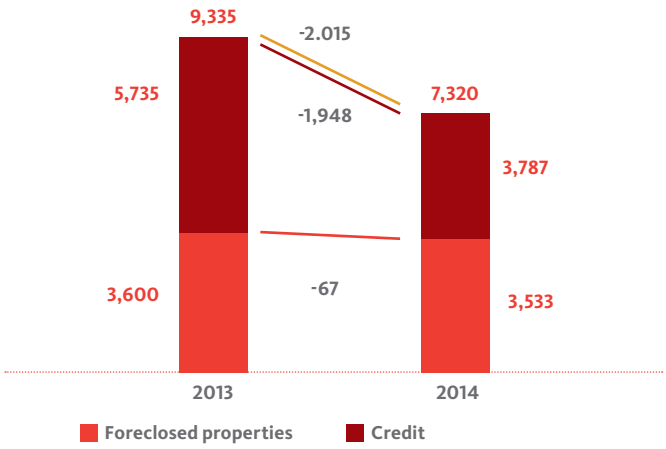
The gross exposure in loans and foreclosures continued the downward trend of previous years and fell 53.3% between 2008 and 2014.

The following table shows the evolution and classification of the lending and foreclosed portfolio:

	2014			2013		
	Gross balance	% coverage	Net balance	Gross balance	% coverage	Net balance
1. Credit	8,276	54%	3,787	11,355	49%	5,735
a. Normal	102	0%	102	424	0%	424
b. Sub-standard	1,209	35%	784	2,815	36%	1,797
c. Doubtful	6,965	58%	2,901	8,116	57%	3,514
2. Foreclosed	7,904	55%	3,533	7,990	55%	3,600
TOTAL 1+2	**16,180**	**55%**	**7,320**	**19,345**	**52%**	**9,335**

Millone euros

Under the perimeter of management of the real estate unit, net exposure was reduced by 22% in 2014.



By type of real estate that guarantees the loans and foreclosed assets, the coverage levels are as follows:

	Real estate loans		Foreclosed assets		Total	
	Exposure	Coverage	Exposure	Coverage	Exposure	Coverage
Completed buildings	3,577	38%	2,269	43%	5,846	40%
Promotions under construction	130	49%	716	46%	846	47%
Land	3,393	69%	4,864	62%	8,257	65%
Other guarantees	1,176	61%	55	64%	1,231	61%
TOTAL	**8,276**	**54%**	**7,904**	**55%**	**16,180**	**55%**

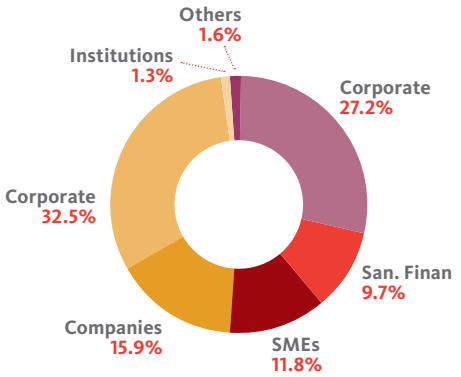
Million euros

6.3.3. Brazil

Brazil's credit risk is EUR 90,572 million (11.2% of the Group's total). It is adequately diversified and with a mainly retail profile (51% to individuals, consumer finance and SMEs).

Portfolio mix

%



* Santander Financiamentos: unit specialised in consumer finance (mainly auto finance).

Loans grew 13% (at constant exchange rate) in 2014 compared to 7.1% in 2013. This growth was in line with the average of Brazil's private sector banks.

Below are the levels of lending and growth of the main segments.

Lending: segmentation

Million euros. Constant exchange rates, 2014

	2014	2013	2012	14 / 13	13 / 12	12 / 11
Individuals	**24,635**	**23,230**	**21,734**	**6%**	**7%**	**11%**
Mortgages	6,919	5,060	3,860	37%	31%	24%
Consumer	10,506	11,676	11,947	-10%	-2%	8%
Cards	5,711	5,286	4,965	8%	6%	14%
Others	1,499	1,207	962	24%	25%	-2%
Santander Financiamentos	**8,742**	**8,976**	**9,302**	**-3%**	**-4%**	**-3%**
SMEs and large companies	**54,547**	**45,057**	**41,164**	**21%**	**9%**	**13%**
SMEs	10,679	11,137	11,477	-4%	-3%	20%
Companies	14,415	11,940	10,496	21%	14%	4%
Corporate	29,453	21,981	19,190	34%	15%	13%

Growth was stronger in the segments with a more conservative risk profile, in line with the Bank's policy of giving greater weight in the portfolio's composition to segments with a better credit profile.

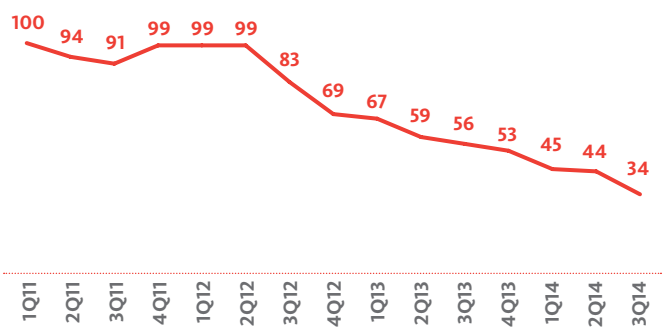
Of note in the segment of individuals was growth in mortgages (28% of total lending as against 22% in 2013), and the stronger rise to companies and corporations.

The Bank also continued during 2014 the measures started two years ago to strengthen the quality of loan admission, which has led to a sustained improvement in the leading indicators on the credit profile of new loans (vintages). The following charts show these indicators for the portfolios of loans to individuals and SMEs, which accounted for 62% of NPLs and 76% of provisions.

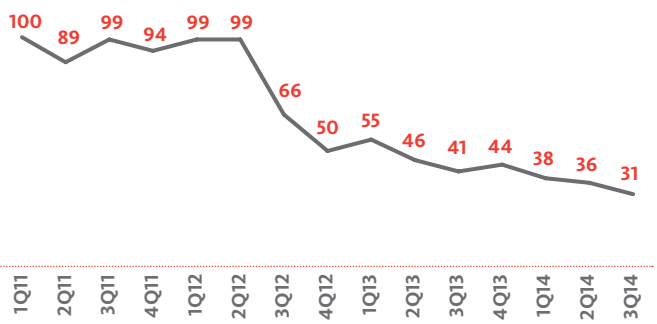
Vintages. Evolution of the over30 ratio at three months of the admission of each vintage

Q1/2011=100

Individuals



SMEs

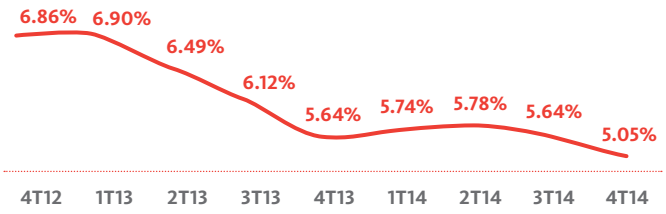


* Ratio calculated as the total amount of operations that are more than 30 days overdue on the total amount of the vintage.

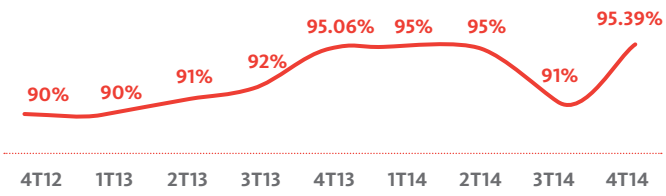
As a result of these improvement policies in loan admission and the change of mix, the NPL ratio fell by 59 b.p. in 2014 to 5.05%.

The coverage ratio was 95% at the end of 2014, a rise of 33 b.p. This improvement was due to the better performance of the portfolio, which reduced the level of NPLs.

NPL ratio



Coverage ratio



6.4. Other credit risk optics

6.4.1. Credit risk by activity in the financial markets

This section covers credit risk generated in treasury activities with clients, mainly with credit institutions. This is developed through financing products in the money market with different financial institutions, as well as derivatives to provide service to Group clients.

According to chapter six of the CRR (EU regulation 575/2013), the credit risk of the counterparty is the risk that the client in an operation could enter into non-payment before the definitive settlement of the cash flows of this operation. It includes the following types of operations: derivative instruments, operations with repurchase commitment, stock lending commodities, operations with deferred settlement and financing of guarantees.

There are two methodologies for measuring the exposure, one is with MtM methodology (replacement value of derivatives or amount available in committed credit lines) and the other, introduced in the middle of 2014 for some countries and products, which incorporates the calculation of the exposure by Monte Carlo simulation. The capital at risk or unexpected loss is also calculated, i.e. the loss which, once the expected loss has been subtracted, constitutes the economic capital, net of guarantees and recovery.

After markets close, exposures are re-calculated by adjusting all operations to their new time frame, adjusting the potential future exposure and applying mitigation measures (netting, collateral, etc), so that the exposures can be controlled directly against the limits approved by senior management. Risk control is done through an integrated system and in real time, enabling the exposure limit available with any counterparty, product and maturity and in any Group unit to be known at each moment.

Exposures in counterparty risk

The total exposure at the end of 2014 on the basis of management criteria in terms of positive market value after applying netting agreements and collateral by counterparty risk activities was EUR 17,260 million (net exposure of EUR 50,006 million) and was concentrated in high credit quality counterparties (75.2% of risk with counterparties has a rating equal to or more than A-).

In addition, at the end of 2014 credit valuation adjustments of EUR 785.6 million were registered (-16.8%[10] due mainly to the general fall in credit spreads during 2014) and debt valuation adjustments of EUR 227.5 million (-2.7%)[11].

Around 93% of the counterparty risk operations in nominal terms was with financial institutions and central counterparty institutions (CCP in English) with whom we operate almost entirely under netting and collateral agreements. The rest of operations with customers who are not financial institutions are, in general, operations whose purpose is hedging. Occasionally, operations are conducted for purposes other than hedging, always with specialised clients.

Distribution of counterparty risk by client rating (in nominal terms)*

AAA	1.39%
AA	2.30%
A	71.52%
BBB	20.84%
BB	3.91%
B	0.03%
RESTO	0.02%

* Ratings based on equivalences between internal ratings and ratings of agencies.

10. 2013 figures recalculated for those counterparties without listed CDS for which, as of 2014, market proxies are used, calculated by CDS on the basis of the rating/sector/country of the counterparty (the figure published in 2013 for these counterparties uses the internal PD).

11. The definition and methodology for calculating the CVA and DVA are set out in 7.2.2.6.

Counterparty risk: distribution by nominal risk and market value *

Million euros

	2014			2013			2012		
		Market value			Market value			Market value	
	Nominal	Positive	Negative	Nominal	Positive	Negative	Nominal	Positive	Negative
CDS protection acquired**	38,094	60	769	45,968	86	887	52,332	476	680
CDS protection sold	31,565	658	48	38,675	763	89	42,697	453	333
Total credit derivatives	**69,659**	**717**	**817**	**84,642**	**849**	**976**	**95,030**	**930**	**1,013**
Equity forwards	1,055	117	17	2,125	76	20	4,630	338	132
Equity options	36,616	1,403	2,192	58,964	1,686	2,420	60,689	1,376	1,438
Equity spot	19,947	421	-	10,041	1,103	0	6,616	999	0
Equity swaps	472	-	701	685	-	265	88	0	266
Total equity derivatives	**58,089**	**1,941**	**2,910**	**71,814**	**2,865**	**2,705**	**72,022**	**2,713**	**1,835**
Fixed-income forwards	3,905	3	124	3,089	1	0	4,855	5	4
Fixed-income options	423	4	0	-	0	0	0	0	0
Fixed-income spot	5,055	-	-	1,906	-	0	1,693	0	0
Total fixed income derivatives	**9,383**	**8**	**124**	**4,995**	**1**	**0**	**6,548**	**5**	**4**
Forward and spot rates	151,172	3,633	2,828	101,216	2,594	1,504	105,089	1,380	1,342
Exchange-rate options	44,105	530	790	46,290	604	345	70,298	232	496
Other exchange rate derivatives	354	3	6	125	2	1	41	1	0
Exchange-rate swaps	458,555	14,771	15,549	411,603	9,738	8,530	418,930	9,617	9,550
Total exchange rate derivatives	**654,187**	**18,936**	**19,173**	**559,233**	**12,940**	**10,380**	**594,358**	**11,231**	**11,388**
Asset swaps	22,617	999	1,749	22,594	901	1,634	22,322	870	1,623
Call money swaps	264,723	1,228	1,150	235,981	698	608	215,404	673	1,011
Interest rate structures	23,491	2,215	2,940	37,398	1,997	2,553	6,640	2,180	2,339
Forward interest rates- FRAs	171,207	13	63	117,011	16	18	304,041	41	49
IRS	2,899,760	95,654	94,624	2,711,552	58,164	54,774	2,038,235	81,091	77,005
Other interest-rate derivatives	218,167	4,357	3,728	230,735	3,870	3,456	251,526	4,255	3,726
Total interest-rate derivatives	**3,599,966**	**104,466**	**104,253**	**3,355,272**	**65,648**	**63,043**	**2,838,168**	**89,109**	**85,752**
Commodities	1,020	243	112	1,363	265	78	1,871	308	104
Total commodity derivatives	**1,020**	**243**	**112**	**1,363**	**265**	**78**	**1,871**	**308**	**104**
Total gross derivatives	**4,392,304**	**126,312**	**127,389**	**4,077,320**	**82,568**	**77,183**	**3,607,996**	**104,295**	**100,097**
Repos	166,047	3,871	5,524	152,105	9,933	7,439	123,784	2,453	3,315
Stock lending	27,963	3,432	628	19,170	2,919	672	18,857	3,476	774
Total counterparty risk	**4,586,314**	**133,615**	**133,541**	**4,248,595**	**95,419**	**85,294**	**3,750,638**	**110,223**	**104,186**

* Figures with management criteria. Excluding organised markets.

**Credit derivatives acquired including hedging of loans.

Counterparty risk: exposure in terms of market value and equivalent credit risk including mitigation effect[1]

Million euros

	2014	2013	2012
Market value netting effect[2]	28,544	27,587	28,192
Collateral received	11,284	9,451	11,454
Exposure by market value[3]	17,260	18,136	16,738
Net ECR[4]	50,006	58,425	56,088

1. Data with management criteria. Excluding organised markets.
2. Market value used to include the effects of mitigant agreements to calculate the exposure by counterparty risk.
3 Taking into account the mitigation of netting agreements and after discounting the collateral received.
4 ERC (equivalent credit risk: net replacement value plus the maximum potential value less the collateral received).

Counterparty risk: Notional OTC derivative products by maturity*

Million euros

	1 year**	1-5 years	5-10 years	Over 10 years	TOTAL
CDS protection acquired***	37,852	72	0	170	38,094
CDS protection sold	31,565	0	0	0	31,565
Total credit derivatives	**69,417**	**72**	**0**	**170**	**69,659**
Equity forwards	1,055	0	0	0	1,055
Equity options	34,302	1,529	557	228	36,616
Equity spot	19,842	105	0	0	19,947
Equity swaps	472	0	0	0	472
Total equity derivatives	**55,670**	**1,634**	**557**	**228**	**58,089**
Fixed-income forwards	3,283	622	0	0	3,905
Fixed-income options	423	0	0	0	423
Fixed-income spot	4,514	318	207	17	5,055
Total fixed-income derivatives	**8,219**	**940**	**207**	**17**	**9,383**
Forward and spot rates	147,542	3,574	56	1	151,172
Exchange-rate options	41,082	3,024	0	0	44,105
Other exchange rate derivatives	345	9	0	0	354
Exchange-rate swaps	427,937	17,900	9,422	3,296	458,555
Total exchange rate derivatives	**616,905**	**24,507**	**9,478**	**3,298**	**654,187**
Asset swaps	21,310	315	777	215	22,617
Call money swaps	262,828	1,650	175	69	264,723
Interest rate structures	20,747	405	848	1,492	23,491
Forward interest rates - FRAs	171,207	0	0	0	171,207
IRS	2,739,575	85,442	42,082	32,662	2,899,760
Other interest-rate derivatives	202,853	8,346	6,578	390	218,167
Total interest-rate derivatives	**3,418,520**	**96,158**	**50,459**	**34,829**	**3,599,966**
Commodities	823	197	0	0	1,020
Total commodity derivatives	**823**	**197**	**0**	**0**	**1,020**
Total derivatives	**4,169,554**	**123,508**	**60,701**	**38,541**	**4,392,304**
Repos	165,947	100	0	0	166,047
Stock lending	27,509	301	131	22	27,963
Total counterparty risk	**4,363,010**	**123,909**	**60,831**	**38,563**	**4,586,314**

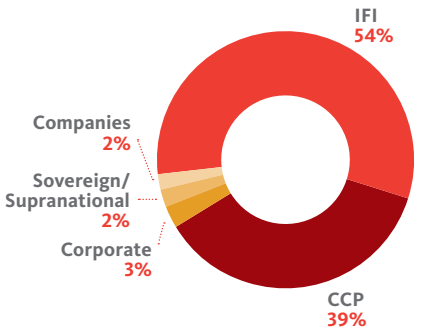
* Figures on the basis of management criteria. Excluding organised markets.

** In operations under collateral agreement the period of the collateral replacement is considered as maturity.

*** Credit derivatives acquired including hedging of loans.

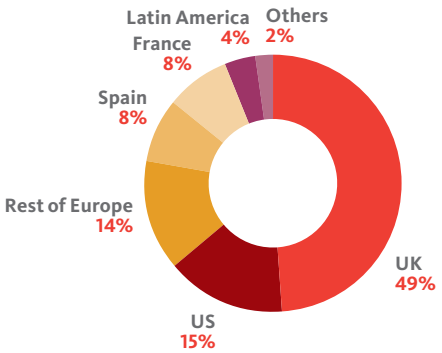
The distribution of risk in notional derivatives by type of counterparty was 54% with financial institutions and 39% with clearing houses.

Counterparty risk by type of client



As regards the geographic distribution, 49% of notional derivatives are with UK counterparties (whose weight within the total is due to the increasing use of clearing houses), 15% with North American counterparties, 8% with Spanish ones. 8% with French ones and of note among the rest is 14% with other European countries and 4% with Latin America.

Counterparty risk by geographic areas



Counterparty risk, organised markets and clearing houses
The Group's policies seek to anticipate wherever possible the implementation of measures resulting from new regulations regarding operations of OTC derivatives, repos and stock lending, both if settled by clearing house or if remaining bilateral. In recent years, there has been a gradual standardisation of OTC operations in order to conduct clearing and settlement via houses of all new trading operations required by the new rules, as well as foster internal use of the electronic execution systems.

As regards the operations of organised markets, within counterparty risk management credit risk for this type of operation is not considered, as this risk is eliminated by the organised markets acting as counterparty in the operations, given that they have mechanisms that enable them to protect their financial position via systems of deposits and improved guarantees and processes that ensure the liquidity and transparency of transactions. As of 2014, with the entry into force of the new CRD IV (Capital Requirements Directive) and the CRR (Capital Requirements Regulations), which transfer the Basel III principles, credit risk is considered for this type of operation as regards calculating capital.

The following table show the relative share in total derivatives of new operations settled by clearing house at the end of 2014 and the significant evolution of operations settled by clearing house since 2012.

Distribution of counterparty risk on the basis of the channel of clearing and type of derivative*

Nominal in million euros

	Bilateral		CCP**		
	Nominal	%	Nominal	%	Total
Derivatives	67,895	97%	1,764	2.5%	69,659
Equity derivatives	58,019	100%	70	0.1%	58,089
Fixed-income derivatives	9,368	99.8%	15	0.2%	9,383
Exchange rate derivatives	653,702	99.9%	484	0.1%	654,187
Interest rate derivatives	1,860,694	51.7%	1,739,272	48.3%	3,599,966
Commodities derivatives	1,020	100.0%	-	0.0%	1,020
Repos	108,153	65.1%	57,894	34.9%	166,047
Stock lending	27,963	100.0%	-	0.0%	27,963
Total	**2,786,814**	**60.8%**	**1,799,499**	**39.2%**	**4,586,314**

* Figures based on management criteria. Excluding organised markets.
** Central counterparty institutions (CCPs)

Risk distribution on the basis of settlement in CCPs and by type of derivative and evolution*

Gross exposure. Nominal in million euros

	2014	2013	2012
Credit derivatives	1,764	949	-
Equity derivatives	70	111	138
Fixed-income derivatives	15	1	33
Exchange rate derivatives	484	616	988
Interest rate derivatives	1,739,272	1,290,496	669,750
Commodities derivatives	-	-	-
Repos	57,894	55,435	63,875
Stock lending	-	46	34
Total	**1,799,499**	**1,347,653**	**734,817**

* Data on the basis of management criteria. Excluding organised markets.

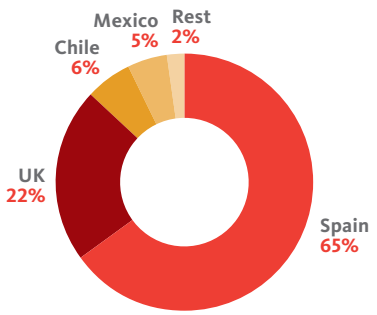
The Group actively manages operations not settled by clearing house and seeks to optimise their volume, given the requirements of spreads and capital that the new regulations impose on them.

In general, the operations with financial institutions are done under netting and collateral agreements, and a continued effort is being made to ensure that the rest of operations are covered under this type of agreement. Generally, the collateral agreements that the Group signs are bilateral ones with some exceptions mainly with multilateral institutions and securitisation funds.

The collateral received under the different types of collateral (CSA, OSLA, ISMA, GMRA, etc) signed by the Group amounted to EUR 11,284 million (of which EUR 9,643 million corresponded to collateral received by derivatives), mostly effective (92.9%), and the rest of the collateral types are subject to strict policies of quality as regards the type of issuer and its rating, debt seniority and haircuts applied.

The chart below shows the geographic distribution:

Geographic distribution of collateral received



Off-balance sheet credit risk
The off-balance sheet risk corresponding to funding and guarantee commitments with wholesale clients was EUR 80,980 million and with the following distribution by products:

Off-balance sheet exposure
In million euros

					Maturity
Product	**< 1 year**	**1-3 years**	**3-5 years**	**> 5 years**	**TOTAL**
Funding*	10,103	10,310	29,673	2,434	**52,520**
Technical guarantees	4,568	8,013	1,677	4,081	**18,339**
Financial and commercial guarantees	3,281	4,356	1,105	663	**9,406**
Foreign trade**	0	217	0	499	**716**
Total	**17,952**	**22,896**	**32,455**	**7,677**	**80,980**

* Mainly including credit lines committed bilaterally and syndicated.
** Mainly including stand-by letters of credit.

Activity in credit derivatives
Grupo Santander uses credit derivatives to cover loans, customer business in financial markets and within trading operations. The volume of this activity is small compared to that of our peers and, moreover, is subject to a solid environment of internal controls and minimising operational risk.

The risk of these activities is controlled via a broad series of limits such as VaR[12], nominal by rating, sensitivity to the spread by rating and name, sensitivity to the rate of recovery and to correlation. Jump-to-default limits are also set by individual name, geographic area, sector and liquidity.

In notional terms, the CDS position incorporates EUR 35,646 million of acquired protection[13] and EUR 31,556 million of sold protection.

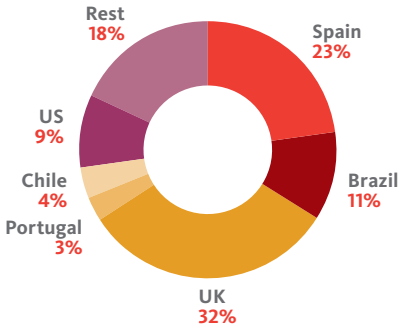
At December 31, 2014, the sensitivity of lending to increases in spreads of one basis point was minus EUR 1.5 million, higher than 2013, and the average VaR was EUR 2.9 million, above 2013 and 2012 (average VaR of EUR 2.1 million and EUR 2.9 million, respectively).

6.4.2. Risk of concentration
Control of risk concentration is a vital part of management. The Group continuously tracks the degree of concentration of its credit risk portfolios using various criteria: geographic areas and countries, economic sectors, products and groups of clients.

The board, via the risk appetite, determines the maximum levels of concentration, as detailed in section 4.4. on risk appetite and structure of limits. In line with the risk appetite, the executive risk committee establishes the risk policies and reviews the exposure levels appropriate for adequate management of the degree of concentration of the credit risk portfolios.

In **geographic terms** the credit risk with clients is diversified in the main markets in which the Group operates, as shown in the chart below.

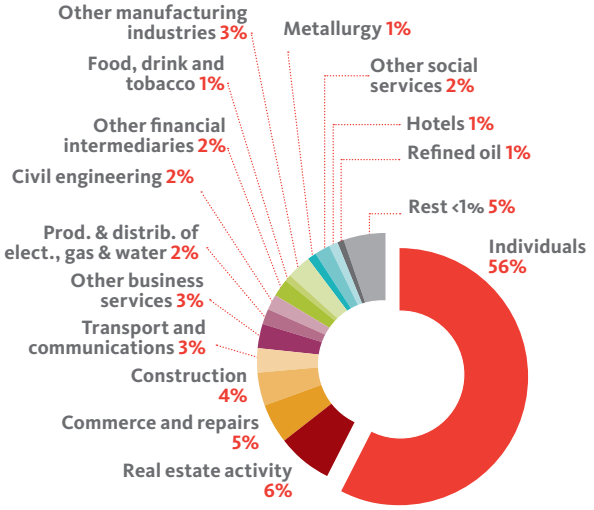
Riesgo de crédito con clientes



Some 56% of the Group's credit risk corresponds to individual customers, who, due to their inherent nature, are highly diversified. In addition, the portfolio is also well distributed by **sectors**, with no significant concentrations in specific sectors. The following chart shows the distribution at the end of the year.

12. The definition and methodology of the VaR calculation is in 7.2.2.1.
13. This figures excludes around EUR 1,760 million nominal of CDS which cover loans that for accounting purposes are recorded as financial guarantees instead of credit derivatives as their change in value has no impact on results or reserves in order to avoid accounting asymmetry.

Risk diversification by economic sector



The Group is subject to the regulation on large risks contained in the fourth part of the CRR (EU regulations 575/2013), according to which the exposure contracted by an entity with a client or group of clients linked among themselves will be considered a "large exposure" when its value is equal to or more than 10% of the eligible capital. In addition, in order to limit the large exposures no entity can assume with a client or group of linked clients an exposure whose value exceeds 25% of its eligible capital, after taking into account the impact of the reduction of credit risk contained in the regulation.

At the end of 2014, after applying risk mitigation techniques and regulations applicable to large risks, all the declared groups were below 4.7% of eligible equity except for a central EU counterparty entity which was 7.3%.

The regulatory credit exposure with the 20 largest groups within the sphere of large risks represented 5.5% of outstanding credit risk with clients (lending plus balance sheet risks). As for regulatory credit exposure with financial institutions, the top 10 represented EUR 18,378 million.

The Group's risks division works closely with the financial division to actively manage credit portfolios. Its activities include reducing the concentration of exposures through various techniques such as using credit derivatives and securitisation to optimise the risk-return relation of the whole portfolio

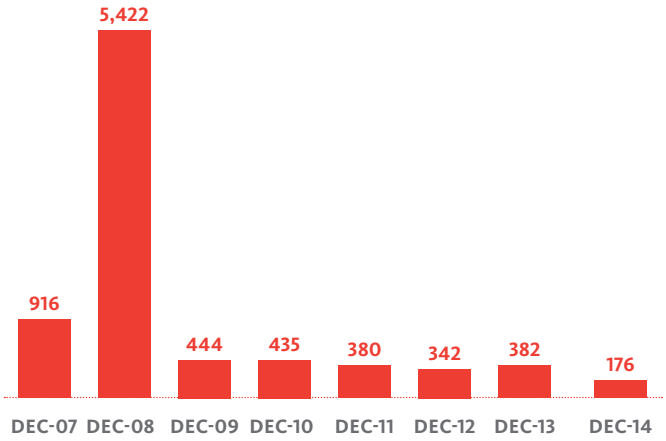
6.4.3. Country risk

Country risk is a component of credit risk in all cross-border credit operations for circumstances different to the usual commercial risk. Its main elements are sovereign risk, the risk of transfer and other risks that could affect international financial activity (wars, natural disasters, balance of payments crisis, etc).

The exposure susceptible to country-risk provisions at the end of 2014 was EUR 176 million (EUR 382 million in 2013). Total provisions stood at EUR 22 million compared with EUR 47 million in 2013. Of note in 2014 was Colombia which changed its classification, in accordance with Bank of Spain criteria, from Group 2 to Group 3[14].

Evolution of country-risk subject to provisions

Million euros



The exposure is moderate and has been on a downward path in recent years, particularly in 2014 due to the maturities of operations. The only exception was in 2008 when there was a significant increase due to the incorporation of transactions with Brazilian clients resulting from the purchase of ABN/Banco Real. This increase was reduced in 2009, with the reclassification of Brazil to Group 2.

The total exposure to country risk, regardless of whether it requires provisions or not, is also moderate. Except for Group 1 countries (considered by the Bank of Spain as those of less risk[15]), the individual exposure by country does not exceed in any cases 1% of Grupo Santander's total assets.

The principles of country risk management continued to follow criteria of maximum prudence; country risk is assumed very selectively in operations that are clearly profitable for the bank, and which enhance the global relationship with customers.

6.4.4. Sovereign risk and vis-á-vis the rest of public administrations

As a general criterion, sovereign risk is that contracted in transactions with a central bank (including the regulatory cash reserve requirement), the issuer risk of the Treasury or similar entity (portfolio of public debt) and that arising from operations with public institutions with the following features: their funds only come from the state's budgeted income and the activities are of a non-commercial nature.

14. The typology of countries for each risk group is defined in Bank of Spain circular 4/2004 .

15. This group includes operations with final debtor resident in the European Union, Norway, Switzerland, Iceland, the US, Canada, Japan, Australia and New Zealand.

This criterion, historically used by Grupo Santander, has some differences with that of the European Banking Authority (EBA) used for its regular stress exercises. The main ones are that the EBA's criterion does not include risk with central banks, exposures with insurance companies, indirect exposures via guarantees and other instruments. On the other hand, it includes public administrations in general (including regional and local ones) and not only the state sector.

Exposure to sovereign risk (according to the criteria applied in the Group) mainly emanates from the obligations to which our subsidiary banks are subject regarding the establishment of certain deposits in central banks, the establishment of deposits with the excess of liquidity and of fixed-income portfolios maintained within the risk management strategy for structural interest of the balance sheet and in trading books in treasuries. The great majority of these exposures are in local currency and are funded on the basis of customer deposits captured locally, and also in local currency.

The exposures in the local sovereign but in currencies different to the official one of the country of issuance is not very significant (EUR 8,633 million, 4.5% of the total sovereign risk), and less so the exposure in non-local sovereign issuers, which means cross-border risk[16] (EUR 3,257 million, 1.68% of the total sovereign risk).

In general, the total exposure to sovereign risk has remained at adequate levels to support the regulatory and strategic motives of this portfolio.

The investment strategy for sovereign risk also takes into account the credit quality of each country when setting the maximum exposure limits. The following table shows the percentage of exposure by rating levels[17].

Exposure by level of rating

%

	2014	2013	2012	2011
AAA	29%	36%	34%	29%
AA	4%	6%	3%	26%
A	28%	27%	29%	6%
BBB	32%	26%	31%	38%
Under BBB	7%	5%	4%	1%

The sovereign risk distribution by rating level was affected in the last few years by many rating revisions of the sovereign issuers of the countries where the Group operates (Spain, Portugal, US, Chile, etc.).

On the basis of the EBA criteria already mentioned, the exposure to public administrations at the end of each of the last three years was as follows (figures in million euros)[18]:

The exposure increased 40% in 2014, mainly due to the acquisition of fixed-income portfolios available for sale in Brazil, Spain and Portugal. The sovereign risk exposure of Spain (where the Group has its headquarters) is not high in terms of total assets (3.4% at the end of 2014), compared to its peers.

The sovereign exposure in Latin America is almost all in local currency, recorded in local books and concentrated in short-term maturities of lower interest rate risk and greater liquidity.

Exposure to sovereign risk (EBA criteria)

Million euros

DEC. 31, 2014	Portfolio			
	Trading & others to VR	Available for sale	Lending	Net total direct exposure
Spain	5,778	23,893	15,098	**44,769**
Portugal	104	7,811	589	**8,504**
Italy	1,725	0	0	**1,725**
Greece	0	0	0	**0**
Ireland	0	0	0	**0**
Rest of euro zone	(1,070)	3	1	**(1,066)**
UK	(613)	6,669	144	**6,200**
Poland	5	5,831	30	**5,866**
Rest of Europe	1,165	444	46	**1,655**
US	88	2,897	664	**3,649**
Brazil	11,144	17,685	783	**29,612**
Mexico	2,344	2,467	3,464	**8,275**
Chile	593	1,340	248	**2,181**
Rest of Latam	181	1,248	520	**1,949**
Rest of world	4,840	906	618	**6,364**
Total	**26,284**	**71,194**	**22,205**	**119,683**

DEC. 31, 2013	Portfolio			
	Trading & others to VR	Available for sale	Lending	Net total direct exposure
España	4,359	21,144	12,864	**38,367**
Portugal	149	2,076	583	**2,807**
Italia	1,310	77	0	**1,386**
Grecia	0	0	0	**0**
Irlanda	0	0	0	**0**
Resto zona euro	(1,229)	67	0	**(1,161)**
Reino Unido	(1,375)	3,777	0	**2,402**
Polonia	216	4,770	43	**5,030**
Resto Europa	5	117	0	**122**
Estados Unidos	519	2,089	63	**2,671**
Brasil	8,618	8,901	223	**17,743**
México	3,188	2,362	2,145	**7,695**
Chile	(485)	1,037	534	**1,086**
Resto de América	268	619	663	**1,550**
Resto del mundo	5,219	596	148	**5,964**
Total	**20,762**	**47,632**	**17,268**	**85,661**

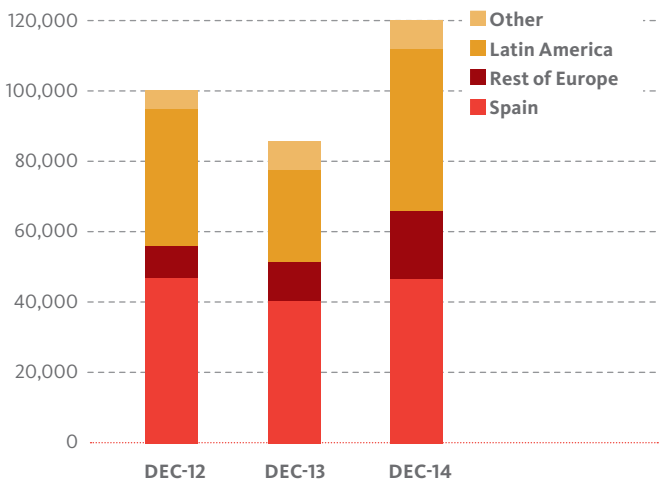
16. Countries classified as low risk by the Bank of Spain (Group 1 according to its terminology) are not considered.

17. Internal ratings used.

18. In addition at December 31, 2014, the Group maintained direct net exposures in derivatives whose reasonable value was EUR 1,028 million, as well as indirect net exposures in derivatives whose reasonable value was EUR 5 million. Grupo Santander has no exposure to portfolios at maturity.

Sovereign risk and compared to other public administrations: direct net exposure (EBA criteria)

Million euros



6.4.5. Environmental risk

Analysis of the environmental risk of credit operations is one of the main aspects of the strategic plan of corporate social responsibility. It revolves around the following two large points:

- Equator principles: this is an initiative of the World Bank's International Financial Corporation. It is an international standard for analysing the social and environmental impact of project finance operations and corporate loans with known destiny (bridging loans with forebearance envisaged via project finance and corporate financing to construct or increase a specific project). The assumption of these principles represents a commitment to assess and take into account the social and environmental risks, and thus to finance only those projects that can accredit adequate management of the social and environmental impacts. The methodology used is set out below.

  - For project finance operations with an amount equal to or more than $10 million, corporate loans with known destiny for a project with an amount equal to more than $100 million, with Santander's share equal to or more than $50 million, an initial questionnaire is filled out, of a generic nature, designed to establish the project's risk in the socio-environmental sphere (according to categories A, B and C, from greater to lower risk, respectively) and the operation's degree of compliance with the Equator Principles.

  - For those projects classified within the categories of greater risk (categories A and B), a more detailed questionnaire has to be filled out, adapted according to the sector of activity.

  - According to the category and location of the projects a social and environmental audit is carried out (by independent external auditors). The Bank also gives training courses in social and environmental matters to risk teams as well as to those responsible for business of all the areas involved. An online course was launched in 2014 for more than 2,500 Group employees in all countries.

  In 2014, 79 projects were analysed under the Equator principles for a total amount of EUR 35.911 million.

- VIDA tool: used since 2004, its main purpose is to assess the environmental risk of corporate clients, both current and potential, through a system that classifies in seven categories each of the companies on the basis of the environmental risk contracted. In 2014, 45.384 clients were assessed by this tool in Spain (total risk of EUR 86,356 million).

DEC. 31, 2012	Portfolio			Net total direct exposure
	Trading & others to VR	Available for sale	Lending	
Spain	4,403	24,654	16,528	**45,586**
Portugal	0	1,684	616	**2,299**
Italy	(71)	76	0	**4**
Greece	0	0	0	**0**
Ireland	0	0	0	**0**
Rest of euro zone	943	789	0	**1,731**
UK	(2,628)	4,419	0	**1,792**
Poland	669	2,898	26	**3,592**
Rest of Europe	10	0	0	**10**
US	(101)	1,783	30	**1,712**
Brazil	14,067	11,745	351	**26,163**
Mexico	4,510	2,444	2,381	**9,335**
Chile	(293)	1,667	521	**1,895**
Rest of Latam	214	916	771	**1,900**
Rest of world	1,757	645	234	**2,636**
Total	**23,480**	**53,718**	**21,457**	**98,655**

Environmental risk classification

Million euros

Note: VIDA assessment in the retail banking network in Spain
VL: very low; L: low; M: medium and A: high.

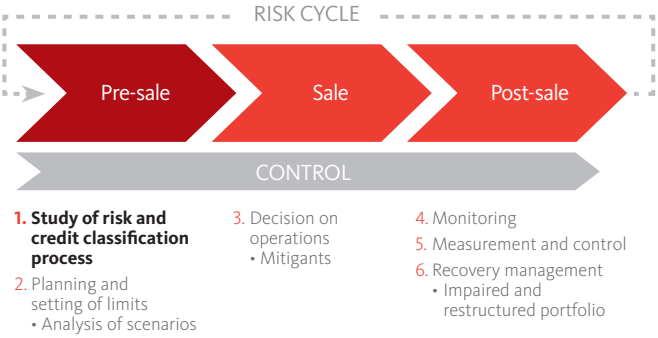
Low or very low environmental risk represents 66% of total risk, lower than in 2013 due to the incorporation of the perimeter of global wholesale banking.

6.5. Credit risk cycle

The process of credit risk management consists of identifying, analysing, controlling and deciding on the risks incurred by the Group's operations. The business areas, senior management and the risk areas are all involved.

The board and the executive committee participate in the process, as well as the executive risk committee, which sets the risk policies and procedures, the limits and delegation of powers, and approves and supervises the framework of the risk function.

The risk cycle has three phases: pre-sale, sale and post-sale. The process is constantly revised, incorporating the results and conclusions of the after-sale phase to the study of risk and pre-sale planning.



6.5.1. Study of risk and credit rating process

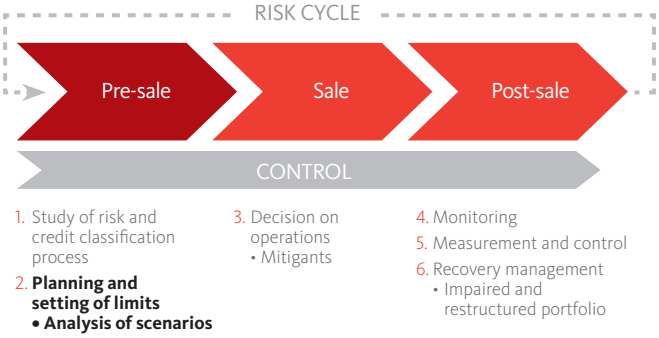
Risk study consists of analysing a customer's capacity to meet his contractual commitments with the bank. This entails analysing the customer's credit quality, risk operations, solvency and profitability to be obtained on the basis of the risk assumed.

With this objective, the Group has used since 1993 models for assigning solvency ratings. These mechanisms are used in all individualised management segments, both wholesale (sovereign, financial institutions and corporate banking), as well as the rest of companies and institutions in this category.

The rating is the result of a quantitative model based on balance sheet ratios or macroeconomic variables, which is supplemented by the expert advice of the analyst.

The ratings given to customers are regularly reviewed, incorporating the latest available financial information and experience in the development of banking relations. The regularity of the reviews increases in the case of customers who reach certain levels in the automatic warning systems and in those classified as special watch. The rating tools are also revised in order to adjust the accuracy of the rating granted.

While ratings are used for companies under individualised management, scoring techniques are used for the standardised segment, which automatically assign a score to operations, as set out in the section "decisions on operations."



6.5.2. Planning and setting limits

The purpose of this phase is to limit efficiently and comprehensively the risk levels assumed by the Group.

The credit risk planning process serves to set the budgets and limits at portfolio or customer level on the basis of the segment.

The planning and setting of limits is conducted via documents agreed between the business and risk areas and approved by the executive risk committee or committees delegated by it, and in which the expected results of business, in terms of risk and return are set out, as well as the limits to which this activity is subject and management of the associated risks.

Planning is articulated via the strategic commercial plan, ensuring the conjunction of the business plan, the credit policy on the basis of the risk appetite and of the necessary resources to achieve it. It acts as a reference for all retail and commercial banking businesses. The maximum executive committee of each unit is responsible for approving and monitoring the plan.

At the same time, in the wholesale sphere and the rest of companies and institutions analysis is conducted at the client level. When certain circumstances concur, the client is assigned an individual limit (pre-classification).

In this way, a pre-classification model based on a system for measuring and monitoring economic capital is used for large corporate groups. The result of pre-classification is the maximum risk level that a client or group can assume in terms of amount of maturity. A more streamlined version of pre-classifications is used for those companies which meet certain requirements (high knowledge, rating, etc).

Analysis of scenarios

In line with what is described in section 4.5. of this report, analysis of credit risk scenarios enables senior management to better understand the portfolio's evolution in the face of market conditions and changes in the environment. It is a key tool for assessing the sufficiency of the provisions made and the capital to stress scenarios.

These exercises are carried out for all the Group's relevant portfolios and are articulated as follows:

- Definition of reference scenarios (at both the global level as well as for each of the Group's units).
- Determining the value of the risk parameters and metrics (probability of default, loss at default, NPLs, etc) to different scenarios.
- Estimating the expected loss associated with each of the scenarios raised and contrasted with the levels of provisions.
- Analysis of the evolution of the credit risk profile at the portfolio, segment, unit and Group levels in the face of different scenarios and compared to previous years.

The simulation models employed by the Group use data from a complete economic cycle in order to calibrate the performance of risk factors in the face of changes in macroeconomic variables. These models are submitted to backtesting processes and regular fine tuning in order to guarantee they reflect correctly the relationship between macroeconomic variables and risk parameters.

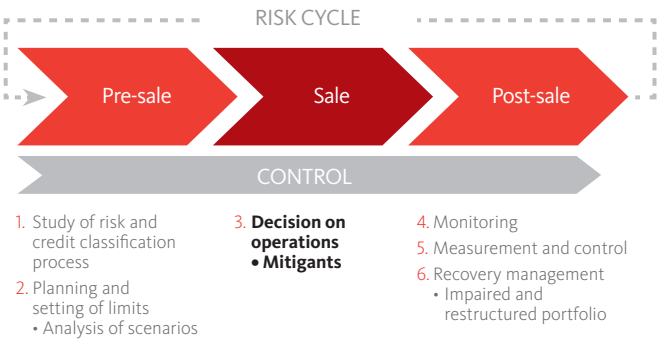
The projections of the risk and loss parameters, normally with a time frame of three years, are executed under various economic scenarios which include the main macroeconomic variables (GDP, unemployment rate, house prices, inflation, etc).

The economic scenarios defined are backed by different levels of stress, from the baseline scenario or the most probable one to stress scenarios which, although unlikely, are possible.

These scenarios are defined by Grupo Santander's research department in coordination with the counterparts of each unit and using as a reference the figures published by the main international institutions.

A global stress scenario is defined describing a world crisis situation and the way it would affect each of the countries in which the Group operates. In addition, a local stress scenario is defined which affects in an isolated way some of the main units and with a greater degree of stress than the global stress scenario.

In the executive risk committee the Group's senior management takes note, proposes the changes it deems necessary and formally approves the set of definitive scenarios to be used in the execution of the Group's stress test.



6.5.3. Decisions on operations

The sales phase consists of the decision-taking process which analyses and resolves operations. Approval by the risks area is a prior requirement before contracting any risk operation. This process must take into account the policies defined for approving operations and take into consideration both the risk appetite as well as those elements of the operation that are relevant in the search for the right balance between risk and profitability.

In the sphere of **individual clients, businesses and SMEs with low turnover**, the administration of large volumes of credit operations with the use of automatic decision models is facilitated for classifying the client/operation binomial. Lending is classified into homogeneous risk groups, on the basis of the information on the features of the operation and of its owner. These models are used in banking with individuals, businesses and standardised SMEs.

As already indicated, the prior phase of setting limits can follow two different paths, giving rise to different types of decision in the sphere of **companies**:

- Automatic and verifying if there is capacity for the proposed operation (in amount, product, maturity and other conditions) within the limits authorised under the framework of pre-classification. This process is generally applied to corporate pre-classifications.
- Always requiring the authorisation of the analyst although the operation meets the amount, maturity and other conditions set in the pre-classified limit. This process applies to the pre-classification of companies under individualised management of retail banking.

Credit risk mitigation techniques

Grupo Santander applies various forms of credit risk reduction on the basis, among other factors, of the type of client and product. As we will later see, some are inherent in specific operations (for example, real estate guarantees) while others apply to a series of operations (for example, netting and collateral).

The various mitigation techniques can be grouped into the following categories:

Determination of a net balance by counterparty

The concept of netting is the possibility of determining a net balance between operations of the same type, under the umbrella of a framework agreement such as ISDA or similar.

It consists of aggregating the positive and negative market values of derivative transactions that Santander has with a certain counterparty, so that in the event of default it owes (or Santander owes, if the net is negative) a single net figure and not a series of positive or negative values corresponding to each operation closed with the counterparty.

An important aspect of the contracts framework is that they represent a single legal obligation that covers all operations. This is fundamental when it comes to being able to net the risks of all operations covered by the contract with a same counterparty.

Real guarantees
These are those goods that are subject to compliance with the guaranteed obligation and which can be provided not only by the client but also by a third party. The real goods or rights that are the object of the guarantee can be:

- Financial: cash, deposit of securities, gold, etc.
- Non-financial: real estate (both properties as well as commercial premises, etc), other property goods.

From the standpoint of risk admission, the highest level of real guarantees is required. In order to calculate the regulatory capital, only those guarantees that meet the minimum qualitative requirements set out in the Basel agreements are taken into consideration.

A very important example of a real financial guarantee is **collateral**. This is a series of instruments with a certain economic value and high liquidity that are deposited/transferred by a counterparty in favour of another in order to guarantee/reduce the credit risk of the counterparty that could result from portfolios of transactions of derivatives with risk existing between them.

The nature of these agreements is diverse, but whatever the specific form of collateralisation, the final purpose, as in the netting technique, is to reduce the counterparty risk.

The operations subject to the collateral agreement are regularly valued (normally day to day) and, on the net balance resulting from this valuation, the parameters defined in the contract are applied so that a collateral amount is obtained (normally cash or securities), which is to be paid to or received from the counterparty.

As regards **real estate guarantees**, there are regular re-appraisal processes, based on real market values for the different types of property, which meet all the requirements set by the regulator.

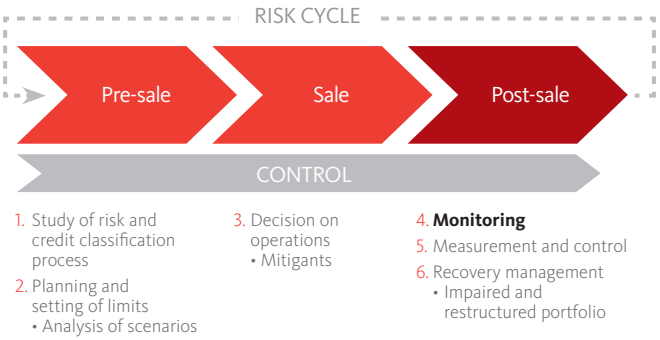
Implementation of the mitigation techniques follows the minimum requirements established in the manual of credit risk management policies, and consists of ensuring:

- Legal certainty. The possibility of legally requiring the settlement of guarantees must be examined and ensured at all times.
- The non-existence of substantial positive correlation between the counterparty and the value of the collateral.
- The correct documentation of all guarantees.
- The availability of documentation of the methodologies used for each mitigation technique.
- Adequate monitoring and regular control.

Personal guarantees and credit derivatives
This typology of guarantees corresponds to those that place a third party in a position of having to respond to obligations acquired by another to the Group. It includes, for example, sureties, guarantees, stand-by letters of credit, etc. The only ones that can be recognised, for the purposes of calculating capital, are those provided by third parties that meet the minimum requirements set by the supervisor.

Credit derivatives are financial instruments whose main objective is to cover the credit risk by acquiring protection from a third party, through which the bank transfers the issuer risk of the underlying asset. Credit derivatives are over the counter (OTC) instruments that are traded in non-organised markets. The coverage with credit derivatives, mainly through credit default swaps, is contracted with front line banks.

The information on mitigation techniques is in “Credit risk reduction techniques of the Prudential Relevance Report (Pillar III)”. There is also more information on credit derivatives in the section “Activity in credit derivatives” in item “6.4.1. Credit risk by activities in financial markets” of this report.



6.5.4. Monitoring

Monitoring is a continuous process of constant observation, which allows changes that could affect the credit quality of clients to be detected early on, in order to take measures to correct the deviations that impact negatively.

Monitoring is based on segmentation of customers, and is carried out by local and global risk dedicated teams, supplemented by internal audit.

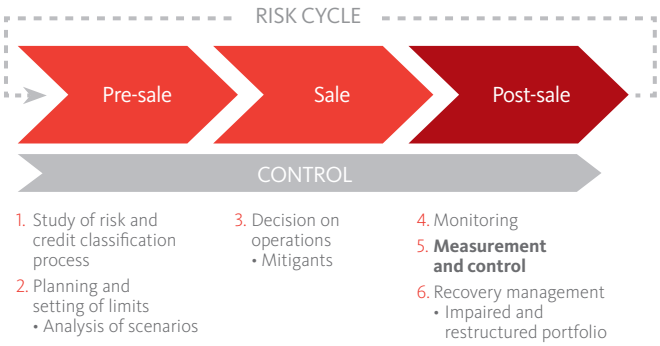
The function consists, among other things, of identifying and tracking clients under special watch, reviewing ratings and continuous monitoring of indicators of standardised clients.

The system called **companies in special watch** (FEVE) identifies four levels on the basis of the degree of concern arising from the circumstances observed (extinguish, secure, reduce, monitor). The inclusion of a company in FEVE does not mean there have been defaults, but rather the advisability of adopting a specific policy toward that company and establishing the person and time frame for it. Clients in FEVE are reviewed at least every six months, and every quarter for the most serious cases. A company can end up

in special watch as a result of monitoring, a review conducted by internal audit, a decision of the person responsible for the company or the entry into functioning of the system established for automatic warnings.

Ratings are reviewed at least every year, but if weaknesses are detected, or on the basis of the rating, it is done more regularly.

As regards the risks of individual clients, businesses and SMEs with a low turnover, the main indicators are monitored in order to detect shifts in the performance of the loan portfolio with respect to the forecasts made in the credit management programmes.



6.5.5. Measurement and control

As well as monitoring clients' credit quality, Grupo Santander establishes the control procedures needed to analyse the current credit risk profile and its evolution, through different credit risk phases.

The function is developed by assessing the risks from various perspectives that complement one another, establishing as the main elements control by countries, business areas, management models, products, etc, facilitating early detection of points of specific attention, as well as preparing action plans to correct any deteriorations.

Each element of control admits two types of analysis:

1. Quantitative and qualitative analysis of the portfolio.
Analysis of the portfolio controls, permanently and systematically, the evolution of risk with respect to budgets, limits and standards of reference, assessing the impacts of future situations, exogenous as well as those resulting from strategic decisions, in order to establish measures that put the profile and volume of the risks portfolio within the parameters set by the Group.

The credit risk control phase uses, among others and in addition to traditional metrics, the following metrics:

- **Management of non-performing loans variation plus net write-offs (VMG)**

The VMG measures how NPLs change during a period, discounting write-offs and taking loan loss recoveries into account.

It is an aggregate measure at portfolio level that allows a response to deteriorations observed in the evolution of NPLs.

It is the result of the final balance less the initial balance of non-performing loans of the period under consideration, plus the write-offs in this period less loan loss recoveries in the same period.

The VMG and its components play a key role as variables of monitoring.

- **Expected loss (EL) and capital**

Expected loss is the estimate of the economic loss that would occur during the next year of the portfolio existing at a given moment.

It is one more cost of activity, and must impact on the price of operations. Its calculation is mainly based on three parameters:

- Exposure at default (EaD): maximum amount that could be lost as a result of a default.
- Probability of default (PD): the probability of a client's default during the year.
- Loss Given Default (LGD): this reflects the percentage of exposure that could not be recovered in the event of a default. It is calculated by discounting at the time of the default the amounts recovered during the whole recovery process and this figure is then compared in percentage terms with the amount owed by the client at that moment.

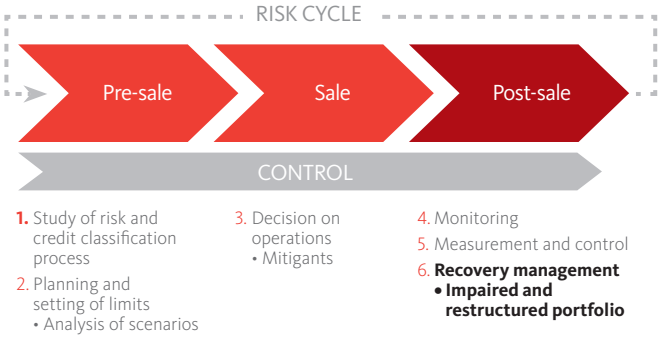
Other relevant aspects regarding the risk of operations are covered, such as quantification of off-balance sheet exposures or the expected percentage of recoveries, related to the guarantees associated with the operation, as well as other issues such as the type of product, maturity, etc.

The risk parameters also enable economic and regulatory capital to be calculated. The integration in management of the metrics of capital is vital for rationalising its use. More detail is available in chapter 12 on capital management and control of capital risk.

2. Evaluation of the control processes
Evaluation of the control processes includes systematic and regular revision of the procedures and methodology, developed throughout the credit risk cycle, in order to guarantees their effectiveness and validity.

In 2006, within the corporate framework established in the Group for compliance with the Sarbanes Oxley law, a corporate tool was established in the Group's intranet to document and certificate all the sub processes, operational risks and controls that mitigate them. The risks division assesses every year the efficiency of internal control of its activities.

The function of comprehensive control and internal validation of risks, as part of its mission of supervising the quality of the Group's risk management, guarantees that the management and control systems of the different risks inherent in its activity fulfil the most demanding requirements and the best practices observed in industry and/or required by regulators. In addition, internal audit is responsible for ensuring that the policies, methods and procedures are adequate, effectively implemented and regularly reviewed.



6.5.6. Recovery management

Recovery activity is a significant element in the Bank's risk management. This function is developed by the area of recoveries and cleaning up of assets, which was created in July 2013 in order to obtain greater efficiencies in the process of asset recovery, while developing a global strategy and a focus of recovery management.

The Group has a corporate management model which sets the guidelines and general lines of action to be applied in the various countries, always taking into account the local particularities that the recovery activity requires (economic environment, business model or a mixture of both). The recovery areas are business areas that directly manage clients; the corporate model thus has a business focus, whose creation of value on a sustained basis is based on effective and efficient collection management, whether by regularisation of balances pending payment or by total recovery.

The recovery management model requires adequate co-ordination of all the management areas (business of recoveries, commercial, technology and operations, human resources and risks). It is subject to constant review and continuous improvement in the processes and management methodology that sustain it, through applying the best practices developed in the various countries.

In order to conduct recovery management adequately, it is done in four phases: irregularity or early non-payment, recovery of non-performing loans, recovery of write-offs and management of foreclosed assets. Indeed, the recovery function begins before the first non-payment when the client shows signs of deterioration and ends when the debt has been paid or regularised. The function aims to anticipate non-compliance and is focused on preventative management.

The current macroeconomic environment directly impacts the non-payment index and customers' bad loans. The quality of portfolios is thus fundamental for the development and growth of our businesses in different countries. Debt reimbursement and recovery functions are given a special and continuous focus, in order to ensure that this quality always remains within the expected levels.

The diverse features of our clients makes segmentation necessary in order to manage recoveries adequately. Massive management of large collectives of clients with similar profiles and products is conducted through processes with a high technological component, while personalised management focuses on customers that, because of their profile, require a specific manager and more individualised management.

Recovery activity has been aligned with the socio-economic reality of various countries and different risk management mechanisms, with adequate criteria of prudence, have been used on the basis of their age, guarantees and conditions, always ensuring, as a minimum, the required classification and provisions.

Particular emphasis in the recovery function is placed on management of the aforementioned mechanisms for early management, in line with corporate policies, taking account of the various local realities and closely tracking vintages, stocks and performance. These policies are renewed and regularly adopted in order to reflect both the better management practices as well as the regulatory changes applied.

As well as measures focused on adapting operations to the client's payment capacity, also noteworthy is recovery management seeking solutions other than judicial ones for advance payment of debts.

One of the ways to recover debt from clients, who have suffered a severe deterioration in their repayment capacity, is repossession (judicial or in lieu of payment) of the real estate assets that serve as guarantees of the loans. In countries with a high exposure to real estate risk, such as Spain, there are very efficient sales management instruments which enable the capital to be returned to the bank and reduce the stock in the balance sheet at a much faster speed than the rest of banks.

7. Trading market risk and structural risks

7.0. Organisation of this section

We will first describe the activities subject to market risk, setting out the different types and risk factors.

Then we will look at each one of the market risks on the basis of the finality of the risk, distinguishing the risk of market trading and structural risks, and, within the latter, structural risks of the balance sheet and pension, actuarial and fiduciary risks.

The most relevant aspects to take into account such as the principal magnitudes and their evolution in 2014 are set out for each type of risk, the methodologies and metrics employed in Santander and the limits used for their control.

7.1. Activities subject to market risk and types of market risk

The **perimeter** of activities subject to market risk covers those operations where capital risk is assumed as a result of changes in market factors, including both trading risks as well as structural risks that are also affected by movements in markets.

This risk comes from the change in **risk factors** - interest rates, inflation rates, exchange rates, share prices, the spread on loans, commodity prices and the volatility of each of these elements - as well as from the liquidity risk of the various products and markets in which the Group operates.

- The **Interest rate risk** is the possibility that changes in interest rates could adversely affect the value of a financial instrument, a portfolio or the Group as a whole. It affects, among others, loans, deposits, debt securities, most assets and liabilities of trading portfolios as well as derivatives.

- The **inflation rate risk** is the possibility that changes in inflation rates could adversely affect the value of a financial instrument, a portfolio or the Group as a whole. It affects, among others, loans, debt securities and derivatives, whose yield is linked to inflation or to a real rate of variation.

- The **exchange rate risk** is the sensitivity of the value of a position in a currency different to the base currency to a potential movement in exchange rates. A long position or one bought in a foreign currency would produce a loss in the event that the currency depreciated against the base currency. Among the positions affected by this risk are non-euro investments in subsidiaries, as well as loans, securities and derivatives denominated in foreign currencies.

- The **equity risk** is the sensitivity of the value of positions opened in equities to adverse movements in the market prices or in expectations of future dividends. Among other instruments, this affects positions in shares, stock market indices, convertible bonds and derivatives using shares as the underlying asset (put, call, and equity swaps).

- The **credit spread risk** is the risk or sensitivity of the value of positions opened in fixed income securities or in credit derivatives to movements in credit spread curves or in recovery rates associated with issuers and specific types of debt. The spread is a differential between financial instruments that trade with a spread over other reference instruments, mainly the yield on government securities and interbank rates.

- The **commodities price risk** is the risk derived from the effect of potential changes in prices. The Group's exposure to this risk is not significant and is concentrated in derivative operations on commodities with clients.

- The **volatility risk** is the risk or sensitivity of the value of a portfolio to changes in the volatility of risk factors: interest rates, exchange rates, shares, credit spreads and commodities. This risk is incurred by financial instruments which have volatility as a variable in their valuation model. The most significant case is portfolios of financial options.

All these market risks can be partly or fully mitigated by using options, futures, forwards and swaps.

There are **other types of market risk**, whose coverage is more complex. They are the following:

- **Correlation risk** is the sensitivity of the value of a portfolio to changes in the relation between risk factors, be they of the same type (for example, between two exchange rates) or of a different nature (for example, between an interest rate and the price of a commodity).

- **Market liquidity risk** is that of a Group entity or the Group as whole finding itself unable to get out of or close a position in time without impacting on the market price or on the cost of the transaction. This risk can be caused by a fall in the number of market makers or institutional investors, the execution of large volumes of operations and market instability, increasing with the concentration existing in certain products and currencies.

- **Risk of prepayment or cancellation.** When in certain operations the contract allows, explicitly or implicitly, cancellation before the maturity without negotiation there is a risk that the cash flows have to be reinvested at a potentially lower interest rate. This mainly affects loans or mortgage securities.

- **Underwriting risk.** This occurs as a result of an entity's participation in underwriting a placement of securities or another type of debt, assuming the risk of partially owning the issue or the loan due to non-placement of all of it among potential buyers.

Pension, actuarial and fiduciary risks, which are described later on, also depend on movements in market factors.

On the basis of the finality of the risk, activities are segmented in the following way:

a) **Trading:** financial services to customers and purchase-sale and positioning mainly in fixed-income, equity and currency products. The Global Banking and Markets (GBM) division is mainly responsible for managing it.

b) **Structural risks:** we distinguish between balance sheet risks and pension and actuarial risks:

b1) Structural balance sheet risks: market risks inherent in the balance sheet excluding the trading portfolio. Management decisions on these risks are taken by the ALCO committees of each country in coordination with the Group's ALCO committee and are executed by the financial management division. This management seeks to inject stability and recurrence into the financial margin of commercial activity and to the Group's economic value, maintaining adequate levels of liquidity and solvency. The risks are:

- **Structural interest rate risk.** This arises from mismatches in the maturities and repricing of all assets and liabilities.

- **Structural exchange rate risk/hedging** of results. Exchange rate risk occurs when the currency in which the investment is made is different from the euro in companies that consolidate and those that do not (structural exchange rate). In addition, the positions of exchange rate hedging of future results generated in currencies other than the euro (hedging of results) are also included.

- **Structural equity risk.** This involves investments via stakes in financial or non-financial companies that are not consolidated, as well as portfolios available for sale formed by equity positions.

b2) Pension and actuarial risk

- **Pension risk:** the risk assumed by the Bank in relation to the pension commitments with its employees. The risk lies in the possibility that the fund does not cover these commitments in the period of accrual of the provision and the profitability obtained by the portfolio is not sufficient and obliges the Group to increase the level of contributions.

- **Actuarial risk:** unexpected losses produced as a result of an increase in the commitments with the insurance takers, as well as losses from an unforeseen rise in costs.

7.2. Trading market risks

7.2.1. Main magnitudes and evolution

Grupo Santander's trading risk profile remained low in 2014, in line with previous years, due to the fact that most of the activity involves providing services to its clients, as well as geographic diversification and by risk factor.

7.2.1.1. VaR analysis[19]

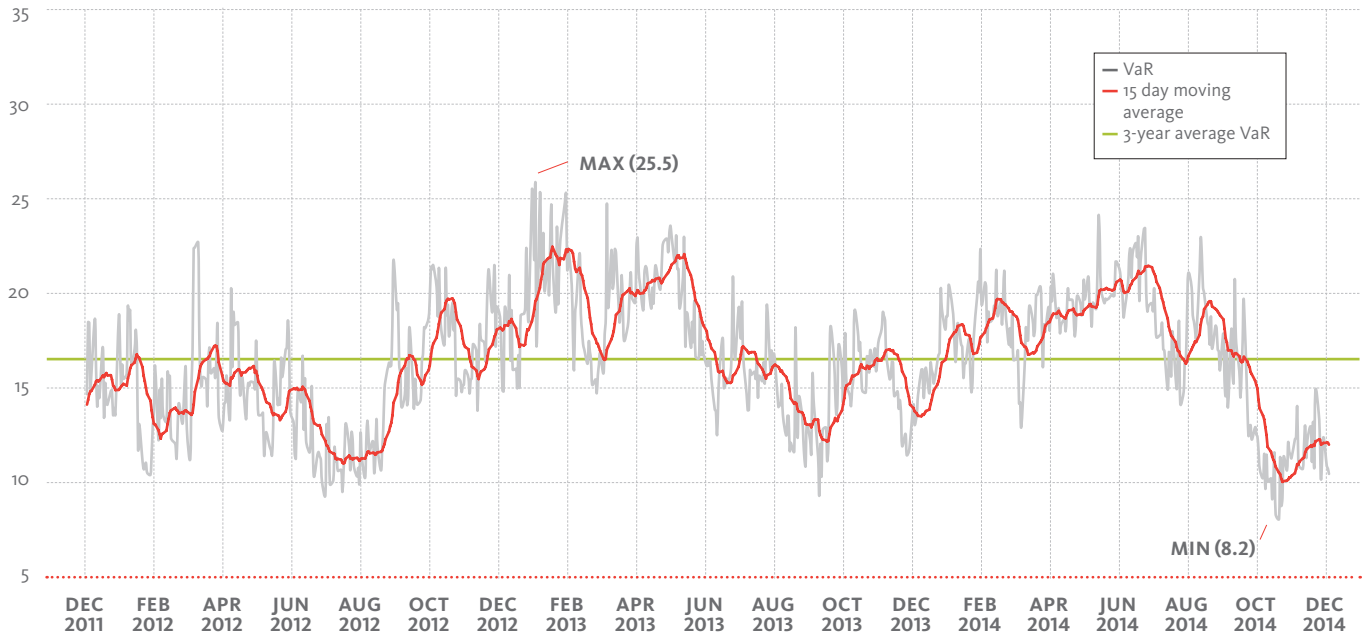
Grupo Santander maintained its strategy of concentrating its trading activity on customer business, minimising where possible exposures of directional risk opened in net terms. This was reflected in the VaR evolution of the trading portfolio of global wholesale banking, which was around the average of the last three years and ended 2014 at EUR 10.5 million[20].

19. The definition and methodology for calculating VaR is in section 7.2.2.1.

20. Relative to the trading activity of global wholesale banking (GWB) in financial markets. As well as the trading activity of GWB, there are other positions catalogued for accounting purposes. The total VaR of trading of this accounting perimeter was EUR 11.3 million.

Evolution of VaR 2012- 2014

Million euros. VaR at 99%, with a time frame of one day



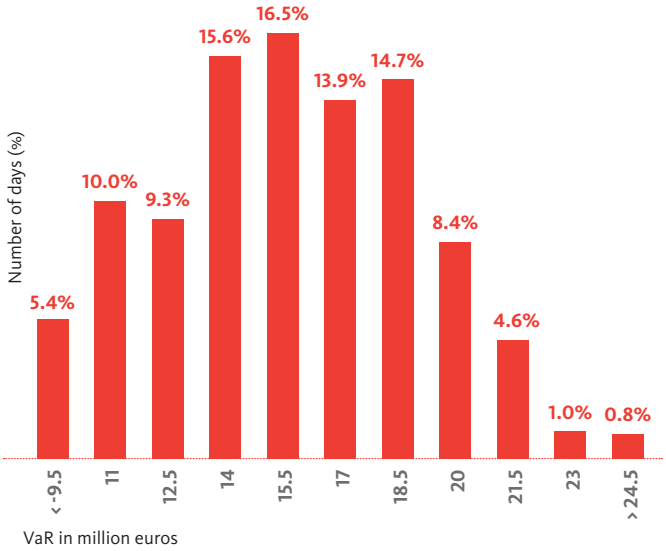
VaR during 2014 fluctuated between EUR 8.2 million and EUR 23.8 million. The main increases were linked to the Brazilian Treasury's changes in exposure to exchange rates and Spain's Treasury to interest rates and credit spreads.

The average VaR in 2014 was EUR 16.9 million, very similar to the two previous years (EUR 17.4 million in 2013 and EUR 14.9 million in 2012) for the reason already mentioned of the concentration of activity in customers.

The histogram below shows the distribution of average risk in terms of VaR between 2012 and 2014 where the accumulation of days with levels between EUR 9.5 million and EUR 21.5 million can be seen (93%). The higher values of EUR 21.5 million (2%) were concentrated in periods mainly affected by one-off rises of volatility in the Brazilian currency and by the euro zone's sovereign debt crisis.

VaR risk histogram

Var at 99% with a time frame of one day.
Number of days (%) in each range



Risk by factor

The average and year-end values in VaR terms at 99% for the last three years, as well as their minimum and maximum values and the expected shortfall (ES) at 97.5%[21] in 2014, were as follows:

VaR statistics by risk factor[22, 23]

Million euros. VaR at 99% and ES at 97.5%, with a time frame of one day

		2014					2013		2012	
		VaR (99%)				ES (97.5%)	VaR		VaR	
		Minimum	Average	Maximum	Year-end	Year-end	Average	Year-end	Average	Year-end
Total trading	**Total**	**8.2**	**16.9**	**23.8**	**10.5**	**11.4**	**17.4**	**13.1**	**14.9**	**18.5**
	Diversification effect	**(5.2)**	**(13.0)**	**(27.9)**	**(9.3)**	**(9.9)**	**(16.2)**	**(12.3)**	**(15.2)**	**(13.5)**
	Interest rate VaR	8.1	14.2	22.2	10.5	11.7	12.7	8.5	11.8	12.0
	Equity VaR	1.1	2.7	8.9	1.8	1.3	5.6	4.7	7.0	7.1
	FX VaR	1.3	3.5	10.2	2.9	2.8	5.4	4.7	5.0	3.5
	Credit spread VaR	4.2	9.3	15.9	4.6	5.3	9.6	7.2	6.1	9.1
	Commodities VaR	0.1	0.3	0.5	0.1	0.2	0.3	0.3	0.4	0.3
Europe	**Total**	**5.9**	**12.2**	**18.0**	**7.3**	**7.3**	**13.9**	**9.9**	**11.0**	**16.4**
	Diversification effect	**(1.9)**	**(9.2)**	**(22.8)**	**(5.5)**	**(5.8)**	**(14.1)**	**(9.0)**	**(12.9)**	**(9.9)**
	Interest rate VaR	4.6	8.9	13.0	6.2	6.3	9.3	6.6	7.9	6.8
	Equity VaR	0.8	1.7	8.1	1.0	0.8	4.3	2.6	6.2	6.3
	FX VaR	0.7	2.9	9.8	1.5	1.8	5.2	3.7	4.1	4.0
	Credit spread VaR	2.7	7.6	14.1	3.9	4.1	9.0	5.8	5.4	8.9
	Commodities VaR	0.1	0.3	0.5	0.1	0.2	0.3	0.3	0.4	0.3
Latin America	**Total**	**6.3**	**12.3**	**26.7**	**9.8**	**10.1**	**11.1**	**6.9**	**10.1**	**8.9**
	Diversification effect	**0.4**	**(3.5)**	**(12.2)**	**(12.2)**	**(3.7)**	**(5.3)**	**(6.7)**	**(6.4)**	**(3.8)**
	Interest rate VaR	5.2	11.8	24.2	9.8	10.6	9.6	5.9	8.8	8.8
	Equity VaR	0.7	2.1	5.0	3.0	1.4	3.2	2.9	3.1	1.6
	FX VaR	0.7	2.0	9.2	9.2	1.9	3.5	4.7	3.1	1.3
US and Asia	**Total**	**0.4**	**0.7**	**1.6**	**0.7**	**0.9**	**0.8**	**0.5**	**0.9**	**0.8**
	Diversification effect	**(0.1)**	**(0.3)**	**(1.0)**	**(0.2)**	**(0.7)**	**(0.4)**	**(0.2)**	**(0.5)**	**(0.3)**
	Interest rateVaR	0.3	0.7	1.6	0.7	0.7	0.7	0.5	0.7	0.6
	Equity VaR	0.0	0.1	0.5	0.0	0.0	0.1	0.0	0.2	0.1
	FX VaR	0.1	0.3	0.6	0.2	0.9	0.4	0.2	0.6	0.4
Global activities	**Total**	**1.6**	**2.3**	**9.0**	**1.9**	**2.2**	**1.5**	**2.0**	**2.7**	**1.2**
	Diversification effect	**0.0**	**(0.6)**	**(3.4)**	**(0.6)**	**(0.5)**	**(0.3)**	**(0.5)**	**(0.6)**	**(0.3)**
	Interest rate VaR	0.2	0.6	3.0	0.4	0.4	0.3	0.4	0.3	0.2
	Credit spread VaR	1.4	2.2	9.3	1.9	2.1	1.5	2.1	2.6	1.3
	FX VaR	0.0	0.0	0.2	0.2	0.2	0.1	0.0	0.4	0.1

21. Item 7.2.2.2. sets out the definition of this metric. Following the recommendation of the Basel Committee in its "Fundamental review of the trading book: A revised market risk framework" (October 2013), the confidence level of 97.5% means approximately a risk level similar to that which the VaR captures with a 99% confidence level.

22. The VaR of global activities includes operations that are not assigned to any particular country.

23. In Latin America, United States and Asia, the VaR levels of the credit spread and commodity factors are not shown separately because of their scant or zero materiality.

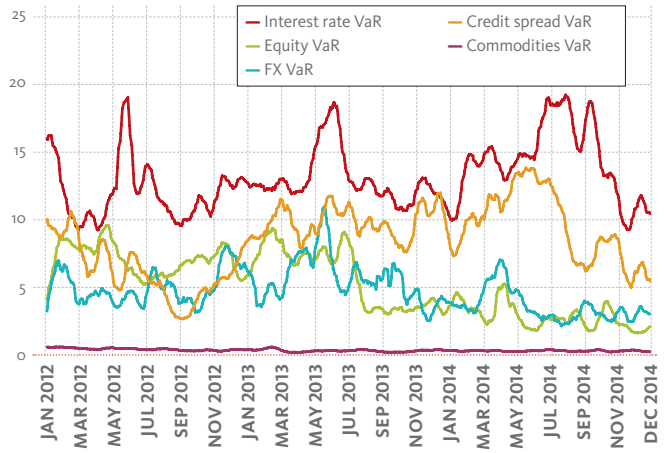
The proximity of the expected shortfall to VaR shows that the risk of high losses of low probability (tail risk) is not high, at least bearing in mind the historic window of the last two years.

The average VaR dropped a little in 2014 by EUR 0.4 million, and by EUR 2.5 million if compared with the year-end figures. By risk factor, the average VaR increased in interest rates and dropped in exchange rates, equities and credit spread. By geographic zones, it rose in Latin America and Global Activities and declined in Europe, United States and Asia.

The Var evolution by risk factor in general was stable in the last few years. The transitory rises in VaR of various factors is explained more by transitory increases in the volatility of market prices than by significant changes in positions.

VaR by risk factor

Million euros. VaR at 99% with a time frame of one day (15 day moving average)



Lastly, the table below compares the VaR figures with stressed VaR figures[24] for trading activity in Spain and Brazil, whose treasuries were those that experienced the Group's largest average VaR in 2014.

Stressed VaR statistics vs, VaR in 2014: treasuries in Spain and Brazil

Million euros. Stressed VaR and VaR at 99% with time frame of one day

		2014				2013	
		Min	Avg.	Max	Year-end	Avg.	Year-end
Spain	VaR (99%)	3.2	7.1	12.9	4.1	10.7	2.3
	Stressed VaR (99%)	7.9	15.3	24.8	21.4	12.2	5.7
Brazil	VaR (99%)	4.9	10.4	23.7	8.5	9.1	4.8
	Stressed VaR (99%)	6.0	14.2	35.3	25.6	17.2	11.4

7.2.1.2. Gauging and contrasting measures

The real losses can differ from the forecasts by the VaR for various reasons related to the limitations of this metric, which is set out in detail later in the section on the methodologies. The Group regularly analyses and contrasts the accuracy of the VaR calculation model in order to confirm its reliability.

The most important test consists of backtesting exercises, analysed at the local and global levels and in all cases with the same methodology. Backtesting consists of comparing the forecast VaR measurements, with a certain level of confidence and time frame, with the real results of losses obtained in a same time frame. This enables anomalies in the VaR model of the portfolio in question to be detected (for example, shortcomings in the parameterisation of the valuation models of certain instruments, not very adequate proxies, etc).

Santander calculates and evaluates three types of backtesting:

- "Clean" backtesting: the daily VaR is compared with the results obtained without taking into account the intraday results or the changes in the portfolio's positions. This method contrasts the effectiveness of the individual models used to assess and measure the risks of the different positions.
- Backtesting on complete results: the daily VaR is compared with the day's net results, including the results of the intraday operations and those generated by commissions.
- Backtesting on complete results without mark-ups or commissions: the daily VaR is compared with the day's net results from intraday operations but excluding those generated by mark-ups and commissions. This method aims to give an idea of the intraday risk assumed by the Group's treasuries.

For the first case and the total portfolio, there was one exception in 2014 of Value at Earnings (VaE)[25] at 99% (days when the daily loss was higher than the VaR) on June 6, mainly due to Mexico because of the drop in sovereign yield curves and swaps (nominal and indexed to inflation UDI), following the Bank of Mexico's cut of 50 b.p. to 3% in the benchmark interest rate, which was not discounted by the market.

There was also an exception of VaR at 99% (days when the daily loss was higher than the VaR) on October 16, mainly due to Spain, because of the rise in credit spreads in Europe and the decline in stock market indexes.

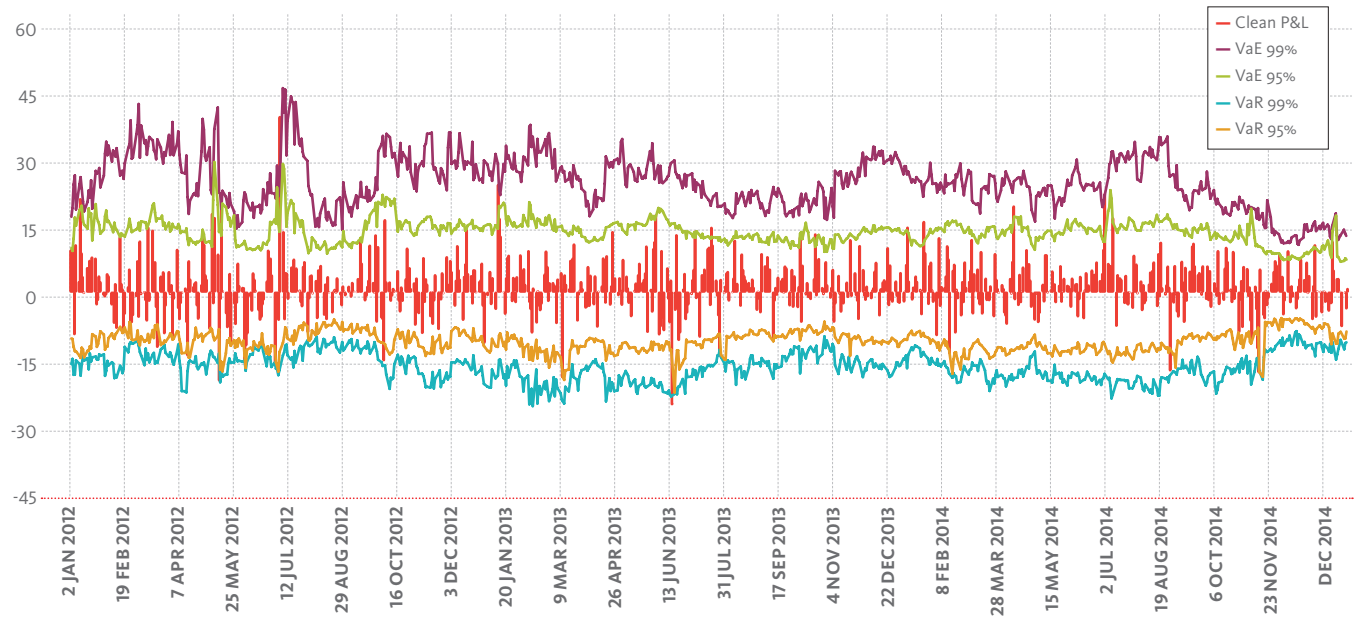
The number of exceptions responded to the expected performance of the VaR calculation model, which works with a confidence level of 99% and an analysis period of one year (over a longer period of time, an average of two or three exceptions a year is expected).

24. Description in 7.2.2.2.

25. The definition and methodology of the VaE calculation is contained in 7.2.2.1.

Backtesting of business portfolios: daily results versus previous day's value at risk

Million euros



7.2.1.3. Distribution of risks and management results[26]

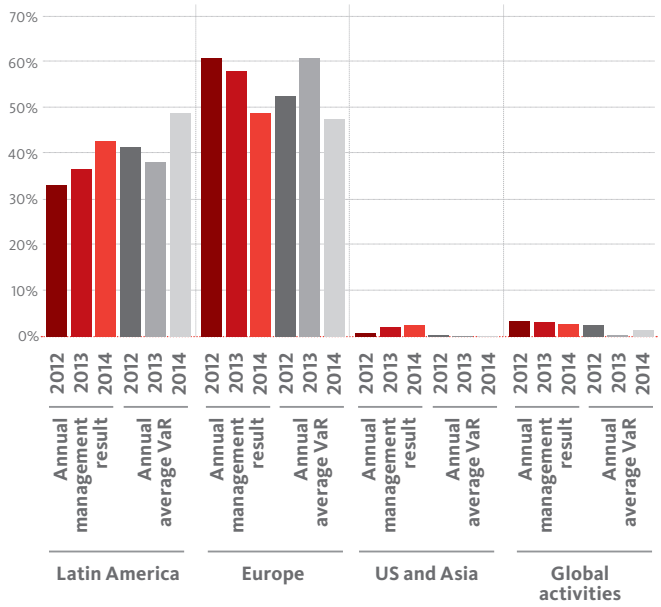
7.2.1.3.1. Geographic distribution

In trading activity, the average contribution of Latin America to the Group's total VaR in 2014 was 49.4% compared with a contribution of 44.7% in economic results. Europe, with 48.6% of global risk, contributed 49.1% of results. In relation to prior years, there was a gradual homogenisation in the profile of activity in the Group's different units, focused generally on providing service to professional and institutional clients.

Below is the geographic contribution (by percentage) to the Group total, both in risks, measured in VaR terms, as well as in results, measured in economic terms.

VaR binomial-management results: geographic distribution

Average VaR (at 99% with a time frame of one day) and annual accumulated management result (million euros) % of annual totals



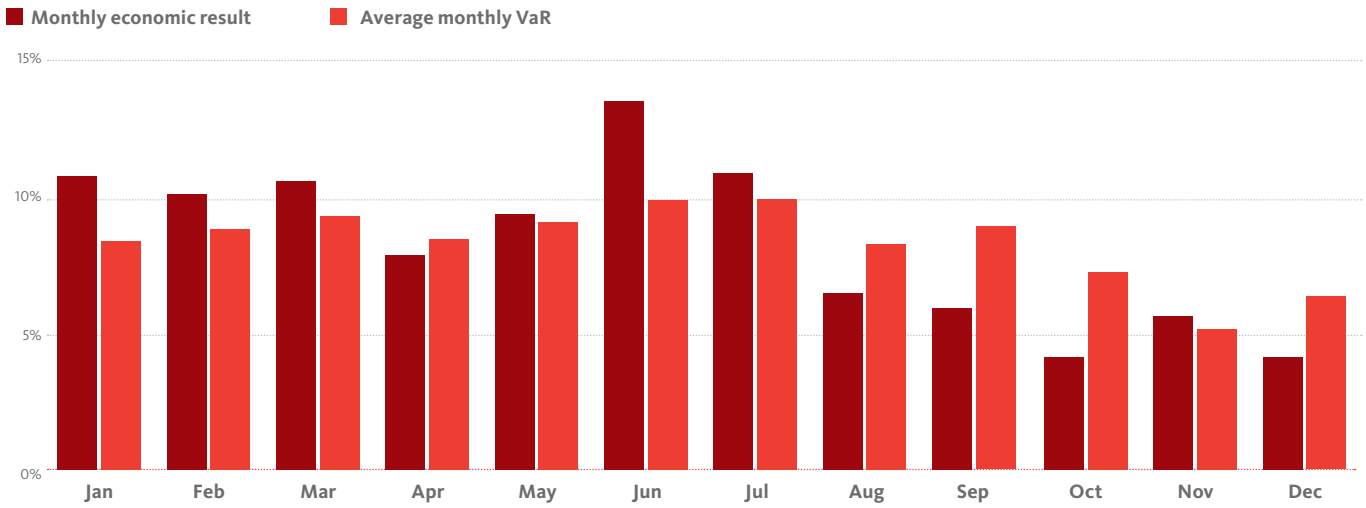
7.2.1.3.2. Distribution of risk by time

The next chart shows the risk assumption profile, in terms of VaR, compared to results in 2014. The average VaR remained relatively stable, although on a downward path to some extent in the second half of the year, while results evolved in a more irregular way during the year. January and June were positive months and from August less positive.

26. Results in terms that can be likened to the gross margin (excluding operating expenses, the only cost is financial).

Distribution of risk by time and results in 2014: percentages of annual totals

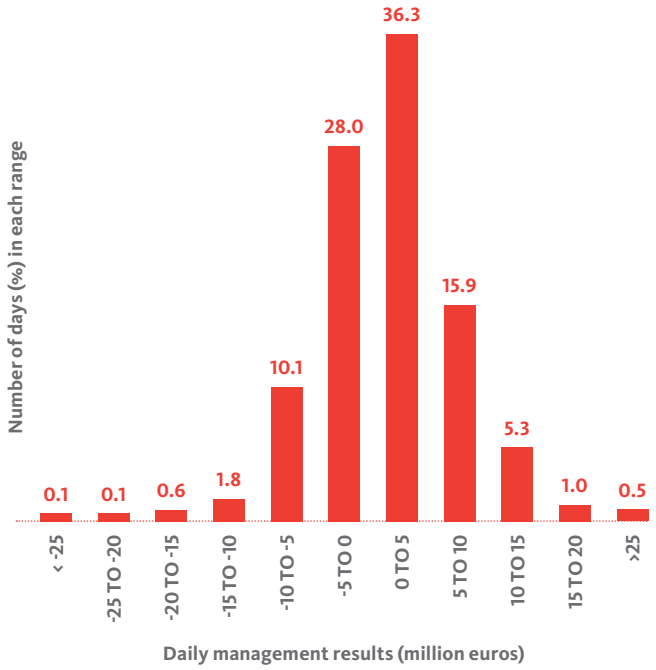
VaR (at 99% with a time frame of one day) and annual accumulated management result (million euros). % of annual totals



The following histogram of frequencies shows the distribution of daily economic results on the basis of their size between 2012 and 2014. The daily yield[27] was between -EUR 15 and +EUR 15 million on more than 97% of days when the market was open.

Histogram of the frequency of daily results (MtM)

Daily results of management "clean" of commissions and intraday operations (million euros). Number of days (%) in each range



7.2.1.4. Risk management of derivatives

Derivatives activity is mainly focused on marketing investment products and hedging risks for clients. Management is focused on ensuring that the net risk opened is the lowest possible.

These transactions include options on equities, fixed-income and exchange rates. The units where this activity mainly takes place are: Spain, Santander UK, and, to a lesser extent, Brazil and Mexico.

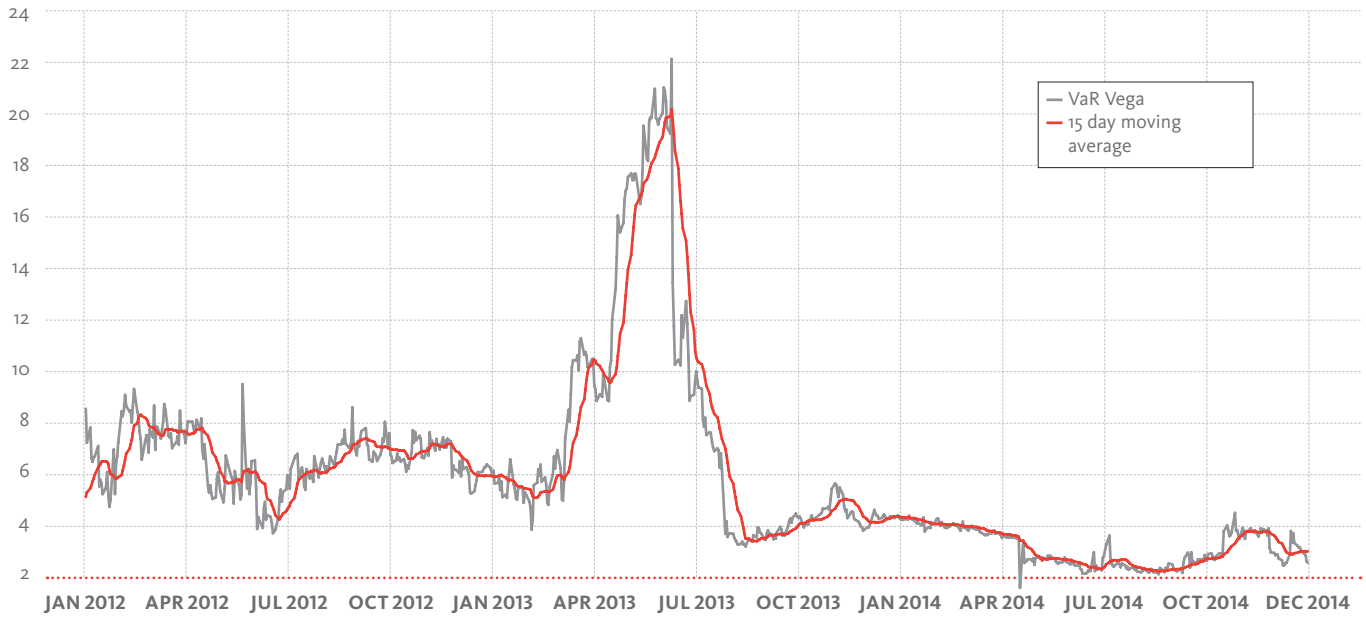
The chart below shows the VaR Vega[28] performance of structured derivatives business over the last three years. It fluctuated at around an average of EUR 6 million. In general, the periods with higher VaR levels related to episodes of significant rises in volatility in the markets. The evolution of VaR Vega in the second quarter of 2013 was the result of the increased volatility of euro and US dollar interest rate curves, coinciding with a strategy of hedging client operations of significant amounts. The VaR Vega during 2014 gradually declined due to greater market tranquillity.

27. Yields "clean" of commissions and results of intraday derivative operations.

28. Vega, a Greek term, means here the sensitivity of the value of a portfolio to changes in the price of market volatility.

Evolution of risk (VaR) of the business of financial derivatives

Million euros. VaR at 99% with a time frame of one day



As regards the VaR by risk factor, on average, the exposure was concentrated, in this order, in interest rates, equities, exchange rates and commodities. This is shown in the table below:

Financial derivatives. Risk (VaR) by risk factor

Million euros. VaR at 99% with a time frame of one day

	2014				2013		2012	
	Minimum	Average	Maximum	Year-end	Average	Year-end	Average	Year-end
Total VaR Vega	**1.7**	**3.3**	**4.7**	**2.7**	**8.0**	**4.5**	**6.8**	**6.5**
Diversification impact	0.1	(2.1)	(8.4)	(2.6)	(3.8)	(2.7)	(3.0)	(3.4)
Interest rate VaR	1.2	2.4	4.3	1.7	6.6	4.1	2.3	2.8
Equity VaR	0.5	1.8	3.6	2.0	3.4	1.8	6.5	5.5
FX VaR	0.0	1.2	7.2	1.6	1.7	1.3	0.7	1.3
Commodities VaR	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.2

As regards the distribution by business unit, the exposure is concentrated, in this order, in Spain, Santander UK, Mexico and Brazil.

Financial derivatives. Risk (VaR) by unit

Million euros. VaR at 99% with a time frame of one day

	2014				2013		2012	
	Minimum	Average	Maximum	Year-end	Average	Year-end	Average	Year-end
Total VaR Vega	**1.7**	**3.3**	**4.7**	**2.7**	**8.0**	**4.5**	**6.8**	**6.5**
Spain	1.3	2.4	3.9	1.5	7.0	3.8	5.9	5.4
Santander UK	0.9	1.4	1.9	0.9	2.2	1.6	2.8	2.0
Brazil	0.3	0.8	7.2	0.7	1.2	0.9	1.0	2.8
Mexico	0.6	0.9	1.7	1.3	1.2	1.2	0.7	0.6

The average risk in 2014 (EUR 3.3 million) is low compared to the last three years, for the previously explained reasons.

Grupo Santander continues to have a very limited exposure to instruments or complex structured vehicles, reflecting a management culture one of whose hallmarks is prudence in risk management. At the end of 2014, the Group had:

- CDOs and CLOs: the position continues to be not very significant (EUR 99 million).
- Hedge funds: the total exposure is not significant (EUR 192 million at the end of 2014) and most of it is via the financing of these funds (EUR 20 million), with the rest direct participation in portfolio or via counterparty by derivatives to hedge funds. This exposure has low loan-to-value levels of around 31% (collateral of EUR 620 million at the end of 2014). The risk with this type of counterparty is analysed case by case, establishing percentages of collateralisation on the basis of the features and assets of each fund.
- Conduits: no exposure.
- Monolines: Santander's exposure to bond insurance companies (monolines) was EUR 137 million[29] at the end of 2014, mainly indirect exposure, and EUR 136 million by virtue of the guarantee provided by this type of entity to various financing or traditional securitisation operations. The exposure in this case is to double default, as the primary underlying assets are of high credit quality. The small remaining amount is direct exposure (for example, via purchase of protection from the risk of non-payment by any of these insurance companies through a credit default swap). The exposure was 2% lower than in 2013.

In short, the exposure to this type of instrument, as the result of the Group's usual operations, continued to decline in 2014. This was mainly due to the integration of positions of institutions acquired by the Group, as Sovereign in 2009. All these positions were known at the time of purchase, having been duly provisioned. These positions, since their integration in the Group, have been notably reduced, with the ultimate goal of eliminating them from the balance sheet.

Santander's policy for approving new transactions related to these products remains very prudent and conservative. It is subject to strict supervision by the Group's senior management. Before approving a new transaction, product or underlying asset, the risks division verifies:

- The existence of an appropriate valuation model to monitor the value of each exposure: Mark-to-Market, Mark-to-Model or Mark-to-Liquidity.
- The availability in the market of observable data (inputs) needed to be able to apply this valuation model.

And provided these two points are always met:

- The availability of appropriate systems, duly adapted to calculate and monitor every day the results, positions and risks of new operations.
- The degree of liquidity of the product or underlying asset, in order to make possible their coverage when deemed opportune.

7.2.1.5. Issuer risk in trading portfolios

Trading activity in credit risk is mainly conducted in the Treasury Units in Spain. It is done by taking positions in bonds and credit default swaps (CDS) at different maturities on corporate and financial references, as well as indexes (Itraxx, CDX).

The table below shows the largest positions at the end of the year, distinguishing between long positions (bond purchase or protection sale via CDS) and short positions (bond sale or purchase protection via CDS):

Million euros. Data at 31 December 2014

	Largest "long" positions (protection sale)		Largest "short" positions (protection purchase)	
	Exposure at default (EaD)	% of total EaD	Exposure at default (EaD)	% of total EaD
1st reference	213	5.5%	(48)	6.2%
2nd reference	129	3.3%	(27)	3.4%
3rd reference	128	3.3%	(26)	3.4%
4th reference	97	2.5%	(24)	3.1%
5th reference	85	2.2%	(19)	2.5%
Top 5 sub-total	**651**	**16.9%**	**(144)**	**18.5%**
Total	**3,848**	**100.0%**	**-775**	**100.0%**

Note: zero recoveries are supposed (LCR=0) in the EaD calculation

29. Guarantees provided by monolines for bonds issued by US states (municipal bonds) are not considered as exposure. They amounted to EUR 744 million at the end of 2014.

7.2.1.6. Analysis of scenarios

Various stress scenarios were calculated and analysed regularly in 2014 (at least monthly) at the local and global levels for all the trading portfolios and using the same assumptions by risk factor.

Maximum volatility scenario (worst case)

This scenario is given particular attention as it combines historic movements of risk factors with an ad-hoc analysis in order to reject very unlikely combinations of variations (for example, sharp falls in stock markets together with a decline in volatility). As regards the variations, an historic volatility equivalent to six standard deviations is applied. The scenario is defined by taking for each risk factor the movement which represents the greatest potential loss in the portfolio, rejecting the most unlikely combinations in economic-financial terms. For year-end, that scenario implied, for the global portfolio, interest rate rises, falls in stock markets, depreciation of all currencies against the euro, rise in credit spreads and mixed volatility movements. The following table shows the results of this scenario at the end of 2014.

Maximum volatility stress scenario (worst case)

Million euros. Dec-31-14

	Interest rates	Equities	Exchange rates	Credit Spread	Commodities	Total
Total trading	**(33.6)**	**(10.0)**	**(10.5)**	**(26.7)**	**(0.2)**	**(81.0)**
Europe	(3.4)	(0.7)	(3.3)	(23.7)	(0.2)	(31.4)
Latin America	(27.9)	(9.3)	(4.6)	0.0	0.0	(41.8)
US	(1.3)	0.0	(2.1)	0.0	0.0	(3.5)
Global activities	(0.8)	0.0	(0.5)	(3.0)	0.0	(4.3)
Asia	(0.1)	0.0	(0.5)	0.0	0.0	(0.1)

The stress test shows that the economic loss suffered by the Group in its trading portfolios, in terms of the mark to market (MtM) result would be, if the stress movements defined in the scenario materialized in the market, EUR 81.0 million, a loss that would be concentrated in Latin America (in this order, interest rates, equities and exchange rates) and Europe (basically concentrated in credit spreads).

Other global stress test scenarios

Various global scenarios (similar for all the Group's units) are established:

Abrupt crisis: ad hoc scenario with very sudden movements in markets. Rise in interest rate curves, sharp falls in stock markets, large appreciation of the dollar against the rest of currencies, rise in volatility and in credit spreads.

11S Crisis: historic scenario of the 11 September 2001 attacks with a significant impact on the US and global markets. It is sub-divided into two scenarios: 1) maximum accumulated loss until the worst moment of the crisis and 2) maximum loss in a day. In both cases, there are drops in stock markets and in interest rates in core markets and rises in emerging markets, and the dollar appreciates against the rest of currencies.

Subprime crisis: Historic scenario of the US mortgage crisis. The objective of the analysis is to capture the impact on results of the reduction in liquidity in the markets. The scenarios have two time frames (one day and 10 days): in both cases there are falls in stock markets and in interest rates in core markets and rises in emerging markets, and the dollar appreciates against the rest of currencies.

Sovereign crisis: the severest historic scenario for banks carried out by the Committee of European Banking Supervisors (CEBS) to measure the market's shock capacity between April 15 and September 1, 2010. Given the Group's international sphere, four geographic zones are distinguished (US, Europe, Latin America and Asia), interest rate rises, falls in stock markets and volatilities are established, rises in credit spreads and depreciation of the euro and Latin American currencies and appreciation of Asian currencies against the dollar.

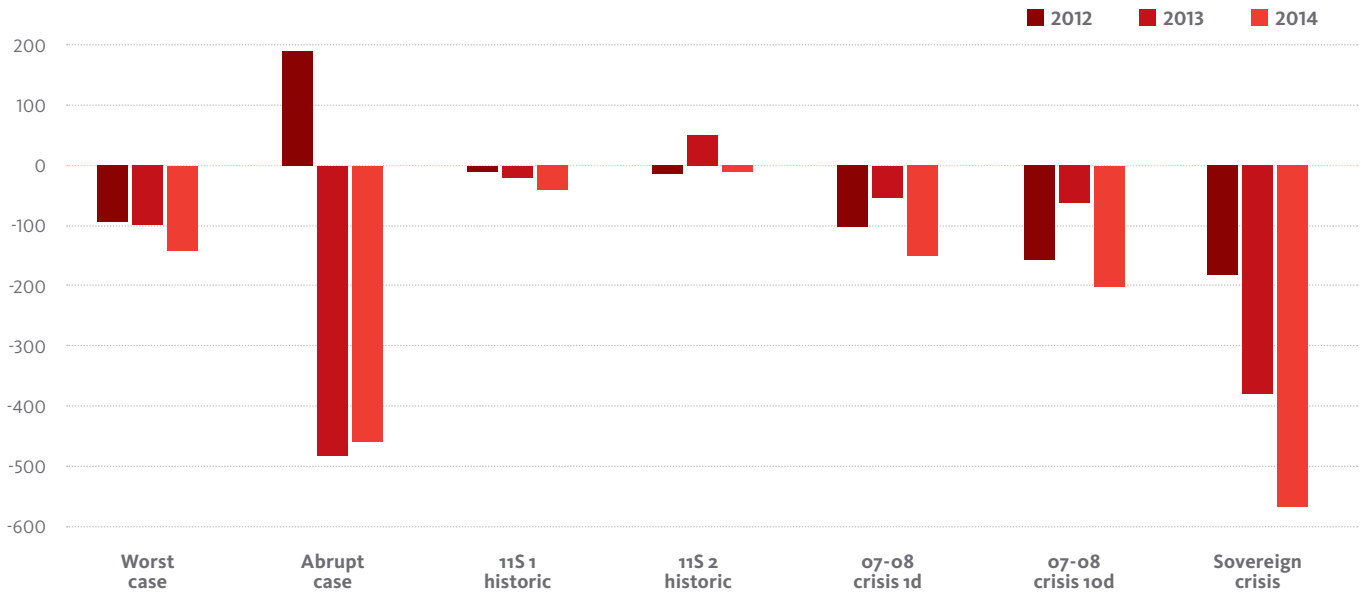
As of November 2014, this latter scenario has been replaced by the adverse scenario proposed by the EBA in April in its stress test exercise ("The EBA 2014 EU-Wide Stress Test"), obtaining a result of EUR 223.9 million at December 31, 2014.

Every month a consolidated stress test report is drawn up, supervised by the global committee of market risks, with explanations of the main changes in results for the various scenarios and units. An early warning mechanism has also been established so that when the loss of a scenario is high in historic terms and/or the capital consumed by the portfolio in question, the relevant business executive is informed.

Here we show the results of the global scenarios for the last three years.

Stress test results: comparison of the 2012-2014 scenarios (annual averages)

Million euros



7.2.1.7. Linkage with balance sheet items. Other alternative risk measures

Below are the balance sheet items of the Group's consolidated position that are subject to market risk, distinguishing the positions whose main risk metric is the VaR from those where monitoring is carried out with other metrics. The items subject to the risk of market trading are set out.

Relation of risk metrics with balances of group's consolidated position

Million euros. dec-31-14

		Main market risk metrics		
	Balance	VaR	Others	Main risk factor for balance in "·others"
Assets subject to market risk	**1,266,296**	**196,351**	**1,069,945**	
Cash and deposits in central banks	69,428	-	69,428	Interest rate
Trading portfolios	148,888	147,012	1,876	Interest rate, credit spread
Other financial assets at reasonable value	42,673	41,993	680	Interest rate, credit spread
Financial assets available for sale	115,250	-	115,250	Interest rate, equities
Equity stakes	3,471	-	3,471	Equities
Hedging derivatives	7,346	7,346	-	Interest rate
Lending	781,635	-	781,635	Interest rate
Other financial assets [1]	35,798	-	35,798	Interest rate
Other no-financial assets [2]	61,807	-	61,807	
Liabilities subject to market risk	**1,266,296**	**178,805**	**1,087,491**	
Trading portfolio	109,792	109,249	543	Interest rate, credit spread
Other financial liabilities at reasonable value	62,317	62,301	16	Interest rate, credit spread
Hedging derivatives	7,255	7,255	-	
Financial liabilities at amortised cost [3]	961,083	-	961,083	Interest rate
Provisions	15,376	-	15,376	Interest rate
Other financial liabilities	10,113	-	10,113	Interest rate
Equity	89,714	-	89,714	
Other non-financial liabilities	10,646	-	10,646	

1. Includes adjustments to macro hedging, non-current assets on sale, assets for reinsurance, and insurance contracts linked to pensions and fiscal assets.
2. Includes intangible assets, material assets and other assets.
3. Adjusted for macro hedging.

For activity managed with metrics different to the VaR, alternative measures are used, mainly: sensitivity to different risk factors (interest rate, credit spread, etc).

In the case of the trading portfolio, the securitisations and "level III" exposures (those in which not observable market data constitute significant inputs in their corresponding internal models of valuation) are excluded from VaR measurement.

Securitisations are mainly treated as if they were credit risk portfolio (in terms of default, rate of recovery, etc). For "level III" exposures, which are not very significant in Grupo Santander (basically derivatives linked to the home price index (HPI) in market activity in Santander UK, and the not very significant portfolio of illiquid CDOs in the parent bank's market activity), as well as in general for inputs that cannot be observed in the market (correlation, dividends, etc), a very conservative policy is followed, reflected in valuation adjustments as well as sensitivity.

7.2.2. Methodologies

7.2.2.1. Value at Risk (VaR)

The standard methodology that Grupo Santander applied to trading activities during 2014 was Value at Risk (VaR), which measures the maximum expected loss with a certain confidence level and time frame. The standard for historic simulation is a confidence level of 99% and a time frame of one day. Statistical adjustments are applied enabling the most recent developments that condition the levels of risk assumed to be efficiently and quickly incorporated. A time frame of two years or at least 520 days from the reference date of the VaR calculation is used, obtained from the reference date of calculating the VaR. Two figures are calculated every day, one applying an exponential decline factor which accords less weight to the observations furthest away in time and another with the same weight for all observations. The reported VaR is the higher of the two.

The Value at Earnings (VaE) is also calculated, which measures the maximum potential gain with a certain level of confidence and time frame, applying the same methodology as for the VaR.

The VaR by historic simulation has many advantages as a risk metric (it sums up in a single number the market risk of a portfolio, is based on market movements that really occurred without the need to make assumptions of formal functions nor of correlations between market factors, etc), but also has limitations.

Some limitations are intrinsic to the VaR metrics, regardless of the methodology used for its calculation, including:

- The VaR calculation is calibrated at a certain level of confidence which does not indicate the levels of possible losses beyond it.
- There are some products in the portfolio with a liquidity horizon greater than that specified in the VaR model.
- The VaR is a static analysis of the risk of the portfolio, and the situation could change significantly during the following day, although the likelihood of this occurring is very low.

Other limitations come from using the historic simulation methodology:

- High sensitivity to the historic window used.
- Incapacity to capture plausible events of big impact if they do not occur in the historic window used.
- The existence of parameters of valuation with no market input (such as correlations, dividend and recovery rate).
- Slow adjustment to the new volatilities and correlations, if the most recent data receives the same weight as the oldest data.

Part of these limitations are corrected by using the stressed VaR and expected shortfall, the calculation of a VaR with exponential decline and applying conservative valuation adjustments. Furthermore, as previously stated, the Group regularly conducts analysis and backtesting of the accuracy of the VaR calculation model.

7.2.2.2. Stressed VaR (sVaR) and Expected Shortfall (ES)

As well as the usual VaR, Santander calculates every day a stressed VaR for the main portfolios. The methodology for calculation is the same as that used for the VaR, with the following two exceptions:

- Historic period of observation of factors: the stressed VaR uses a window of 250 days, instead of one of 520 for the VaR. Furthermore, it is not just the latest data that is used but a continuous period of stress relevant for the portfolio in question. As regards determining the period of observation, for each relevant portfolio, the methodology area has analysed the history of a subseries of market risk factors that were chosen on the basis of expert criteria and the most relevant positions of the books.
- In order to obtain the stressed VaR, unlike when calculating the VaR, the maximum between the percentile uniformly weighted and the one exponentially weighted is not applied. Instead, the percentile uniformly weighted is used directly.

Meanwhile, the expected shortfall (ES) is also calculated in order to estimate the expected value of the potential loss when this is higher than the level set by the VaR. The ES, unlike the VaR, has the advantage of capturing better the tail risk and of being a sub-additive metric[30]. With regard to the near future, the Basel Committee recommends replacing VaR with the expected shortfall as the reference metric for calculating the regulatory capital of the trading portfolios.[31] The committee believes that the confidence level of 97.5% is a risk level similar to that which VaR captures with a confidence level of 99%.

30. The sub-additive metric is one of the desirable properties which, according to financial literature, should present a coherent risk metric. This property establishes that f (a+b) be lower or equal to f(a)+f(b). Intuitively, it supposes that the more instruments or risk factors there are, the less risky a portfolio due to the benefits of diversification. VaR does not meet this property for certain distributions, while the ES always does.

31. "Fundamental review of the trading book: a revised market risk framework" (consultative documents of the Basel Committee on banking supervision, October 2013).

7.2.2.3. Analysis of scenarios

As well as VaR, the Group uses other measures that enable it to have greater control of the risks in all the markets in which it operates. These measures include analysis of scenarios, which consists of defining alternatives to the performance of different financial variables and obtaining the impact on results of applying them on activities. These scenarios can replicate events that occurred in the past (such as a crisis) or determine plausible alternatives that do not correspond to past events.

The potential impact on results of applying different stress scenarios on all the trading portfolios and considering the same assumptions by risk factor is calculated and analysed regularly. As a minimum three types of scenarios are defined: plausible, severe and extreme, obtaining with the VaR a fuller spectrum of the risk profile.

In addition, levels of warning (triggers) are set for global scenarios, on the basis of the historic results of these scenarios and of the capital associated with the portfolio in question. In the event of surpassing these levels, those responsible for management of the portfolio are informed so they can take the necessary measures. At the same time, the results of the stress exercises at the global level, as well as the possible breaching of the levels set, are regularly reviewed and communicated to senior management if deemed pertinent.

7.2.2.4. Analysis of positions, sensitivities and results

The positions are used to quantify the net volume of market securities of the transactions in portfolio, grouped by main risk factor, considering the delta value of the futures and options that could exist. All the risk positions can be expressed in the base currency of the unit and in the currency for homogenising information. The changes in positions are controlled every day, in order to detect possible incidents that might occur and correct immediately.

The market risk sensitivity measures are those that estimate the variation (sensitivity) of the market value of an instrument or portfolio to changes in each of the risk factors. The sensitivity of value of an instrument to changes in market factors can be obtained through analytical approximations by partial derivatives or by the complete revaluation of the portfolio.

The daily drawing up of the income statement is an excellent indicator of risks, as it enables the impact of changes in financial variables on portfolios to be identified.

7.2.2.5. Derivative activities and credit management

Also noteworthy is the control of derivative activities and credit management which, because of its atypical nature, is conducted daily with specific measures. First, the sensitivities to price movements of the underlying asset (delta and gamma), volatility (vega) and time (theta) are controlled. Second, measures such as the sensitivity to the spread, jump-to-default, concentrations of positions by level of rating, etc, are reviewed systematically.

As regards the credit risk inherent in the trading portfolios, and in line with the recommendations of the Basel Committee on Banking Supervision and prevailing regulations, an additional metric, the incremental risk charge (IRC), is calculated in order to cover the risk of non-compliance and of migration of rating that is not adequately captured in the VaR, via the variation of the corresponding credit spreads. The products controlled are basically fixed-income bonds, both public and private, derivatives on bonds (forwards, options, etc) and credit derivatives (credit default swaps, asset backed securities, etc). The method for calculating the IRC is based on direct measurements on the tails of the distribution of losses to the appropriate percentile (99.9%), with a time frame of one year. Monte Carlo methodology is used, applying one million simulations.

7.2.2.6. Credit Valuation Adjustment (CVA) and Debt Valuation Adjustment (DVA)

Grupo Santander incorporates credit valuation adjustment (CVA) and debt valuation adjustment (DVA) when calculating the results of trading portfolios. The CVA is a valuation adjustment of over-the-counter (OTC) derivatives, as a result of the risk associated with the credit exposure assumed by each counterparty.

The CVA is calculated by taking into account the potential exposure with each counterparty in each future maturity. The CVA for a certain counterparty would be equal to the sum of the CVA for all maturities. It is calculated on the basis of the following inputs:

- Expected exposure: including, for each operation the current market value (MtM) as well as the potential future risk (add-on) to each maturity. Mitigants such as collateral and netting contracts are taken into account, as well as a factor of temporary decay for those derivatives with intermediate payments.
- Severity: the percentage of final loss assumed in case of credit/non-payment of the counterparty.
- Probability of default: for cases where there is no market information (spread curve traded via CDS, etc) general proxies generated on the basis of companies with listed CDS of the same sector and external rating as the counterparty are used.
- Discount factors curve.

The DVA is a valuation adjustment similar to the CVA, but in this case as a result of Grupo Santander's risk that counterparties assume in the OTC derivatives.

7.2.3. System for controlling limits

Setting market risk and liquidity limits is designed as a dynamic process which responds to the Group's risk appetite level (described in section 4.4 of this report). This process is part of the annual limits plan, which is drawn up by the Group's senior management in a way that involves all the Group's institutions.

The market risk limits used in Grupo Santander are established on different metrics and try to cover all activity subject to market risk from many perspectives, applying a conservative criterion. The main ones are:

- VaR limits.
- Limits of equivalent positions and/or nominal.
- Sensitivity limits to interest rates.

- Vega limits.
- Risk limits of delivery by short positions in securities (fixed income and equities).
- Limits aimed at reducing the volume of effective losses or protecting results generated during the period:
  - Loss trigger.
  - Stop loss.
- Credit limits:
  - Limit on the total exposure.
  - Limit to the jump to default by issuer.
  - Others.
- Limits for origination operations.

These general limits are complemented by sub-limits. In this way, the market risk area has a structure of limits sufficiently granular to conduct an effective control of the various types of market risk factors on which an exposure is maintained. Positions are tracked daily, both of each unit as well as globally. An exhaustive control is made of the changes in the portfolios, in order to detect possible incidents for their immediate correction. Meanwhile, the daily drawing up of the income statement by the market risks area is an excellent indicator of risks, as it allows the impact that changes in financial variables have had on portfolios to be identified.

Three categories of limits are established on the basis of its sphere of approval and control: limits of approval and global controls, limits of global approval and local controls and limits of approval and local controls. The limits are requested by the business executive of each country/institution, tending to the particular nature of the business and achieving the budget established, seeking consistency between the limits and the risk/return ratio, and approved by the corresponding risk bodies.

The business units must at all times comply with the limits approved. In the event of a limit being exceeded, the local business executives have to explain, in writing and on the day, the reasons for the excess and the action plan to correct the situation, which in general can consist of reducing the position until it reaches the prevailing limits or set out the strategy that justifies an increase in the limits.

If the business unit fails to respond to the situation of excess within three days, the global business executives will be asked to set out the measures to be taken in order to make the adjustment to the existing limits. If this situation lasts for 10 days as of the first excess, senior risk management will be informed so that a decision can be taken, and the risk takers could be made to reduce the levels of risk assumed.

7.3. Structural balance sheet risks[32]

7.3.1. Main magnitudes and evolution

The market risk profile inherent in Grupo Santander's balance sheet, in relation to the volume of assets and shareholders' funds, as well as the financial margin budgeted, remained at low levels in 2014 and in line with previous years.

7.3.1.1. Structural interest rate risk

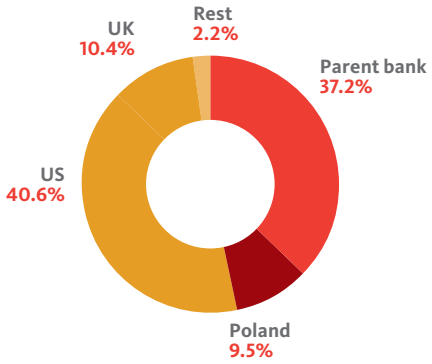
7.3.1.1. Europe and the United States

The main balances in Europe (parent bank and UK) show positive economic value sensitivities to interest rate rises, given the expectations of long-term rates on the basis of economic indicators, while short-term rates maintains a very low net interest margin (NIM) exposure. The US balance sheet has a positive sensitivity to short and well as long-term interest rate rises.

In any case, the level of exposure in all countries is moderate in relation to the annual budget and the amount of equity.

At the end of 2014, the risk of the NIM at one year, measured as its sensitivity to parallel changes of ±100 basis points, was concentrated in the US dollar yield curve with EUR 67 million in risk to interest rate cuts (very low probability scenario in the current environment). Of note also was the risk to interest rate cuts in the Polish zloty curve (EUR 21 million).

NIM sensitivity by countries to 100 b.p.[33]
% of the total



Other: SCF and Portugal.

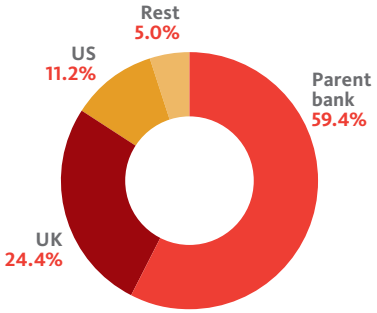
At the same date, the main risk of economic value, measured as its sensitivity to parallel changes in the yield curve of ±100 basis points was in the euro interest rate curve (EUR 2,149 million in risk to interest rate cuts). As regards the dollar and sterling curves, the amounts were EUR 865 million and EUR 343 million, respectively, also in risk to interest rate cuts.

As previously stated, these scenarios a very unlikely.

32. Includes the entire balance sheet except for the trading portfolios.
33. Sensitivity for the worst scenario between +100 and -100 b.p.

MVE sensitivity by countries to 100 b.p.[34]

% of the total



Other: Portugal, SCF and Poland.

The tables below give the structure by maturity of the balance sheet's interest rate risk at the parent bank and Santander UK at the end of 2014.

Santander parent bank: interest rate repricing gap[35]

Million euros. 31 december 2014

	Total	3 months	1 year	3 years	5 years	> 5 years	Not sensitive
Assets	394,976	148,766	70,591	25,194	15,919	19,812	114,693
Liabilities	431,401	166,111	63,114	59,981	30,499	40,457	71,238
Off-balance sheet	36,425	21,971	(1,040)	13,849	2,087	(441)	0
Net gap	**0**	**4,626**	**6,437**	**(20,939)**	**(12,494)**	**(21,086)**	**43,455**

Santander UK: interest rate repricing gap[36]

Million euros. 31 december 2014

	Total	3 months	1 year	1-3 years	3-5 years	> 5 years	Not sensitive
Assets	324,674	193,356	30,189	49,580	23,806	7,192	20,551
Liabilities	324,342	210,648	25,153	26,559	11,494	14,779	35,710
Off-balance sheet	(332)	10,815	3,246	(512)	(7,603)	(6,280)	1
Net gap	**0**	**(6,477)**	**8,282**	**22,509**	**4,710**	**(13,867)**	**(15,158)**

In general, the gaps by maturities remained at very low levels in relation to the size of the balance sheet, in order to minimise the interest rate risk.

7.3.1.1.2. Latin America

The long-term balances are positioned to interest rate cuts due to the slower economic growth. The situation in the short term is very similar, except in the case of Mexico, as it invests in the short term its liquidity excess in local currency.

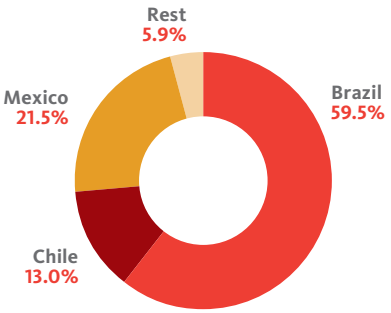
A moderate level of exposure was maintained during 2014 in all countries in relation to the annual budget and the amount of equity.

34. Sensitivity for the worst scenario between +100 and -100 b.p.
35. Aggregate gap of all foreign currencies in the balance sheet of Santander parent bank, expressed in euros.
36. Aggregate gap of all foreign currencies in the balance sheet of Santander UK, expressed in euros.

At the end of 2014, the financial margin risk measured in sensitivity to ±100 b.p., was concentrated in three countries, Brazil (EUR 152 million), Mexico (EUR 55 million) and Chile (EUR 33 million), as shown in the chart below:

NIM sensitivity by countries to 100 b.p.[37]

% of the total

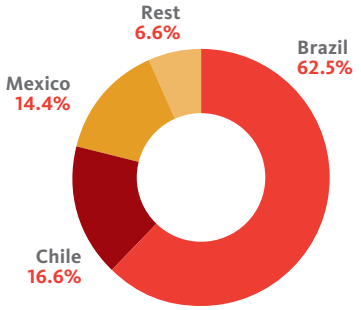


Other: Argentina, Panama, Peru, Puerto Rico, Santander Overseas and Uruguay.

Equity value risk, measured by its sensitivity to parallel changes of +/- 100 b.p., is also concentrated in Brazil (EUR 572 million), Chile (EUR 152 million) and Mexico (EUR 132 million).

MVE sensitivity by countries to 100 b.p[38]

% of the total



Other countries: Argentina, Panama, Peru, Puerto Rico, Santander Overseas and Uruguay.

The gap tables show the structure by maturity of risk of the balance sheet in Brazil in December 2014.

Brazil: interest rate frepricing gap[39]

Million euros. 31 december 2014

	Total	3 months	1 year	3 years	5 years	> 5 years	Not sensitive
Assets	191,635	79,913	30,171	27,540	9,676	14,086	30,250
Liabilities	191,635	119,076	10,640	12,014	7,288	6,603	36,015
Off-balance sheet	0	(14,156)	12,975	(973)	1,517	637	1
Net neto	**0**	**(53,319)**	**32,505**	**14,553**	**3,905**	**8,120**	**(5,764)**

7.3.1.1.3. balance sheet structural interest rate risk (var)

As well as sensitivity to interest rate movements (not just movements of +/-100 b.p, but also those of +/- 25, +/- 50, +/-75, in order to better characterise the risk in countries with very low interest rates), Santander uses other methods to monitor the structural interest rate risk of the balance sheet including analysis of scenarios and calculation of the VaR, using methodology similar to that used for the trading portfolios.

37. Sensitivity for the worst scenario between +100 and -100 b.p..
38. Sensitivity for the worst scenario between +100 and -100 b.p.
39. Aggregate gap of all currencies in the balance sheet of the Brazil unit, expressed in euros.

The table below shows the average, minimum, maximum and year-end values of the VaR of structural interest rate risk over the last three years.

Balance sheet structural interest rate risk (var)

Million euros. VaR at 99% with a time frame of one day

	2014			
	Minimum	Average	Maximum	Year-end
Structural interest rate risk (VaR)*	**411.3**	**539.0**	**698.0**	**493.6**
Diversification impact	(109.2)	(160.4)	(236.2)	(148.7)
Europe and US	412.9	523.0	704.9	412.9
Latin America	107.6	176.4	229.4	229.4

* Includes VaR by credit spread in the ALCO portfolios.

	2013			
	Minimum	Average	Maximum	Year-end
Structural interest rate risk (VaR)*	**580.6**	**782.5**	**931.0**	**681.0**
Diversification impact	(142.3)	(164.7)	(182.0)	(150.3)
Europe and US	607.7	792.5	922.0	670.0
Latin America	115.2	154.6	191.0	161.3

* Incluye VaR por *spread* crediticio en las carteras ALCO.

	2012			
	Minimum	Average	Maximum	Year-end
Structural interest rate risk (VaR)*	**361.7**	**446.4**	**525.7**	**517.5**
Diversification impact	(78.1)	(124.4)	(168.1)	(144.9)
Europe and US	334.4	451.4	560.8	552.0
Latin America	105.5	119.5	133.0	110.3

* Incluye VaR por *spread* crediticio en las carteras ALCO.

The structural interest rate risk, measured in VaR terms at one day and at 99%, was an average of EUR 539 million in 2014. The contribution to it of the balances of Europe and the US was significantly higher than that of Latin America. Of note was the high diversification between both areas and the decline in VaR in Europe and US, due to the narrowing of bond spreads, particularly in Spain and Portugal.

7.3.1.2. Structural exchange-rate risk/hedging of results

Structural exchange rate risk arises from Group operations in currencies, mainly related to permanent financial investments, and the results and the hedging of these investments.

This management is dynamic and seeks to limit the impact on the core capital ratio of movements in exchange rates.

At the end of 2014, the largest exposures of permanent investments (with their potential impact on equity) were in Brazilian reales, followed by sterling, US dollars, Mexican pesos, Chilean pesos and Polish zlotys. The Group covers part of these positions of a permanent nature with exchange-rate derivatives.

In addition, financial management at the consolidated level is responsible for exchange-rate management of the Group's expected results and dividends in those units whose currency is not the euro.

7.3.1.3. Structural equity risk

Santander maintains equity positions in its banking book in addition to those of the trading portfolio. These positions are maintained as portfolios available for sale (capital instruments) or as equity stakes, depending on their envisaged time in the portfolio.

The equity portfolio of the banking book at the end of 2014 was diversified in securities in various countries, mainly Spain, Brazil, US, Netherlands and China. Most of the portfolio is invested in the financial and insurance sectors; other sectors, to a lesser extent, are professional, scientific and technical activities, public administrations (stake in Sareb), energy supply and the hotel and restaurant trade.

The structural equity positions are exposed to market risk. VaR calculations are made for these positions, using market price series for listed shares and proxies for those that do not. At the end of 2014, the VaR at 99% with a one day time frame was EUR 208.5 million (EUR 235.3 million and EUR 281.4 million at the end of 2013 and 2012, respectively).

7.3.1.4. Structural VaR

In short, with a homogeneous metric such as the VaR, the total market risk of the balance sheet can be monitored excluding the trading activity of global wholesale banking (the VaR evolution of this activity is reflected in section 6.2.1.1., distinguishing between fixed income (both interest rate as well the credit spread for the ALCO portfolios), exchange rates and equities.

In general, the structural VaR is not high in terms of the Group's volume of assets or equity.

VaR of the balance sheet excluding trading activity

Million euros. VaR at 99% with a time frame of one day

	2014				2013		2012	
	Minimum	Average	Maximum	Year-end	Average	Year-end	Average	Year-end
Non-trading VaR	**597.3**	**718.6**	**814.2**	**809.8**	**857.6**	**733.9**	**593.1**	**659.0**
Diversification effect	(241.5)	(364.1)	(693.5)	(426.1)	(448.3)	(380.2)	(390.7)	(347.1)
Interest rate VaR*	411.3	539.0	698.0	493.6	782.5	681.0	446.4	517.5
Exchange rate VaR	256.9	315.3	533.8	533.8	254.5	197.8	237.0	207.3
Equity VaR	170.6	228.4	275.8	208.5	269.0	235.3	300.4	281.4

* Includes VaR by credit spread in the ALCO portfolios.

7.3.2. Methodologies

7.3.2.1. Structural interest rate risk

The Group analyses the sensitivity of net interest margin and of equity value to changes in interest rates. This sensitivity arises from gaps in maturity dates and the review of interest rates in the different asset and liability items.

On the basis of the positioning of balance sheet interest rates, as well as the situation and outlook for the market, the financial measures are agreed to adjust the positioning to that desired by the bank. These measures range from taking positions in markets to defining the interest rate features of commercial products.

The metrics used by the Group to control interest rate risk in these activities are the interest rate gap, the sensitivity of net interest margin and of equity value to changes in interest rate levels, the duration of equity and Value at Risk (VaR), for the purposes of calculating economic capital.

7.3.2.1.1. Interest rate gap of assets and liabilities

The interest rate gap analysis focuses on the mismatches between the interest reset periods of on-balance-sheet assets and liabilities and of off-balance-sheet items. It provides a basic representation of the balance sheet structure and allows for the detection of interest rate risk by concentration of risk in maturities. It is also a useful tool for estimating the impact of eventual interest rate movements on net interest margin or the Bank's equity value.

All on- and off-balance sheet items must be disaggregated by their flows and looked at in terms of repricing/maturity. In the case of those items that do not have a contractual maturity, an internal model of analysis is used and estimates made of the duration and sensitivity of them.

7.3.2.1.2. Net interest margin sensitivity (NIM)

The sensitivity of net interest margin measures the change in the short/medium term in the accruals expected over a particular period (12 months), in response to a shift in the yield curve.

It is calculated by simulating the net interest margin, both for a scenario of a shift in the yield curve as well as for the current situation. The sensitivity is the difference between the two margins calculated.

7.3.2.1.3. Market value of equity sensitivity (MVE)

The sensitivity of equity value is an additional measure to the sensitivity of the net interest margin.

It measures the interest risk implicit in net worth (equity) on the basis of the impact of a change in interest rates on the current values of financial assets and liabilities.

7.3.2.1.4. Treatment of liabilities without defined maturity

In the corporate model, the total volume of the balances of accounts without maturity is divided between stable and unstable balances. This separation between the stable and unstable balances is obtained from a model that is based on the relation between balances and their own moving averages.

From this simplified model the monthly cash flows are obtained and used to calculate the NIM and MVE sensitivities.

The model requires a variety of inputs:

- Parameters inherent in the product.
- Performance parameters of the client (in this case analysis of historic data is combined with the expert business view).
- Market data.
- Historic data of the portfolio.

7.3.2.1.5. Pre-payment treatment for certain assets

The pre-payment issue mainly affects fixed-rate mortgages in units where the relevant interest rate curves for the balance sheet (specifically for the portfolio of investment in fixed rate mortgages) are at low levels. In these units the risk is modelised and some changes can also be made to assets without defined maturity (credit card businesses and similar).

The usual techniques used to value options cannot be applied directly because of the complexity of the factors that determine the pre-payment of borrowers. As a result, the models for assessing options must be combined with empirical statistical models that seek to capture the pre-payment performance. Some of the factors conditioning this performance are:

- Interest rate: the differential between the fixed rate of the mortgage and the market rate at which it could be refinanced, net of cancellation and opening costs.
- Seasoning: pre-payment trend downward at the start of the instrument's life cycle (signing of the contract) and upward and stabilising as time passes.

- Seasonality: the amortisations or early cancellations tend to take place at specific dates.

- Burnout: decreasing trend in the speed of pre-payment as the instrument's maturity approaches, which includes:

a) Age: defines low rates of pre-payment .

b) Cash pooling: defines as more stable those loans that have already overcome various waves of interest rate falls. In other words, when a portfolio of loans has passed one or more cycles of downward rates and thus high levels of pre-payment, the "surviving" loans have a significantly lower pre-payment probability.

c) Others: geographic mobility, demographic, social, available income factors, etc.

The series of econometric relations that seek to capture the impact of all these factors is the probability of pre-payment of a loan or pool of loans and is denominated the pre-payment model.

7.3.2.1.6. Value at Risk (VaR)

The Value at Risk for balance sheet activity and investment portfolios is calculated with the same standard as for trading: maximum expected loss under historic simulation with a confidence level of 99% and a time frame of one day. As for the trading portfolios, a time frame of two years, or 520 daily figures, is used, obtained from the reference date of the VaR calculation back in time.

7.3.2.2. Structural exchange rate risk/hedging of results

These activities are monitored via position measurements, VaR and results, on a daily basis.

7.3.2.3. Structural equity risk

These activities are monitored via position measurements, VaR and results, on a monthly basis.

7.3.3. System of control of limits

As already stated for the market risk of trading, under the framework of the annual limits plan limits are set for balance sheet structural risks, responding to Grupo Santander's risk appetite level.

The main ones are:

- Balance sheet structural interest rate risk:
  - Limit on the sensitivity of the net interest margin to 1 year.
  - Limit of the sensitivity of equity value.
- Structural exchange rate risk:
  - Net position in each currency (for hedging positions of results).

In the event of exceeding one of these limits or their sub limits, the relevant risk management executives must explain the reasons why and facilitate the measures to correct it.

7.4. Pension, actuarial and fiduciary risks

7.4.1. Pension risks

When managing the pension fund risks of employees (defined benefit), the Group assumes the financial, market, credit and liquidity risks in which it incurs for the asset and investment of the fund, as well as the actuarial risks derived from the liability, and the responsibilities for pensions to its employees.

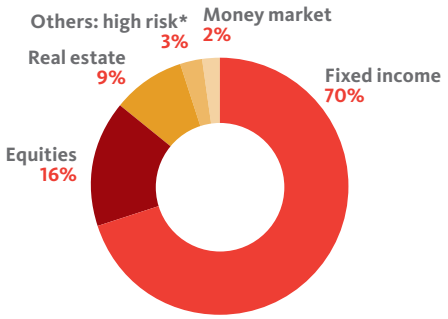
The Group's objective in the sphere of controlling and managing pension risk focuses on identifying, measuring/assessing, monitoring, controlling, mitigating and communicating this risk. The Group's priority is thus to identify and eliminate all the focuses of risk, regardless of whether they have produced losses or not.

This is why the methodology used by Grupo Santander estimates every year the combined losses in assets and liabilities in a defined stress scenario from changes in interest rates and discount rates, inflation, stocks markets and properties, as well as the credit and operational risk.

Main magnitudes

The main magnitudes regarding the pension funds of employees of defined contribution are set out in note 25 of the Group's auditor's report and annual consolidated financial statements, which report the details and movements of provisions for pensions, as well as the main hypotheses used to calculate the actuarial risk and the risk of the fund, including changes in the value of assets and liabilities and details on the investment portfolios assigned to them.

The investor profile of the aggregated portfolio of employees' pension funds is low risk, as around 70% of the total portfolio is invested in fixed-income assets, as set out in the chart below.



* Includes positions in hedge funds, private equity and derivatives.

7.4.2. Actuarial risk

Actuarial risk is produced by biometric changes in the life expectancy of those with life assurance, from the unexpected increase in the indemnity envisaged in non-life insurance and, in any case, from unexpected changes in the performance of insurance takers in the exercise of the options envisaged in contracts.

The following are actuarial risks:

Risk of life liability: the risk of loss in the value of the liabilities of life assurance caused by fluctuations in risk factors that affect these liabilities.

i. Mortality/longevity risk: risk of loss from movements in the value of the liabilities derived from changes in estimating the probability of death/survival of those insured.

ii. Morbidity risk: risk of the loss from movements in the value of the liability derived from changes in estimating the probability of disability/incapacity of those insured.

iii. Rescue/fall risk: the risk of loss from movements in the value of the liability as a result of the early cancellation of the contract, of changes in the exercise of the right of rescue by the insurance holders, as well as options of extraordinary contribution and/or suspending contributions.

iv. Risk of costs: risk of the loss from changes in the value of the liability derived from negative variances in envisaged costs.

v. Catastrophe risk: losses caused by catastrophic events that increase the life liability of the institution.

Risk of non-life liability: risk of loss from the change in the value of the liability of non-life insurance caused by fluctuations in risk factors that affect these liabilities:

i. Premium risk: loss derived from the insufficiency of premiums to meet the disasters that might occur.

ii. Reserve risk: loss derived from the insufficiency of reserves for disasters, already incurred but not settled, including costs from management of these disasters.

iii. Catastrophe risk: losses caused by catastrophic events that increase the non-life liability of the institution.

Main magnitudes

In the case of Grupo Santander, actuarial risk embraces the activity of the Group's fully-owned subsidiaries which are subject not only to a risk of actuarial nature, but also their activity is impacted by the rest of financial, non-financial and transversal risks, defined by the Group.

The volume of assets managed by the companies in Spain and Portugal that belong 100% to Grupo Santander amounted to EUR 25,576 million, of which EUR 23,276 million are directly related to commitments with insurance holders, as follows:

- EUR 14,479 million are commitments guaranteed (wholly or partly) by the companies themselves.
- EUR 8,797 million are commitments where the risks are assumed by the insurance holders:

7.4.3. Fiduciary risk

Fiduciary risk comes from the management and/or administration by clients of products and assets, as well as when acting as trustee for third parties. It is mostly associated with activities related to investment and protection products linked to asset management and insurance activities.

It is the risk incurred when acting as trustee for third parties or managing assets for the benefit of third parties, where mismanagement of assets could result in losses for the client and the fiduciary could be responsible for these losses, with the consequent economic and/or reputational impact.

The fiduciary risk can also be defined as the potential loss that could occur due to significant fluctuations in the value of the portfolios managed by the fiduciary for third parties (settler/beneficiaries) and the image and reputation of the trust.

In this sense, there is a relation between fiduciary risks and the risk of conduct, which is the risk caused by inadequate practices in the Bank's relationship with its clients, the treatment and products offered to the client and their adequacy for each specific client, as well as the compliance and reputational risks.

The main factor of all activities and/or businesses that involve a fiduciary risk is the duty to act in the client's best interest ("Look after the money of clients as if it was your own"). This principle obliges one to always act in the client's interest, in accordance with the mandate, instructions or orders.

This principle is backed by basic pillars for managing fiduciary risk and defending clients' interests.

- **Knowledge of the client:** risk management should be orientated by adequate knowledge, within the organisation, of the reality and needs of clients. This knowledge embraces the adequacy of the product offered to clients in asset management and insurance, ensuring that it fits into the marketing policy in accordance with the client profile.
- **Mandate compliance:** the process of risk management requires analysis and control of the mandates through regular assessment of compliance with them. The risk associated with clients' positions will be cared for by applying the same general principles as those applied in the analysis and control of the Group's own risks.
- **Transparency:** all the relevant information on management of positions, the risks entailed in them and the evolution and results generated by these positions must be transmitted to the client.
- **Management of conflicts of interest:** potential or actual conflicts of interest can be derived from the interrelation between the activity of management and that of other business units or Group areas. In order to avoid these circumstances the criteria established by the Group will be followed in all cases, safeguarding in all of them the interests of clients, participants, partners or those insured.
- **Monitoring and adapting to regulations:** both of products as well as fund management companies so as to always provide the highest quality service and foresee regulatory risk.

The largest component of fiduciary risk is associated with asset management by third parties: discretional management of vehicles and portfolios by fund management and insurance companies in which the Group has a stake and/or with whom distribution agreements are maintained, as well as activity carried out by the Group's private banking units which provide advisory services and discretional management of client portfolios.

The regulations impose on fund management companies as well as companies that provide investment services the obligation to always safeguard the interests of clients.

This obligation is specified in the management contract or fiduciary mandate, which determines the conditions of how the fiduciary operates and its relation with clients. In order to guarantee compliance with the mandate granted by clients, risk is managed from the different vectors that could affect the portfolios and which are explained later on.

In order for the fiduciary to be able to carry out these services, there must be at the local level a legal structure subject to the requirements of its local supervisor. It is also necessary to have adequate technical and human resources, and conduct the control and monitoring of risks in a risk and compliance unit that is independent of business.

The three fundamental vectors of fiduciary risk control are:

- The financial, market, credit and liquidity risks which are incurred by investing the wealth of clients in financial products and instruments.
- The regulatory risk of complying with the limits established by regulations and the strictly fiduciary risk, complying with the investment mandates, as well the security of the investor circuit.
- The importance of monitoring the final result of the investments both with regard to the fiduciary relations with the client who expects the best result as well as with regard to competitors. Always with the objective of offering a product of the highest possible quality and without losing the Group's risk principles.

Management and control model

Grupo Santander's business and asset management activities were changed during the course of 2014, following the corporate restructuring at Santander Asset Management (SAM), a vehicle that integrates asset management activity and which, under the marketing agreement made, offers a wide range of savings and investment products that cover the various needs of clients and which are distributed by the Group's commercial networks and by external distribution channels.

Asset management activity can vary as regards the assets managed:

- Management of mutual funds and companies, discretional management portfolios and pension funds, currently developed by SAM and by countries' private banking teams and vehicles.
- Private equity management, specialised in managing venture capital vehicles.
- Real estate management, specialised in managing property products.

Grupo Santander markets and manages these assets in accordance with the rules and recommendations of local supervisors, following minimum standards that ensure the best interests of its clients.

The mission and objectives of Grupo Santander's department of fiduciary risks are synthesised in the admission and monitoring of the risks assumed with clients and businesses, participating in the decision-making processes on the admission of new products and the mandates of defined management; and, subsequently, monitoring all the fiduciary risks.

In order to comply with this mission, the fiduciary risk team has the following functions:

- Define the risk profile of the new products/portfolios/mandates and underlying assets, participating in the approval process, as well as approving the companies that manage and administer them.
- Identify, know, control, analyse and monitor the fiduciary risks globally in the business of private banking, asset management and insurance.
- Cooperate in designing and defining the fiduciary risk policies: products, underlying assets and management policies.
- Disseminate, implement, cooperate in applying and overseeing compliance in the local units and in each of the business units of the risk policies, procedures and any other rule applicable in the fiduciary risk sphere.
- Design the control and monitoring policies of fiduciary risk on products, portfolios, mandates and underlying assets, guaranteeing both the vision of control as well as that of management.
- Supervise the result of the control processes conducted, make improvement proposals and recommendations for fiduciary risk.
- Design and implement mitigating measures for the risks detected.

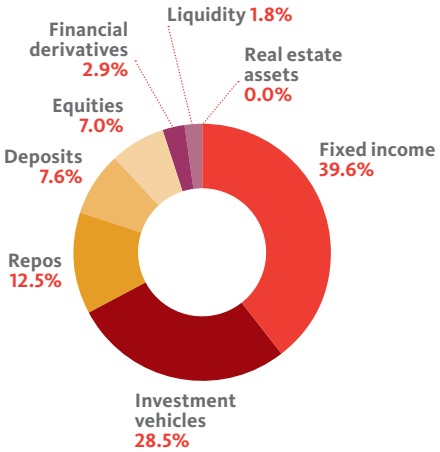
Implementing these functions is structured in the corporate and local spheres in the following way:

In the corporate sphere, the area of fiduciary risks is in charge of designing and defining the financial risk policies and procedures, compliance and performance at the global level; disseminating and cooperating in their implementation in the local units; supervising the result of the control processes carried out locally and implementing, when necessary, the mitigating measures for the risks detected.

In the local sphere, the areas of local risks must have the structure and necessary means to conduct its activity as hitherto described, as they are in charge of executing the various controls established, assuming the responsibility of reporting the results to the interlocutors at the local level (business, risk supervision, regulators and supervisors, etc), as well as to their interlocutors at the corporate level.

Main metrics
At the end of 2014, Grupo Santander clients had in their portfolios EUR 122,026 million of mutual funds and EUR 19,127 million in pension funds, all managed by Santander Asset Management, the holding company participated by the Group.

The risk profile of the total mutual and pension funds is influenced by the type of assets incorporated in the different products, as shown below.



8. Liquidity risk and funding

8.0. Structure of this section

Following an **introduction** to the liquidity risk and funding concept in Grupo Santander (page 245), we present the **liquidity management framework** set by the Group, including monitoring and control of liquidity risk (pages 246-250).

We then look at the **funding strategy developed by the Group and its subsidiaries** over the last few years (pages 250-253), with particular attention to the **liquidity evolution** in 2014. The evolution of the liquidity management ratios in 2014 and business and market trends that gave rise to it (pages 253-258).

The section ends with a qualitative description of the **prospects** for funding in 2015 for the Group and its main countries (page 258).

8.1. Introduction to the treatment of liquidity risk and funding

- Santander has developed a funding model based on autonomous subsidiaries responsible for covering their own liquidity needs.
- This structure makes it possible for Santander to take advantage of its solid retail banking business model in order to maintain comfortable liquidity positions at Group level and in its main units, even during stress in the markets.
- In the last few years, as a result of the tensions arising from the global economic and financial crisis, it has been necessary to adapt the funding strategies to the new commercial business trends, the markets' conditions and the new regulatory requirements.
- In 2014, and in a better market environment, Santander continued to improve in specific aspects such as a very comfortable liquidity position at Group level and in subsidiaries. All of this enables us to face 2015 from a good starting point, without growth restrictions.

Liquidity management and funding have always been basic elements in Banco Santander's business strategy and a fundamental pillar, together with capital, in supporting its balance sheet strength.

Liquidity has gained importance in managing banks in the last few years because of the tensions in financial markets against the backdrop of a global economic crisis. This scenario has enhanced the importance for banks of having appropriate funding structures and strategies to ensure their intermediation activity.

During this period of stress, Santander has enjoyed an appropriate liquidity position, higher than that of its peers, which has given it a competitive advantage to develop and expand its activity in an increasingly demanding environment.

Today, in a more favourable liquidity environment, the Group continues to benefit from the advantage of financial soundness in the face of the new challenge of optimising in cost terms the demanding liquidity standards required by regulators, while pushing growth in countries which were deleveraging.

This better position for the whole Group has been supported by a decentralised funding model consisting of autonomous subsidiaries self-sufficient in liquidity. Each subsidiary is responsible for covering the liquidity needs of its current and future activity, either through deposits captured from its customers in its area of influence or through recourse to the wholesale markets in which it operates, within a framework of management and supervision coordinated at the Group level.

The funding structure is one that shows its greatest effectiveness in situations of high levels of market stress, as it prevents the difficulties of one area from affecting the funding capacity of other areas and thus of the Group as a whole, as could happen in the case of a centralized funding model.

Moreover, at Grupo Santander this funding structure benefits from the advantages of a solid retail banking model with a significant presence in 10 high potential markets and focused on retail clients and high efficiency. All of this gives our subsidiaries a big capacity to attract stable deposits, as well as a strong issuance capacity in the wholesale markets of these countries, generally in their own currency, and backed by the strength of their franchise and belonging to a leading group.

8.2. Liquidity management framework - monitoring and control of liquidity risk

Management of structural liquidity aims to fund the Group's recurring activity in optimum conditions of maturity and cost, avoiding the assumption of undesired liquidity risks.

Santander's **liquidity management** is based on the following **principles:**

- **Decentralized liquidity model**.
- **Needs derived from medium and long term activity must be financed by medium and long term instruments**.
- **High contribution from customer deposits**, derived from the retail nature of the balance sheet.
- **Diversification of wholesale funding sources** by instruments/investors, markets/currencies and terms.
- **Limited recourse to wholesale short-term funding**.
- **Availability of sufficient liquidity reserve**, which includes the discount capacity in central banks to be used in adverse situations.
- **Compliance with regulatory requirements** of liquidity required at Group level and subsidiaries, as a new **management conditionality**.

The effective application of these principles by all the institutions that comprise the Group required development of a unique **management framework** built around three essential pillars:

- A solid organizational and governance model that ensures the involvement of the senior management of subsidiaries in decision-taking and its integration into the Group's global strategy.
- Deep balance sheet analysis and measurement of liquidity risk, which supports decision-taking and its control.
- Management adapted in practice to the liquidity needs of each business.

8.2.1. Organisational model and governance

The decision-taking process regarding structural risks, including liquidity risk, is carried out by local asset and liability committees (ALCO) in coordination with the global ALCO.

The global ALCO is the body empowered by Banco Santander's board to coordinate asset and liability management (ALM) throughout the Group, including liquidity and funding management, which is conducted via the local ALCos and in accordance with the ALM corporate framework.

This body is headed by the Bank's executive chairman and comprises an executive vice-chairman (who is, in turn, chairman of the executive risk committee), the chief executive officer, the chief financial officer, the executive vice president for risk and others senior executives responsible for the business and analysis units who provide advice.

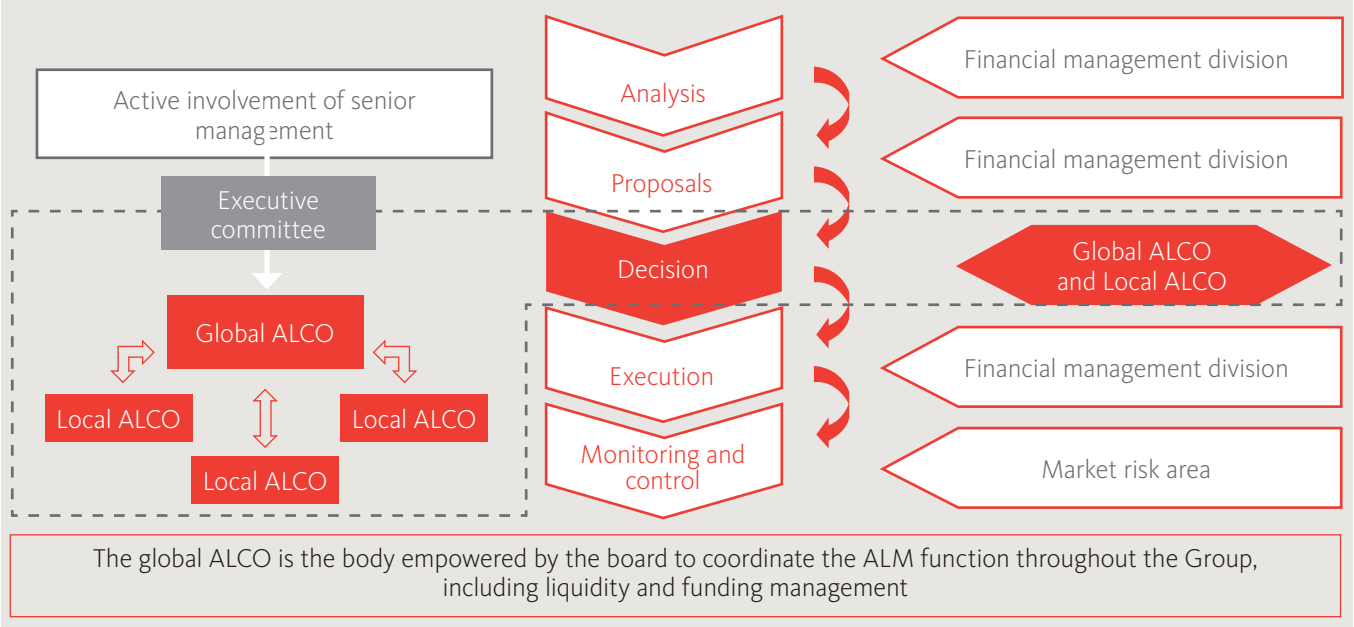
In line with these principles and the ALM corporate framework, the function of liquidity and funding management is backed by:

- The board as the maximum organ responsible for management of the Group.
- The local ALCO committees, which define at each moment the objective positioning of liquidity and the strategies that ensure and/or anticipate the funding needs derived from their business, always within the risk appetite set by the board and the regulatory requirements.
- The global ALCO, which conducts the parent bank's ALM management, as well as coordinating and monitoring the function in the Group's other units.
- The Financial Management area, which manages on a day to day basis, conducting analysis, proposing strategies and carrying out the measures adopted within the positioning defined by the ALCOs.
- The Market Risk area, responsible for monitoring and permanently controlling compliance with the limits established. This independent control function is completed a posteriori by regular reviews conducted by Internal audit.
- All of this supported by an area of independent operations that guarantees the integrity and quality of the information used for managing and controlling liquidity.

This clear division of functions traditionally established in the Group, between executing liquidity management (the responsibility of the Financial Management area) and monitoring and control (the responsibility of the Market Risk area), has put Santander among the function's best governance practices.

Grupo Santander governance: liquidity risk and funding

Structure of decision-taking and functions



This governance model has been strengthened in the last few years by being integrated within a more global view of the Group's risks (Santander's risk appetite framework), which responds to the demand of regulators and market players emanating from the financial crisis to strengthen banks' risk management and control systems.

The liquidity risk profile and appetite aims to reflect the Group's strategy for developing its businesses, which consists of structuring the balance sheet in the most resistant way possible to potential liquidity tension scenarios. Liquidity appetite metrics have been articulated which reflect the application at the individual level of the principles of the Group's liquidity management model, with specific levels for the ratio of structural funding and minimum liquidity horizons under various tension scenarios, as indicated in the following sections.

Over the next few years, the metrics used in the liquidity risk appetite framework will be increased with the incorporation of those monitored and controlled by the financial management area at Group level and of the main units, be they regulatory metrics or another type.

8.2.2. Balance sheet analysis and measurement of liquidity risk

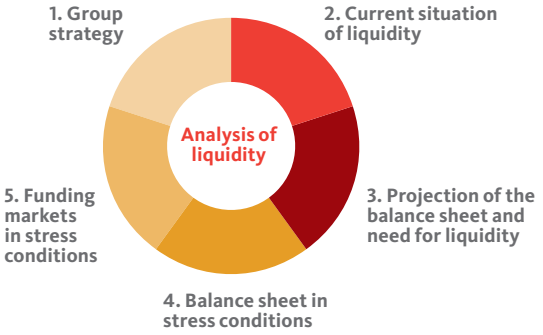
Decision-making on funding and liquidity is based on a deep understanding of the Group's current situation (environment, strategy, balance sheet and state of liquidity), of the future liquidity needs of the various units and businesses (projection of liquidity), as well as access to and the situation of funding sources in the wholesale markets.

The objective is to ensure the Group maintains optimum levels of liquidity to cover its short and long-term needs with stable funding sources, optimising the impact of its cost on the income statement.

This requires monitoring of the structure of balance sheets, forecasting short and medium-term liquidity and establishing the basic metrics.

At the same time, various analyses of scenarios are conducted which take into account the additional needs that could arise from various extreme, unlikely but possible, events. These could affect the various items of the balance sheet and/funding sources differently (degree of renewal of wholesale funding, deposit outflows, deterioration in the value of liquid assets, etc), whether for global market reasons or specific ones of the Group.

Analysis of the balance sheet and measurement of liquidity risk



The inputs for drawing up the Group's various contingency plans are obtained from the results of the analysis of balance sheets, forecasts and scenarios, which, in turn, enable a whole spectrum of potential adverse circumstances to be anticipated.

All these actions are in line with the practices being fostered by the Basel Committee and the various regulators in the European Union and the European Banking Authority to strengthen the liquidity of banks. Their objective is to define a framework of principles and metrics that, in some cases, are close to being implemented and, in others, still being developed.

Greater detail on the measures, metrics and analysis used by the Group and its subsidiaries to manage and control liquidity risk is set out below:

Methodology for monitoring and controlling liquidity risk
The Group's liquidity risk metrics aim to:

- **Achieve greater efficiency** in measuring and controlling liquidity risk.
- **Support financial management**, with measures adapted to the form of managing the Group's liquidity.
- **Alignment with the regulatory requirements** derived from the transposition of Basel III in the European Union (basically CRDIV in EU and others), in order to avoid conflicts between limits and facilitate management.
- **Serve as an early warning system**, anticipating potential risk situations by monitoring certain indicators.
- **Attain the involvement of countries**. The metrics are developed on the basis of common and homogeneous concepts that affect liquidity, but they require analysis and adaptation by each unit.

There are two types of basic metrics used to control liquidity risk: short term and structural. The first category basically includes the liquidity gap and the second one the balance sheet's net structural position. As an additional element, the Group develops various stress scenarios. These three metrics are as follows:

a) Liquidity gap
The liquidity gap provides information on the potential cash inflows and outflows for a certain period of time, both contractual and estimated. They are drawn up for each of the currencies in which the Group operates.

The gap provides information on the sources and uses of funds expected in specific time periods, in relation to the total on- and off-balance sheet items. This analysis tool is obtained from the net of the structure of maturities and flows for each period established. The liquidity available is contrasted with the needs arising from maturities.

In practice, and given the different performances of a same item in the Group's subsidiaries, there are common standards and methodologies to homogenize the building of liquidity risk profiles for each unit, so they can be presented in a comparable way to the Bank's senior management.

As a result, and given that this analysis must be conducted at the individual level of each subsidiary for its autonomous management, a consolidated view of the liquidity gaps is of very limited use for managing and understanding liquidity risk.

Of note in the various analysis made using the liquidity gap is that for **wholesale funding**. On the basis of this analysis a **metric** has been defined whose objective is to guarantee that sufficient liquid assets are maintained in order to attain a minimum **liquidity horizon**, under the assumption of not renewing wholesale funding at maturity.

The minimum liquidity horizons are determined in a corporate and homogeneous way for all units/countries, which must calculate their wholesale liquidity metric in the main currencies in which they operate.

Bearing in mind the market tensions in the last few years of global crisis, this wholesale liquidity gap is closely monitored in the parent bank and in the euro zone units.

At the end of 2014, all units were in a comfortable position in the horizons established for this scenario.

b) Net structural position
The objective of this metric is to determine the reasonability of the funding structure of the balance sheet. The Group's criterion is to ensure that the structural needs (lending, fixed assets, etc) are covered by an adequate combination of wholesale sources and a stable base of retail deposits, to which is added the capital and the rest of permanent liabilities.

Each unit draws up its liquidity balance sheet in accordance with the features of their businesses and compares them with the various funding sources they have. The main factors taken into account when determining this metric are the recurrence of the businesses to be financed, the stability of funding sources and the capacity of assets to become liquid.

In practice, each subsidiary draws up its liquidity balance sheet (different from the accounting one), classifying the various asset and liability items and off-balance sheet ones on the basis of their type for the purposes of liquidity. This determines the funding structure that must be met at all times with a key premise: basic businesses must be financed with stable funds and medium- and long-term funding. All of this guarantees the Bank's sound financial structure and the sustainability of business plans.

At the end of 2014, the Group had a structural liquidity surplus of around EUR 153,000 million (15% of net liabilities as against 16% in 2013). This surplus is almost five times higher than that at the start of the crisis (EUR 33,000 million and 4% of net liabilities in December 2008), thanks to the efforts made during these years.

c) Analysis of scenarios
As an additional element to the metrics, the Group develops various stress scenarios. The main objective is to identify the critical aspects of potential crisis and define the most appropriate management measures to tackle each of these situations.

Generally speaking the units take into account three scenarios in their liquidity analysis: idiosyncratic, local systemic and global systemic. These scenarios represent the minimum standard analysis established for all the Group's units and which are provided to senior management. Each of the units also develops ad hoc scenarios that replicate significant historic crises or specific liquidity risks of their environment.

The main features of the three basic scenarios are:

- An idiosyncratic crisis only affects the Bank but not its environment. This is basically reflected in wholesale funds and in retail deposits, with various percentages of outflows depending on the severity defined.

  Within this category a specific crisis scenario that a local unit could suffer as a result of a crisis in the parent bank (Banco Santander) is studied. This scenario was particularly relevant in 2012 because of strong tensions registered by markets on Spain and the rest of countries on the periphery of the euro zone, a situation amply overcome since then.

- A local systemic crisis is an attack by the international financial markets on the country where the unit is located. Each unit would be affected to varying degrees, depending on its relative position in the local market and the image of soundness it transmits. Among other factors which would be affected in this scenario are, for example, the wholesale funding lines from the closure of markets or the liquid assets linked to the country that would be significantly reduced.

- Global systemic crisis. In this scenario some of the factors mentioned in the scenarios above are stressed. Particular attention is paid to the most sensitive aspects from the standpoint of the unit's liquidity risk.

Defining scenarios and calculating the metrics under each of them are directly linked to the process by the financial management area of drawing up and executing the contingency plan, which is the responsibility of the financial management area.

At the end of 2014, and in a scenario of a potential systemic crisis affecting the wholesale funding of units in Spain (following the previously mentioned 2012 scenario), Grupo Santander maintained an adequate liquidity position. The wholesale liquidity metric horizon in Spain (included within the liquidity gap measures) showed levels higher than the minimums established, during which the liquidity reserve would cover all the maturities of wholesale funding, in the event of not being renewed.

As well as these three metrics a series of internal and market variables was defined as **early warning indicators of possible crises**, which can also state their nature and severity. Their integration into daily liquidity management enables situations that could affect the Group's liquidity risk to be anticipated. Although these alerts vary from country to country and from bank to bank on the basis of specific determinants, some of the parameters used are common in the Group, such as Banco Santander's CDS level, the evolution of deposits from customers and the official interest rate trend of central banks.

8.2.3. Management adapted to business needs

As already pointed out, Grupo Santander's liquidity management is carried out at the level of subsidiaries and/or business units in order to finance their recurring activities in appropriate maturities and prices. The main balance sheet items related to business and funding the Group's largest business units are as follows:

Main units and balance sheet items

Billion euros. December 2014

	Total assets	Net loans *	Deposits**	M/LT funding***
Spain	314.9	157.0	178.7	64.4
Portugal	41.6	23.2	24.0	2.7
SCF	71.5	60.4	30.8	13.3
Poland	27.8	17.0	20.1	0.6
UK	354.2	251.2	202.3	67.4
Brazil	156.3	74.4	68.5	21.5
Mexico	53.7	25.9	28.6	1.7
Chile	42.8	30.6	23.4	6.9
Argentina	9.3	5.5	6.8	0.1
US	96.9	67.2	46.6	24.3
GROUP TOTAL	**1,266.3**	**734.7**	**647.9**	**202.8**

* Customer loans excluding loan-loss provisions.

** Including retail commercial paper in Spain.

*** M/LT issues in markets, securitisations and other collateralised funding in the market and funds taken from FHLB lines. All in their nominal value.

In practice, and in line with the financing principles set out, liquidity management in these units consists of:

- Drawing up every year a liquidity plan based on the funding needs derived from the budgets of each business and the methodology already described. On the basis of these liquidity needs and taking into account prudent limits of recourse to short-term markets, the Financial Management area establishes an issuance and securitisation plan for the year for each subsidiary/global business.

- Monitor during the year the evolution of the balance sheet and of the funding needs of the subsidiaries/businesses, which gives rise to updating the plan.

- Monitor and manage compliance with the regulatory ratios by units, as well as oversee the level of asset encumbrance in each unit's funding, from both the structural standpoint as well as its component with the shortest maturity.

- Maintain an active presence in a large number of wholesale funding markets that enables an appropriate structure of issues to be sustained, diversified by products and with an average conservative maturity.

The effectiveness of this management at Group level is based on implementation in all subsidiaries. Each subsidiary budgets the liquidity needs based on their activity of intermediation and assesses its capacity of recourse to wholesale markets in order to establish an issuance and securitisation plan, in coordination with the Group.

Traditionally, the Group's main subsidiaries have been self-sufficient as regards their structural financing. The exception is Santander Consumer Finance (SCF) which needs the support of other Group units, particularly that of the parent bank, given its nature as a consumer finance specialist operating mainly via dealers.

This support, always at the market price on the basis of the maturity and internal rating of the borrowing unit, has been on a sustained downward trend on a like-for-like basis (from EUR 15,000 million in 2009 to less than EUR 3,000 million in 2014 including hybrid positions in capital). This has made it necessary for SCF to develop internal structures for capturing retail and wholesale funds and opening new securitisation markets. This constitutes a good example of the subsidiaries managing and developing autonomous sources of liquidity.

The incorporation of new portfolios and business units in 2015 (GE Money in Nordic countries; joint ventures with Banque PSA in 11 European countries), will require in the short term greater financial support from the rest of the Group's units. In the medium term, the greater wholesale funding capacity of SCF and access to European Central Bank long-term funding (TLTROs) will enable the unit to return to the path of reduction set in the last few years.

8.3. Funding strategy and evolution of liquidity in 2014

8.3.1. Funding strategy

Santander's activity over the last few years has achieved its objective of adequately funding the Group's recurring activity in a more demanding environment. Its peak, during the global economic and financial crisis, required managing sharp rises in risk that led to scant levels of liquidity in certain maturities and at very high costs. These market conditions relaxed significantly during 2013 and, particularly, in 2014 following the interventions by the main central banks.

Santander's good performance was supported by extending the management model to all the Group's subsidiaries, including the new incorporations, and, above all, adapting the subsidiaries' strategy to the increasing requirements of both the markets as well as regulators. These requirements have not been the same for all markets and reached much higher levels of difficulty and pressure in some areas, such as on the periphery of Europe.

It is possible, however, to extract a series of **general trends** implemented by Santander's subsidiaries in their funding and liquidity management strategies since **the beginning of the crisis**. They are the following:

- **Strong liquidity generation from commercial business due to lower growth in lending and greater emphasis on capturing funds from customers.**
  The evolution in the last few years of the Group's lending is the result of combining sharp falls in the units in Spain and Portugal, due to the strong deleveraging of these economies, with growth in other countries, either through the expansion of units and businesses under development (United States, Germany, Poland, UK companies), or through sustained growth in emerging countries (Latin America). Overall, the Group's net lending increased by EUR 108,000 million since December 2008 (+17%).

  At the same time, the focus on liquidity during the crisis together with the Group's capacity to attract retail deposits via branches, made possible a rise in customer deposits of EUR 227,000 million, 54% higher than the December 2008 balance, and more than double the rise in net lending balances during this period.

  All the commercial units boosted their deposits, both the units in countries undergoing deleveraging as well as those in growth areas where they matched their evolution to that of loans.

  This liquidity generation was particularly intense in Spain (close to EUR 100,000 million since December 2008). This was as a result of the reflection in the credit volumes of private sector indebtedness during the crisis and the strong capturing of deposits in an environment of savers seeking security. The combination resulted in turning a surplus of loans over deposits in 2008 into the current surplus of deposits.

  These trends on loans and deposits changed in 2014 at Group level. Lower deleveraging and recovery of new lending in the countries most affected by the crisis, on the one hand and, on the other, the focus on reducing the cost of funds in mature markets with interest rates at historic lows explain why the spread between the balances of credits and of deposits has stopped falling and even increased moderately during the year.

- **Maintaining adequate and stable levels of medium and long term wholesale funding at the Group level.** This funding represented 21% of the balance of liquidity at the end of 2014, similar to that of the last two years (21% average in 2010-2013), but well below the 28% at the end of 2008, when wholesale liquidity, more abundant and of lower cost, had still not suffered the tensions of the crisis.

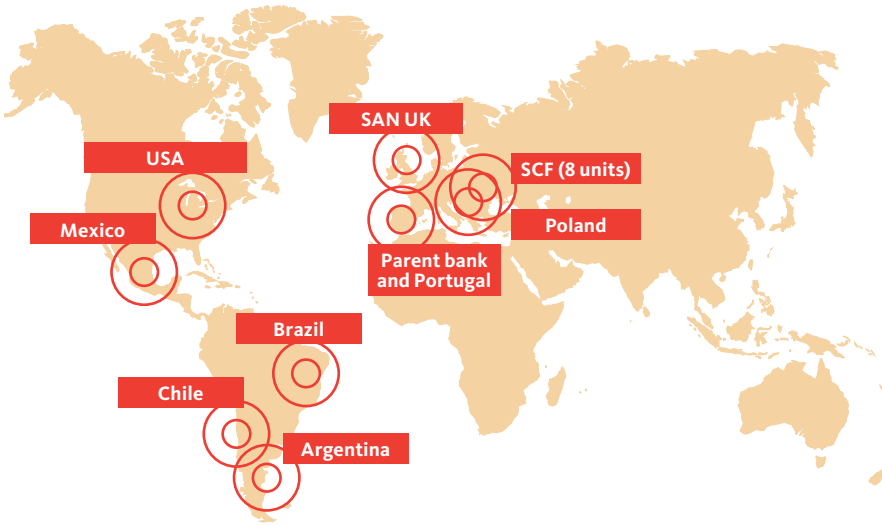
  Following the tightening of conditions in wholesale markets, the Group's decentralised model of subsidiaries, with its own programmes of issues and ratings, helped to maintain Santander's strong participation in developed wholesale markets even in periods of maximum requirements such as 2011-2012.

  Of note in this period was the United Kingdom's issuance capacity, the re-launch of the activity of large Latin American countries and the incorporation of new units to the pool of the Group's important issues, both in the United States (issues from its holding and securitisations of the specialised consumer unit) as well as in Europe. In this continent, Santander Consumer Finance extended its activity of issues and securitisations to new markets such as the Nordic countries, converting its units into pioneers of auto finance securitisation and laying the foundations to advance in their self-funding.

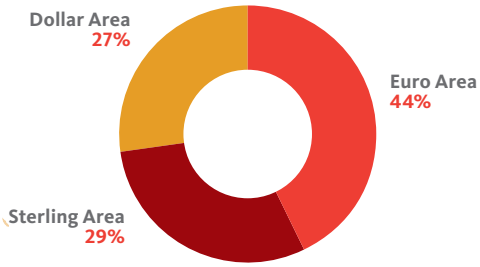
  In general, this wholesale activity has been modulated in each unit on the basis of the requirements of regulation, the generation of internal funds of business and decisions to ensure sufficient liquidity reserves, A good example is Spain where, despite the strong generation of liquidity from the aforementioned business and the capacity of recourse to the European Central Bank, the Group has implemented a conservative issuance policy. Over the last four years, with two years of maximum tension and two of softening, Santander has issued close to EUR 50,000 million of medium and long term debt, backed by the strength of the brand and Santander's credit quality.

Comfortable access to wholesale markets through autonomous subsidiaries, with own issuance programmes and ratings

Main issuing units



M/L Term funding captured in the market in 2014*



*Including issues, securitisations and structured financing.

- **Ensure a sufficient volume of assets that can be discounted in central banks** as part of the liquidity reserve (as defined on page 256 of this section) to cater for stress situations in wholesale markets.

  The Group has significantly increased its total discounting capacity in the last few years from EUR 85,000 million at the end of 2008 to close to EUR 170,000 million. This volume at the end of 2014 almost doubled the commercial gap (i.e. the difference between net loans and deposits), following the reduction in the gap due to the aforementioned business dynamics.

  The growth in the volume that can be discounted is due to a strategy coordinated at the Group level during the crisis and conducted by subsidiaries to generate assets that can be discounted and which offset the reduction in the value of guarantees, as a result of the downgrading of ratings, particularly of sovereign debt and related assets. A large part of this total discounting capacity is concentrated in units in the euro zone following the extraordinary measures implemented by the European Central Bank (ECB) in 2011 and 2012 (basically, increased collateral and three-year liquidity auctions) to ensure the area's liquidity buffer.

  During 2012, and faced with the tensions in the euro markets, Santander pursued a prudent strategy of depositing in the central banks of the Eurosystem most of the funds raised in the three-year auctions, as an immediate liquidity reserve, while maintaining a very limited global net borrowing position. The reduction in tensions enabled the Group in 2013 to return to the ECB all the funds borrowed from Spain in the three-year auctions. Net recourse at the end of the year was at a five-year low, mainly concentrated in Portugal.

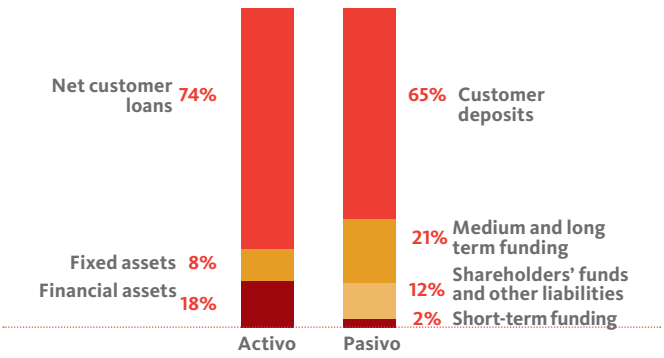
  In the fourth quarter of 2014, and within the ECB's strategy of promoting credit and contributing to a sustained recovery in the euro zone, the Group's units in the area (parent bank, Portugal and SCF) took part in the auctions of TLTROs, taking the maximum volume of funds available (EUR 8,200 million, overall). These funds and those to be obtained in successive quarterly auctions during 2015 and 2016 will facilitate the financing of household consumption and lending to business activities.

All these development of businesses and markets, made on the foundations of a solid liquidity management model, enabled Santander to enjoy today a very robust **funding structure**. The **basic features** of this structure are:

- **High relative share of customer deposits in an essentially retail banking balance sheet.**
  Customer deposits are the main source of the Group's funding. They represent around two-thirds of the Group's net funding (i.e. of the balance of liquidity) and 88% of net loans at the end of 2014.

  They are also very stable funds given their origin of mainly business with retail customers (84% of the Group's deposits come from retail and private banks and the remaining 16% from large corporate and institutional clients).

Grupo Santander liquidity balance sheet*
% 2014 year-end



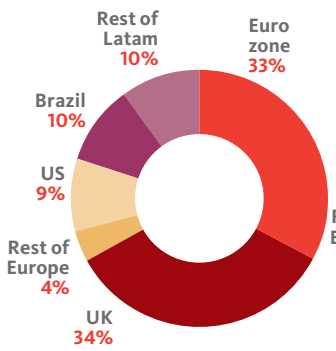
* Balance sheet for the purposes of liquidity management: total balance sheet net of trading derivatives and interbank balances.

- **Diversified wholesale funding focused on the medium and long term and with a very small relative share of short term.** Medium and long term wholesale funding accounts for 21% of the Group's net funding and comfortably covers the rest of lending not financed by customer deposits (commercial gap).

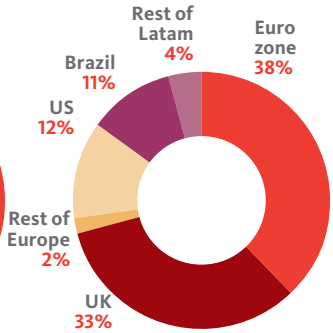
  This funding is well balanced by instruments (approximately 1/3 senior debt, 1/3 securitisations and structured with guarantees, 1/4 covered bonds and the rest preferred shares and subordinated debt) and also by markets so that those with the highest weight in issues are those where investor activity is the stronger.

The charts showing the geographic distribution of customer loans and of medium and long term funding are set out below so that their similarity can be appreciated.

Net customer loans
December 2014



M/LT wholesale funding
December 2014



The bulk of medium and long term wholesale funding consists of debt issues. Their outstanding balance at the end of 2014 was EUR 140,000 million nominal, with an adequate profile of maturities (average maturity of 3.5 years).

Its recent evolution reflects, on the one hand, the impact of the euro's depreciation against the main currencies and, on the other, the greater recourse to markets in 2014 with the capturing of funds higher than the year's maturities and amortisations. The distribution by instruments, the evolution over the last three years and their maturity profile was as follows.

Medium and long term debt issues, Grupo Santander
Million euros

	Evolution of outstanding balances in nominal value		
	December 2014	December 2013	December 2012
Preferred shares	7,340	4,376	4,765
Subordinated debt	8,360	10,030	11,004
Senior debt	68,457	60,195	69,916
Covered bonds	56,189	58,188	67,468
Total*	**140,346**	**132,789**	**153,152**

	Distribution by maturity. December 2014*								
	0-1 month	1-3 months	3-6 months	6-9 months	9-12 months	12-24 months	2-5 years	Over 5 years	Total
Preferred shares	0	0	0	0	0	0	0	7,340	7,340
Subordinated debt	0	0	0	0	152	1,682	3,352	3,173	8,360
Senior debt	1,470	4,066	7,092	2,931	6,313	16,808	21,386	8,392	68,457
Covered bonds	2,842	5,549	2,250	894	2,389	9,303	15,478	17,484	56,189
Total*	**4,312**	**9,615**	**9,342**	**3,825**	**8,854**	**27,793**	**40,216**	**36,388**	**140,346**

* In the case of issues with put option in favour of the holder, the maturity of the put option will be considered instead of the contractual maturity.
Note: the entire senior debt issued by the Group's subsidiaries does not have additional guarantees.

As well as debt issues, the medium and long term wholesale funding is completed by lines from the Federal Home Loan Banks in the US (around EUR 8,000 million) and by funds obtained from securitisation activities. The latter includes securitisation bonds placed in the market, collateralised financing and other special ones for a total amount of close to EUR 55,000 million and an average maturity of more than two years.

The wholesale funding of short-term issuance programmes is a marginal part of the structure as it accounts for less than 2% of net funding, which is related to treasury activities and is well covered by liquid financial assets.

The outstanding balance at the end of 2014 was EUR 21,400 million, mainly captured by the UK unit and the parent bank through existing issuance programmes: various programmes of CDs and commercial paper of the UK (49%); European commercial paper and US commercial paper and domestic programmes of the parent bank (22%), and from other units (29%).

In short, Santander enjoys a very solid and robust financing structure based on an essentially retail banking balance sheet that enables the Grupo Santander to cover comfortably its structural liquidity needs (loans and fixed assets) with permanent structural funds (deposits, medium and long term funding and equity), which generates a large surplus of structural liquidity.

8.3.2. Evolution of liquidity in 2014

The key aspects of liquidity in 2014 were:

- **Comfortable liquidity ratios**, backed by a balanced commercial activity at constant perimeter and a greater capturing of medium and long term wholesale funds (+44% more than 2013), which absorb credit growth.
- **Compliance ahead of schedule with regulatory ratios**: at the end of 2014, LCR levels of more than 100%, both at the level of the Group and its subsidiaries, compared to a minimum requirement of 60% as of October 2015.
- **High liquidity reserve**, stronger than 2013 in quantity (EUR 227,000 million) and quality (45% of the total are high quality liquid assets).
- **Reduced weight of encumbered assets** in structural medium and long term funding operations, around 13% of the Group's extended balance sheet (European Banking Authority criteria, EBA) at the end of 2014.

From the funding standpoint, 2014 saw a further improvement in markets compared to previous years. The advances mainly occurred in the first half of the year when, in an environment of recovery, particularly in mature economies, the global perception of risk decreased notably, stock market indices rose and the risk premiums of public and private debt fell substantially. This produced an even more fluid access to markets, both for banks as well as large companies, and a lower competitive pressure for retail deposits.

This performance, mainly due to central banks' very accommodating monetary policies with ample liquidity and interest rates at historic lows (even negative in the euro zone for the European Central Bank's deposit facility), led to the consequent search for profitability. Another important determinant was the progress made in European banking union and the idea that the most extreme risks were over.

In the second half of the year, there was a correction and a greater differentiation of risk according to the nature of assets and each economy's prospects, all conditioned by the downgrading of global growth forecasts, the end of the asset buying programme in the United States and the sharp fall in commodity prices (particularly, oil). The markets continued to offer high maturities and good spreads to the best risks.

In this context Santander maintained its **comfortable liquidity position in 2014**, reflected in four **basic aspects:**

i. Basic liquidity ratios at comfortable levels

The table shows the evolution in the last few years of the basic metrics for monitoring liquidity at the Group level:

Grupo Santander monitoring metrics

	2008	2012	2013	2014
Net loans/net assets*	79%	75%	74%	74%
Net loan-to-deposit ratio (LTD ratio)	150%	113%	112%	113%
Customer deposits and medium and long term funding/net loans	104%	117%	118%	116%
Short term wholesale funding/ net liabilities*	7%	2%	2%	2%
Structural liquidity surplus (% /net liabilities*)	4%	16%	16%	15%

*Balance sheet for liquidity management purposes.

Note: in 2012 and 2013 customer deposits include retail commercial paper in Spain (excluding short term wholesale funding). The 2012 and 2013 ratios include SCUSA by global integration, the same as in 2014.

At the end of 2014, and compared to 2013, Grupo Santander registered:

- A stable ratio of net loans/net assets (total assets less trading derivatives and interbank balances) at 74%, as a result of the improvement in credit, following the end of deleveraging in mature markets and the increased perimeter. Its high level in comparison with European competitors reflects the retail nature of Grupo Santander's balance sheet.
- Slight rise in the net loan-to-deposit ratio (LTD ratio) to 113% (112% in 2013), which remains at very comfortable levels (below 120%). This evolution shows the recovery of credit in mature markets, both organic as well as inorganic (incorporation of consumer businesses in Europe) and the greater focus on optimising the cost of retail deposits in countries with low interest rates.

- Slight decline in the ratio of customer deposits and medium- and long-term financing/lending, and for similar reasons to the LTD case, given that the rise in the Group's capturing of wholesale funds was also lower than that in lending. The ratio was 116% (118% in 2013), well above the average of the last few years (2008-13: 112%).

- The reduced recourse in the Group to short term wholesale funding was maintained. The ratio was around 2%, in line with previous years.

- Lastly, the Group's structural surplus (i.e., the excess of structural funding resources - deposits, medium- and long-term funding and capital - over structural liquidity needs - fixed assets and loans) continued to rise in 2014 to an average balance of EUR 158,000 million, 8% more than in 2013.

  This structural surplus at the end of 2014 stood at EUR 153,000 million on a consolidated basis and consists of fixed-income assets (EUR 151,000 million), equities (EUR 14,000 million) and net interbank deposits (EUR 9,000 million) in other credit institutions and central banks, partly offset by short-term wholesale funding (EUR 21,000 million). In relative terms, the total volume represented 15.4% of the Group's net liabilities, a similar level to that at the end of 2013.

In short, Grupo Santander had a comfortable liquidity position at the end of 2014, as a result of the evolution in the subsidiaries. Only one of the units, SCF, increased its LTD considerably over 2013, due to integration of businesses. However, its greater effort in issues and securitisations enabled the ratio of customer deposits and medium- and long-term financing/net lending to remain stable.

The rest of units remained stable or improved their liquidity positions. Of note among those that improved the most was Portugal which, together with a deleveraging process in its final phases, took advantage of the flight to quality to capture retail deposits and access markets ahead of its competitors.

The table below sets out the most frequently used liquidity ratios for Santander's main units at the end of 2014:

Liquidity ratios for the main units

%. December 2014

	Net loan-to-deposit ratio	Deposits+M & LT funding/net loans
Spain	88%	155%
Portugal	97%	115%
Santander Consumer Finance	196%	73%
Poland	84%	122%
UK	124%	107%
Brazil	109%	121%
Mexico	90%	117%
Chile	131%	99%
Argentina	81%	125%
US	144%	106%
Total Group	**113%**	**116%**

Note: in Spain, including retail commercial paper in deposits.

Generally speaking, there were **two drivers in 2014 behind the evolution** of the Group's liquidity and that of its subsidiaries:

1. Arise in the commercial gap, after several years of declines, due to the perimeter and reduced deleveraging in mature markets.

2. More intense issuance activity, particularly by the European units, in a more favourable situation of wholesale markets.

As regards the first driver, **the Group increased its gap between net credits and deposits** by EUR 13,500 million. The greater differential was largely due to three large units: UK, US and Santander Consumer Finance.

The first two, liquidity generators in the years before the deleveraging of their economies, registered growth in lending in 2014 in environments of strong recovery. SCF also reflects the consumer recovery in Europe, although it is still weak, and, above all, the incorporations to its business perimeter in Spain and in Nordic countries.

The rest of mature European units, such as Spain and Portugal, still show the impact of deleveraging on lending although at a much slower pace (in Spain it is even increasing if repos are excluded).

Meanwhile, growth in deposits in mature markets continued although at a slower pace, as a result of a greater focus on reducing the cost of deposits, as the main driver for recovering net interest income in environments of interest rates at minimums. This management led to rises in demand deposits and shifts of expensive deposits to mutual funds, strategies favoured by the improvement in markets and reduced competition for retail savings in an environment of high wholesale liquidity.

In Latin American units, the balanced growth of loans and deposits hides slight differences by countries: rises in the commercial gap in Mexico and Chile, well covered by the good starting position and the growing access to markets, compared to liquidity generation in Brazil and Argentina, in lower growth environments.

The second driver is the **greater recourse to medium and long term funding**. Following the decline in 2013 due to the surplus liquidity generated by commercial businesses, in 2014 the Group's subsidiaries, particularly the European ones, took advantage of the easing of markets and central banks' liquidity injections to increase this volume. The Group captured EUR 52,000 million in medium and long-term wholesale markets, 44% more than in 2013.

Medium and long-term fixed-income issues (senior debt, covered bonds, subordinated debt and preferred shares) were the ones that increased the most (+70% to more than EUR 38,000 million), with a greater weight of senior debt than covered bonds (two-thirds of the total). Spain was the largest issuer, followed by UK and Santander Consumer Finance's units (the three accounted for 79% of that issued).

The remaining EUR 13,400 million of medium and long-term funding corresponded to activities related to securitisations and funding with guarantees, and remained stable. The specialised consumer credit units in US and Europe represented 90% of the total.

All units operating in mature markets increased their wholesale fund capturing in line with the aforementioned trends. Latin American countries, on the other hand, reduced their capturing in an environment of markets very influenced by the end of the Federal Reserve's asset purchase programme.

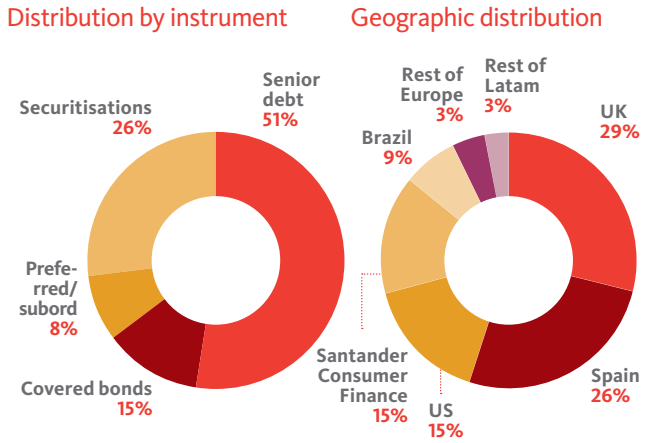
United Kingdom and Spain registered the strongest growth. In the first case, due to the return to lending growth and the improvement in the regulatory ratios which more than doubled the long-term senior debt issues (average life of 5 years). In the case of the parent bank, due to three Additional Tier 1 issues to reinforce and optimise the Group's capital ratios, and the issue of very long term covered bonds (10 and 20 years), the first made at these maturities since the onset of the crisis in a favourable market environment.

In United States, SCUSA continued to increase its securitisation activity and its recourse to warehouse lines to fund the strong growth in new lending and portfolio. Santander Consumer Finance notched up a new record, capturing more than EUR 7,600 million (+24%), with a greater weight of senior debt than securitisations and funding with guarantees. These funds represented 30% of the year's total capturing.

These four units accounted for 85% of the medium and long-term finding obtained in 2014. The chart below sets out in greater detail their distribution by instruments and geographic areas:

Medium and long term issues and securitisations placed in the market

January-December 2014



In short, Grupo Santander maintained comfortable access to the various markets in which it operates, strengthened by the incorporation of new issuance units. It made issues and securitisations in 2014 in 13 currencies, in which 18 issuers from 15 countries participated and with an average maturity of around 3.8 years, slightly higher than in 2013.

ii. Compliance ahead of schedule with regulatory coefficients

Under its liquidity management model, Grupo Santander has been managing in the last few years the launch, monitoring and compliance ahead of schedule of the new liquidity requirements established by international financial regulations.

Liquidity coverage ratio (LCR)

In 2014, and after approval by the Basel Committee of the final definition of the liquidity coverage ratio (LCR), the delegated act of the European Commission was adopted which, in the CRDIV sphere, defined the criteria for calculating and implementing this metric in the European Union. In a new development, implementation was delayed until October 2015, although the initial compliance level of 60% was maintained. This percentage will be gradually increased to 100% in 2018.

The good starting position of short-term liquidity combined with autonomous management of the ratio in all the big units enabled compliance levels of more than 100% to be maintained throughout the year, at both the consolidated as well as individual levels in all of them.

Net stable funding ratio (NSFR)

The final definition of the net stable funding ratio was approved by the Basel Committee in October 2014, and is pending transposition to local regulations. This ratio will come into force as of January 1, 2018.

As regards the ratio, Santander benefits from a high weight of customer deposits, which are more stable, permanent liquidity needs derived from the commercial activity funded by medium and long-term instruments and limited recourse to short-term funds. All of this enables it to maintain a balanced liquidity structure, which is reflected in NSFR ratio levels that, at Group level as well as for most of the subsidiaries, were above 100% at the end of 2014.

In short, management and the liquidity level enable the Group and the main subsidiaries to meet ahead of schedule both regulatory metrics by the.

iii. Strengthened position with a high liquidity reserve
This is the third main aspect reflecting the Group's comfortable liquidity position during 2014.

The liquidity reserve is the total of the highly liquid assets of the Group and its subsidiaries. It serves as a last resort recourse at times of maximum stress in markets, when it is impossible to obtain funding with adequate maturities and prices.

As a result, this reserve includes deposits in central banks and cash, unencumbered sovereign debt, the discounting capacity in central banks, as well as those assets eligible as collateral and undrawn credit lines in official institutions (Federal Home Loans Banks in US). All of this reinforces the solid liquidity position that Santander's business model (diversified, retail banking focus, autonomous subsidiaries) confers on the Group and its subsidiaries.

At the end of 2014, Grupo Santander's liquidity reserve amounted to EUR 230,000 million, 15% higher than in 2013 and 4% above the year's average. This volume represents 26% of the total Group's external funding in net terms and more than 100% of the total wholesale funds captured (short, medium and long term). The structure of this volume by type of asset according to the effective value (net of haircuts) was as follows:

Liquidity reserve at 31/12/2014
Effective value (net of haircuts) in million euros

	31/12/2014	Average 2014	31/12/2013
Cash and holdings at central banks	47,654	46,584	45,091
Unencumbered sovereign debt	52,884	50,056	36,382
Undrawn credit lines granted by central banks	115,105	111,215	107,520
Assets eligible as collateral and undrawn credit lines	14,314	13,060	10,757
Liquidity reserve	**229,957**	**220,915**	**199,750**

Note: the reserve excludes other assets of high liquidity such as listed fixed income and equity portfolios.

This increase was accompanied by a qualitative rise in the Group's liquidity reserve, derived from the differentiated evolution by its assets. The first two categories (cash and deposits in central banks+ unencumbered sovereign debt), the most liquid (or high quality liquidity assets in Basel's terminology, as first line of liquidity) increased more than the average. They rose by EUR 19,000 million, lifting their share of total reserves at the end of the year to 44% (41% in 2013).

Also noteworthy was the increased discounting capacity in central banks during 2014, in line with the strategy developed by the Group and its subsidiaries in the last few years. After reaching its maximum in September, it declined in the fourth quarter as a result of the use of TLTROs by the euro zone units (parent bank, Portugal, SCF), a trend which will continue in 2015.

All the main subsidiaries and management units increased their liquidity reserve volumes in absolute and relative terms, ensuring adequate reserve levels. Of note were the rises in volumes by SCF, Portugal and Poland, with the first two ending the year at levels that almost doubled the averages of 2013.

As regards its potential application, the main units covered with their liquidity reserve at least 75% of the wholesale funding captured at the end of 2014, with four units well over 100% (UK, Mexico, Poland and Portugal). Only two, SCF and Chile, had lower coverage levels although comfortable (34% and 62%, respectively), which continued to increase during the year.

Within the autonomy conferred by the funding model, each subsidiary maintains a composition of assets of its liquidity reserve adequate for its business and market conditions (for example, capacity to mobilise their assets, recourse to additional discounting lines such as in the US). Most of the assets are denominated in the currency of the country, and so there are no restrictions on their use.

iv. Asset encumbrance
Lastly, it is worth pointing out Grupo Santander's moderate use of assets as a guarantee in the balance sheet's structural funding sources.

In line with the guidelines established by the European Banking Authority (EBA) in 2014, the concept of asset encumbrance includes both assets on the balance sheet contributed as guarantee in operations to obtain liquidity as well as those off-balance sheet ones received and re-used with a similar purpose, as well as other assets associated with liabilities for different funding reasons.

The table below sets out Grupo Santander's information as required by the EBA at the end of:

Grupo Santander
Assets

Billion euros	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
Assets of the reporting institution	**296.0**		**970.3**	
Loans and loans on demand	186.3		692.1	
Equity instruments	7.4	7.4	11.4	11.4
Debt securities	84.2	84.2	92.2	92.2
Other assets	18.1		174.7	

Grupo Santander
Collateral received

Billion euros	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 by the reporting institution	**57.5**	**37.4**
Loans and loans on demand	1.6	0.3
Equity instruments	1.8	0.6
Debt securities	54.2	31.4
Other collateral received	0.0	5.3
Own debt securities issued other than own covered bonds or ABSs	0.0	0.0

Grupo Santander
Encumbered assets and collateral received and associated liabilities

Billion euros	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 encoumbrance	291.7	353.5

On balance sheet asset encumbrance amounted to EUR 296.0 billion, close to two-thirds of which are loans (mortgages, corporate). Off-balance sheet asset encumbrance was EUR 57.5 billion and mainly relates to debt securities received in guarantees in operations to acquire assets and which were re-used. The total for the two categories was EUR 353.5 billion, which gave rise to a volume of associated liabilities of EUR 291.7 billion.

At the end of 2014, total asset encumbrance in financing operations represented 26% of the Group's extended balance sheet under EBA criteria (total assets plus guarantees received: EUR 1,361 billion).

It is necessary to distinguish within them the different nature of the sources of encumbrance as well as their role in funding the Group:

- 50% of the total of asset encumbrance corresponds to guarantees contributed in medium and long-term funding operations (with an average maturity of more than two years) to finance the balance sheet's commercial activity. This puts the level of asset encumbrance understood as "structural" at 13% of the extended balance sheet using EBA criteria.

- The other 50% corresponds to short-term market operations (with an average maturity of less than three months) or guarantees contributed in operations with derivatives and whose purpose is not to finance the ordinary activity of businesses but efficient management of short-term liquidity.

Lastly, and in relation to 2013, it should be noted that total asset encumbrance increased significantly due to methodological and perimeter changes. Specifically, the widening of the definition of encumbrance applied by the EBA and the consolidation by global integration of Santander Consumer USA (unit specialised in consumer finance and almost entirely funded by securitisations and guaranteed credit lines) explain more than three-quarters of the change. To this must be added the greater recourse to the European Central Bank's conditioned long-term funding (TLTROs).

Of note is that the volume of asset encumbrance in medium and long term funding operations ("structural") remained stable on a like-for-like basis.

8.4. Funding outlook for 2015

Grupo Santander began 2015 with a comfortable liquidity position in an environment of more favourable markets due to recovery expectations and stability, although not free of risks, and due to the large liquidity injections started by the European Central Bank, via auctions and public debt purchases, which will last until the middle of 2016.

With maturities which can be assumed in the coming quarters, due to the reduced weight of short term and a dynamic of medium and long term issues similar to that of a year ago, the Group will manage these needs in each country together with the specific ones of each business, including the envisaged incorporation of new portfolios and businesses, particularly consumer business in Europe.

The envisaged scenario of stronger growth with low interest rates will generate liquidity needs in many units in both mature and emerging countries, in some cases from the recovery in lending and in others from profit-making of liability positions.

In order to cover these greater commercial needs, the units ended 2014 with surplus positions in most cases. They also have ample access to wholesale markets, which are currently offering higher maturities and lower spreads than in previous years, particularly in Europe due to the European Central Bank's quantitative easing. All of this will enable the Group's subsidiaries to maintain appropriate liquidity structures for their balance sheets.

Spain fits this description. With a surplus of deposits over loans, a moderate recovery in lending is envisaged after a long period of deleveraging, while continuing to focus on optimising the cost of the funds. This could require the use of part of the existing surplus of the ECB's long-term conditioned liquidity (TLTROs) and, if the market conditions in maturities and interest rates remain favourable, greater recourse to wholesale funding.

A similar description can be applied to the unit in Portugal, although with some mismatch regarding the evolution in Spain derived from the less intensive economic recovery and the high existing needs of deleveraging.

Of note in the rest of European units will be the increasing activity Santander Consumer Finance's issues and securitisations, backed by the strength of its business and the quality of its assets. In 2015, as already commented on, the consolidation of new portfolios will require a greater dependence of the rest of the Group on short term funds. On the other hand, Poland, without maturities of wholesale issues in the market and with a surplus of deposits over loans, will concentrate on maintaining this comfortable situation while improving the profitability of its deposits.

In the UK, the good performance of commercial activity and the capturing of clients will strengthen the deposit base as the basic source of credit growth. The favourable situation of wholesale markets will make it possible to optimise the unit's wide borrowing positions in the medium and long term. The United States, also with balanced growth in loans and deposits, will focus its activity on diversifying its wholesale funding sources, both in Santander Bank as well as SCUSA, which will contribute to reducing its degree of leveraging with respect to the funds guaranteed.

In Latin America, as in 2013, the emphasis will remain on deposits for funding business activities while strengthening issuance in wholesale markets opened to the Group's big units.

In addition, and at Group level, Santander maintains its long-term plan to issue funds eligible as capital. Begun in 2014 in order to strengthen regulatory ratios efficiently as well as increase its total capacity to absorb losses, this issuance plan could mean new requirements for the market in 2015 if adequate conditions concur.

Under this general framework, the Group's various units took advantage of the good conditions in the markets at the beginning of 2015 to make issues and securitisations at very tight spreads, capturing more than EUR 4,000 million in January. To this is added the liquidity from the Group's capital increase in the same month, lifting total liquidity captured in the market to more than EUR 11,500 million.

9. Operational Risk

9.1. Definition and objectives

Grupo Santander defines operational risk (OR) as the risk of losses from defects or failures in its internal processes, employees or systems, or those arising from unforeseen circumstances.

Operational risk is inherent to all products, activities, processes and systems and is generated in all business and support areas. For this reason, all employees are responsible for managing and controlling the operational risks generated in their sphere of action.

The Group's objective in control and management of operational risk is to identify, measure/valuate, control/mitigate, monitor and communicate this risk.

The Group's priority is to identify and eliminate risk focuses, regardless of whether they produce losses or not. Measurement also helps to establish priorities in management of operational risk.

Grupo Santander has been using the standard method envisaged in BIS II rules for calculating regulatory capital by operational risk. During 2014, however, the Group started a project to evolve toward a focus of advanced models (AMAs), for which it already has met most of the regulatory requirements. It is important to note that the priority in operational risk management continues to centre on its mitigation.

The report on Prudential Significance/Pillar III in section 5 includes information on calculating the equity requirements by operational risk.

9.2. Management model and control of operational risk

9.2.1. Management cycle of operational risk

The Group's operational risk management incorporates the following elements:

The various phases of the operational risk management and control model are:

- Identify the operational risk inherent in all the Group's activities, products, processes and systems.
- Define the target profile of operational risk, specifying the strategies by unit and time frame, the OR appetite and tolerance and monitoring.
- Promote the involvement of all employees in the operational risk culture, through adequate training at all spheres and levels.
- Measure and assess the operational risk objectively, continuously and coherent with the regulatory standards (Basel, Bank of Spain) and the sector.
- Continuously monitor the exposure of operational risk, implement control procedures, improve internal knowledge and mitigate losses.

- Establish mitigation measures that eliminate or minimise operational risk.

- Produce regular reports on the exposure to operational risk and the level of control for senior management and the Group's areas/units, as well as inform the market and regulatory bodies.

- Define and implement the methodology needed to calculate the capital in terms of expected and unexpected loss.

For each of the aforementioned processes, the following are needed:

- Define and implement systems that enable operational risk exposure, integrated into the Group's daily management, to be monitored and controlled, taking advantage of the existing technology and achieving the maximum computerisation of applications.

- Define and document the policies for managing and controlling operational risk, and install management tools for this risk in accordance with the rules and best practices.

Grupo Santander's operational risk management model contributes the following advantages:

- Promotes development of an operational risk culture.

- Allows comprehensive and effective management of operational risk (identification, measurement/assessment, control/mitigation and information).

- Improves knowledge of existing and potential operational risks and assigns responsibility for them to the business and support lines.

- Operational risk information helps to improve the processes and controls, reduce losses and the volatility of revenues.

- Facilitates the establishment of operational risk appetite limits.

9.2.2. Model of identification, measurement and risk assessment

A series of quantitative and qualitative corporate techniques/tools has been defined to measure and assess technological and operational risk, which are combined to make a diagnosis (on the basis of the risks identified) and obtain an assessment (through measurement/evaluation) of the area/unit.

The quantitative analysis of this risk is carried out mainly with tools that register and quantify the level of losses associated with operational risk events.

- An internal database of events, whose objective is to capture all the Group's losses from operational risk. The capturing of events related to operational risk is not restricted by setting thresholds (i.e. there are no exclusions for reasons of amount) and there are both events with accounting impact (including positive effects) as well as non-accounting ones.

  There are accounting conciliation processes to guarantee the quality of the information gathered in the databases. The main events of the Group and of each operational risk unit are particularly documented and reviewed.

- An external database of events, as the Grupo Santander participates in international consortiums, such as the Operational Risk Exchange (ORX). The use of external data bases was strengthened in 2014, which provide quantitative and qualitative information, enabling a more detailed and structured analysis of the events produced in the sector.

- Analysis of OR scenarios. An expert opinion is obtained from the business lines and from the risk and control managers whose purpose is to identify potential events with a very low probability of occurring, but which could mean a very high loss for an institution. Their possible effect is assessed and extra controls and mitigating measures identified that reduce the eventuality of a high economic impact.

  Meanwhile and as a relevant part of the process of the evolution toward advanced models (AMA), a corporate methodology of scenarios was developed during 2014, which was implemented in Spain and Brazil. The UK is already developing operational risk scenarios. The Group also continued to participate in the exercise led by the ORX consortium.

- Capital calculation by the standard method (see the corresponding section in the report on Prudential Relevance Report/Pillar III).

The tools defined for qualitative analysis seek to assess aspects (coverage/exposure) linked to risk profile, enabling the existing environment of control to be captured.

These tools are mainly:

- Map of processes and risks and self-assessment questions. An adequate evaluation of the risks, on the basis of the expert criterion of the managers, enables a qualitative view of the Group's main focuses of risk to be obtained, regardless of having materialised before.

  The Group's units continued to make progress in exercises of risk self-evaluation. This tool bases its methodology on estimating inherent and residual loss and qualitative VaR according to the map of processes and risks. Specifically, the experts of the various business and support areas assess the risks associated with the processes and activities, estimating the average frequency of occurrence in the materialisation of risks, as well as the average severity. The exercise also incorporates evaluating the greatest loss, assessing the environment of control and linkage to reputational and regulatory risk. The information obtained is analysed locally and corporately and integrated within the strategy of reducing operational risk through measures to mitigate the main risks.

  The corporate areas participated during 2014 in a pilot exercise, based on a methodology of workshops with the participation of risk managers and OR co-ordinators, in order to improve the Bank's active participation. The result, in terms of inherent and residual loss for the area's main risks, produced an improvement

in the perception of risk of the first lines of defence at all levels (executive and management).

- Corporate system of operational risk indicators, in continuous evolution and in coordination with the internal control area. They are various types of statistics or parameters that provide information on an institution's exposure to risk. These indicators are regularly reviewed in order to alert them to changes that could reveal problems with risk.

- Auditing recommendations. Relevant information is provided on inherent risk due to internal and external factors which enables weaknesses in the controls to be identified.

- Other specific instruments that enable a more detailed analysis of the technology risk such as, for example, control of critical incidents in systems and cyber-security events.

9.2.3. Implementation of the model and initiatives

Almost all the Group's units are incorporated to the model and with a high degree of uniformity. However, due to the different pace of implementation, phases, schedules and the historical depth of the respective databases, the degree of progress varies from country to country.

As indicated in section 9.1., the Group started a transformation project toward an AMA focus. During 2014, the state of the pillars of the OR model was analysed, both at the corporate level as well as in the relevant units, and a series of actions was planned in order to cover the management and regulatory expectations in the management and control of OR.

The main functions, activities and global initiatives adopted seek to ensure effective management of operational risk are:

- Define and implement the operational risk framework.

- Designate OR coordinators and create operational risk departments in the local units.

- Training and interchange of experiences: continuation of best practices within the Group.

- Foster mitigation plans: ensure control of implementation of corrective measures as well as ongoing projects.

- Define policies and structures to minimise the impact on the Group of big disasters.

- Maintain adequate control of activities carried out by third parties in order to meet potential critical situations.

- Supply adequate information on this type of risk.

- Develop a methodology to calculate the capital based on VaR models with a confidence interval of 99.9%.

The corporate function enhances management of technological risk, strengthening the following aspects among others:

- Protection against and prevention of cyber attacks and in general aspects related to the security of information systems.

- Foster contingency and business continuity plans.

- Management of risk associated with the use of technologies (development and maintenance of applications, design, implementation and maintenance of technology platforms, output of computer processes, etc).

Following the approval in 2013 of the corporate framework for agreements with third parties and control of suppliers, applied to all the institutions where Grupo Santander has affective control, in 2014 work was begun on drawing up a model developing this framework and formulating the policies of homologation of suppliers, identifying the detail of the principles that will govern relations of the Group's entities with suppliers, from the beginning to their termination, and paying particular attention to:

- The decision to outsource new activities and services.

- The selection of the supplier.

- Establishing the rights and obligations of each of the parties.

- Control of service and regular review of agreements made with suppliers.

- The ending of agreements established.

The Group is in the process of implementing the model, analysing the current processes of the institutions in matters of control of suppliers, standardising certain controls and verifying compliance with the aspects defined in the model.

9.2.4. System of operational risk information

The Group has a corporate information system that supports the operational risk management tools and facilitates information and reporting functions and needs at both the local and corporate levels.

This system has modules to register events, risks and assessment map, indicators, mitigation and reporting systems, and is applied to all the Group's units.

The various areas that the platform covers are shown below:

Corporate operational risk system

- General administration module
- Association with processes, business lines and organisation
- Administration of static data

Operational risk events

- Registry of losses, quasi losses and recoveries
- Individual registry, massive or by interface
- Workflow of capturing and quality filters
- Management of events, multi-impact

Map of risks and self-evaluation and recoveries

- Map of risks and controls
- Evaluation of inherent and residual risk
- Frequency and severity estimates
- Workflow of questionnaires
- Analysis of scenarios

Indicators of operational risk

- Registry of indicators
- Individual capturing, massive or by interface
- Methodological application of normalisation and aggregation of the Group
- Monitoring of indicators and setting of alert thresholds

Reporting

- Information at the country and corporate level
- Static and dynamic reports

Mitigation

- Identification of mitigation plans
- Evaluation and monitoring of mitigation plans

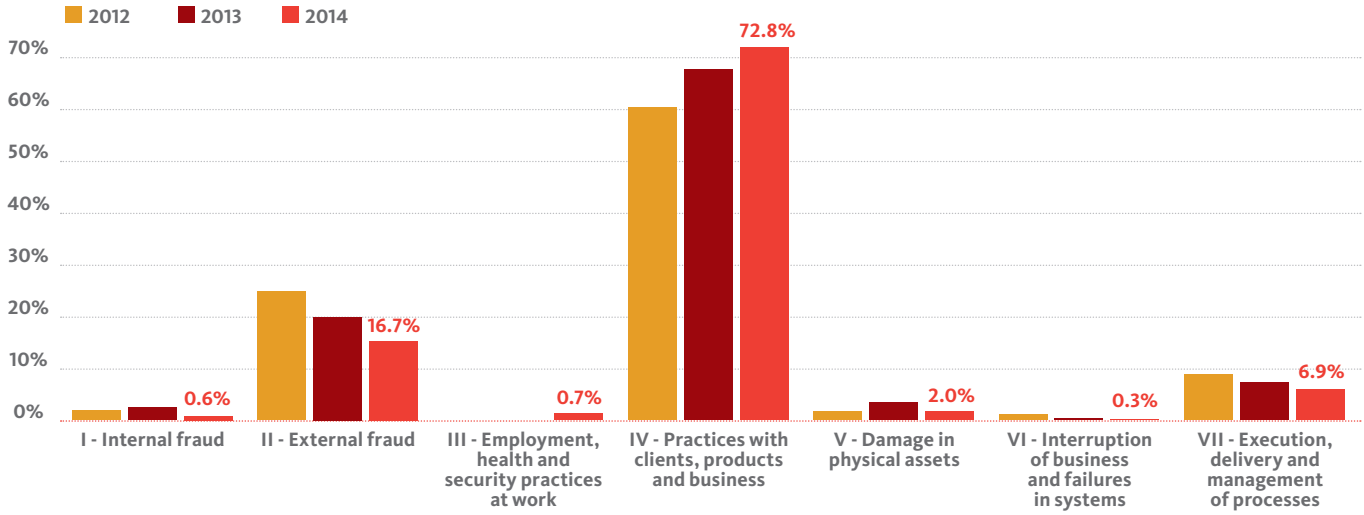
As part of the establishment of advanced models, and taking into account the synergies that will be produced in the control sphere, the Group is in the process of installing a governance, risk and compliance tool (GRC) that supports comprehensivelyly not only operational risk management and control, but also the internal control and compliance functions.

9.3. Evolution of the main metrics

As regards the databases of events, and after consolidating the information received, the evolution of net losses by Basel risk category in the last three years is set out in the chart below:

Distribution of net losses by operational risk category[40]

% of total



The evolution of losses by category shows a reduction in relative terms of external fraud and execution, delivery and management of processes, thanks to the measures taken for their mitigation.

The category of practices with clients, products and business – which includes customer complaints on erroneous marketing, incomplete information and inexact products – increased in relation to the rest of categories. However, despite the increase in the relative share of this category, the net losses were lower than in 2013. Of note among the main elements was the increase in judicial cases in Brazil, as well as compensation for clients in the UK (payment protection insurance). In the latter case, the complaints presented to the Group relate to a general problem in the UK banking sector, and the volume of complaints against the bank is considered proportionate to its market share. Although these events were sufficiently provisioned in 2011 by the Group, the settlements for these clients was maintained in 2014, in accordance with the planning by the unit.

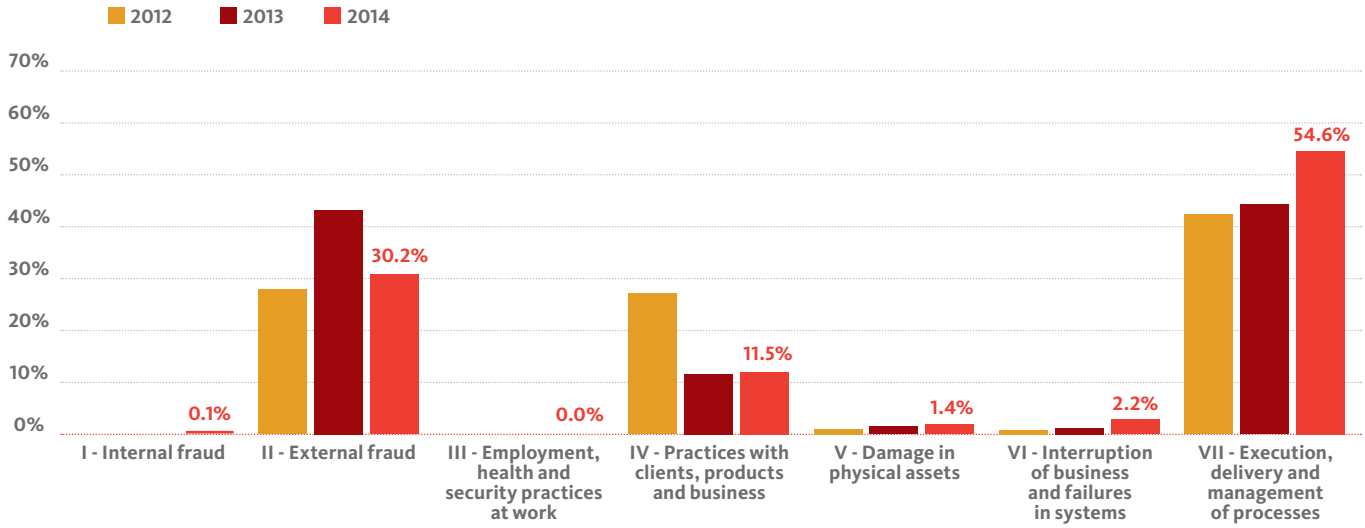
In addition and, as a result of a judicial ruling that means a change in the interpretation of legislation, Santander Consumer Germany began to return to its clients management commissions linked to consumer credits. This event affected all the German banking sector.

40. In accordance with local practice, employee compensation in Brazil is managed as part of the personnel cost without detriment to its treatment according to the categorisation applicable in the Basel operational risk framework, as a result of which it is not included.

The chart below sets out the evolution of the number of operational risk events by Basel category over the last three years:

Distribution of number of events by operational risk category[41]

% of total



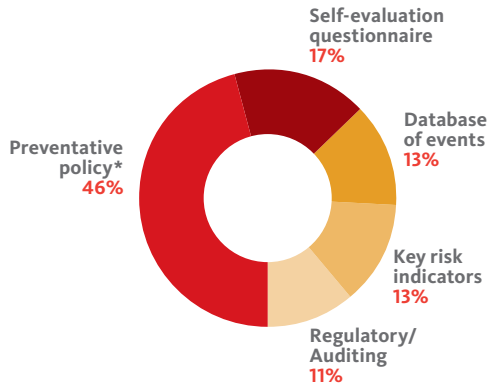
9.4. Mitigation measures

The Group has a stock of mitigation measures (500 active ones), established in response to the main risk sources, which have been identified by analysing the tools used to manage operational risk, as well as the organisational and development model and by implementing preventative policies and procedures for managing and controlling technology and operational risk.

The percentage of measures on the basis of the source and management tool, which identified the risk necessary to mitigate, was as follows:

2014 mitigation – sources of origin

%

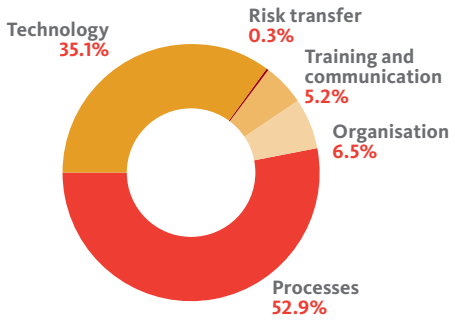


*The preventative policy concept includes measures from the corporate and local committees, the business continuation plan, training for employees and continuous improvement in the controls established.

These measures are turned into action plans which are then distributed in the following spheres:

2014 mitigation – type of measure

%



The main mitigation measures centred on improving the security of customers in their usual operations, as well as continued improvements in processes and technology and in management for a sale of products and providing adequate services.

Regarding the reduction of fraud, the main specific measures were:

- Electronic fraud:
  - Updating the corporate anti-fraud reference model in order to incorporate specific protection measures to mitigate the new patterns of fraud, as well as strengthen the measures already implemented.

41. In accordance with local practice, employee compensation in Brazil is managed as part of the personnel cost without detriment to its treatment according to the categorisation applicable in the Basel operational risk framework, as a result of which it is not included.

- Deploy protection measures in the new channels/applications, such as the robust authentication mechanism in mobile banking, so that operations via these devices have a level of security analogous to that of online banking.

- Fraud in the use of cards:

  - Continue to use chip cards (standard EMV), in line with the schedule established by the means of payment industry for each country, and issuing new cards based on encrypted algorithms that offer better protection against the current cloning techniques.

  - Application of more robust protocols to validate cards when used for purchases in shops.

  - As regards online shopping, we continued to install 3DSecure and mechanisms that enable authentication of transactions to be adapted according to a specific risk analysis.

  - Improved security in ATMs, including anti-skimming devices).

As regards measures relating to practices with clients, products and business, Grupo Santander establishes corporate policies for the marketing of products and services, as described in 10.4 Compliance and reputation risk management model.

Of particular note is the *Trabalhar Bem* (Work Well) project being developed in Brazil in order to provide a better service to the Bank's clients and, with it, reduce the volume of incidents and complaints. This project incorporates various lines of action to improve marketing and customer protection practices: influence in the design decisions of products and services, analysis and solution of the incident that is the root of clients' complaints, development of a single management and monitoring framework, and improvement in the protection networks in the points of contact.

Anti-cyber risk measures

The upward trend in the number and impact of incidents related to cyber security in 2014 was confirmed, affecting all types of companies and institutions including banks. This situation, which generates concern among entities and regulators, spurred preventative measures to be taken in order to be prepared for such attacks.

The Group developed an internal cyber security reference model, inspired in international standards (among others, the US NIST framework –National Institute of Standards and Technology). Implementing the cyber security strategy in the Group's units resulted in various initiatives and lines of action, such as:

- Assessment of the situation of each unit with regard to the reference internal model in order to identify improvement possibilities and prioritise points of action on cyber risks.

- Strengthen the technological solutions and services to detect and prevent cyber attacks and information leaks, as well as the registry, correlation and management of security events.

- Improve the security monitoring services (security operations centre) and widen the scope.

- Participation in cyber exercises promoted by the National Institute of Cybersecurity to assess companies' response to this type of incident.

- Cooperation with international forums in order to identify the best practices and share information on threats.

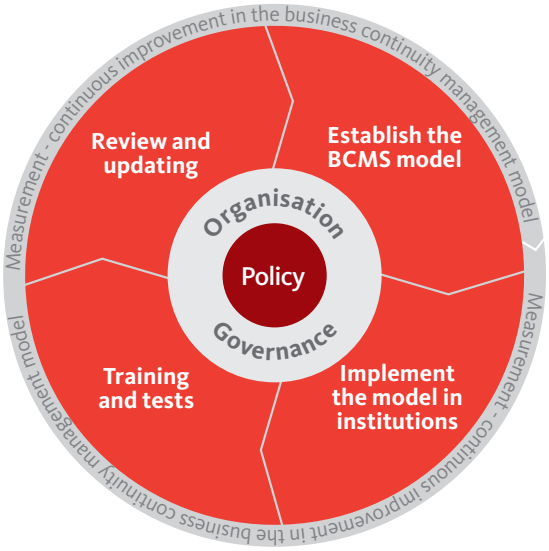
Measures also began to be taken to update the training programmes in this sphere for the Group's employees, which will lead to a new course in the e-learning platform in 2015. This course will give precise steps, as well as examples of the main patterns of cyber attacks and electronic fraud currently occurring.

In addition, observation and study of the events in the sector and in other industries, from an analytical standpoint, enables us to update and adapt our models to the emerging threats.

Lastly, we have prepared a global programme of insurance for cyber risk that covers the Group's units against such events.

9.5. Business continuity plan

The Group has a business continuity management system (BCMS), which ensures that the business processes of our institutions continue to operate in the event of a disaster or serious incident.



The basic objective is to:

- Minimise the possible damage from an interruption in normal business operations on people and financial and adverse business impacts for the Group.

- Reduce the operational effects of a disaster, supplying a series of predefined and flexible guides and procedures to be used to re-launch and recover processes.

- Renew business operations and associated support functions that are time sensitive, in order to achieve business continuity, stable profits and planned growth.
- Re-establish technology operations and support for business operations that are time sensitive, in the event of existing technologies not working.
- Protect the public image of and confidence in Grupo Santander.
- Meet the Group's obligations to its employees, customers, shareholders and other interested third parties.

The Group continued to advance during 2014 in implementing and continuously improving its business continuity management system, placing particular emphasis on strengthening controls for monitoring the continuity plans of suppliers who provide services regarded as essential for the Bank.

9.6. Other aspects of control and monitoring of operational risk

Analysis and monitoring of controls in market operations

Due to the specific nature and complexity of financial markets, the Group considers it necessary to strengthen continuously operational control procedures of this activity. In 2014, it continued to improve the control model of this business, attaching particular importance to the following points:

- Analyse the individual operations of each Treasury operator in order to detect possible anomalous behaviour.
- Implementation of a new tool that enables compliance with the new requirements in recording and control of listening in to operations.
- Strengthen controls on cancelling and modifying operations.
- Strengthen controls on the contributions of prices to market indexes.
- Develop extra controls to detect and prevent irregular operations.
- Develop extra controls on access to systems registering front office operations (for example, with the purpose of detecting shared users).

The business is also undergoing a global transformation that involves modernising the technology platforms and operational processes which incorporate a robust control model, enabling the operational risk associated with business to be reduced.

Corporate information

The function of operational risk control has an operational risk management information system that provides data on the Group's main elements of risk. The information available for each country/unit is the operational risk sphere is consolidated in such a way as to obtain a global vision with the following features:

- Two levels of information: corporate with consolidated information and the other individualized for each country/unit.
- Dissemination of the best practices between Grupo Santander's countries/units, obtained through a combined study of the results of qualitative and quantitative analysis of operational risk.

Information on the following aspects is drawn up:

- Grupo Santander's operational risk management model and in the Group's main units and countries.
- Perimeter of operational risk management.
- Monitoring of appetite metrics.
- Analysis of the internal database of incidents and relevant external incidents.
- Analysis of the main risks, detected via various sources of information, such as self-evaluation exercises of operational and technology risks.
- Assessment and analysis of risk indicators.
- Mitigating/active management measures
- Business continuity and contingency plans.

This information is the basis for complying with the reporting needs to the executive risk committee, senior management, regulators, rating agencies, etc.

Insurance in the management of operational risk

Grupo Santander regards insurance as a key element in management of operational risk. Common guidelines of co-ordination were established in 2014 among the various functions involved in the insurance management cycle which mitigate operational risk, mainly the areas of insurance itself and control of operational risk, but also the different areas of first line risk management.

These guidelines incorporate the following activities:

- Identification of all those risks in the Group which can be the object of insurance coverage, including identification of new coverages of insurance on risks already identified in the market.
- Establishment and implementation of criteria to quantify the risk to be insured, backed by analysis of losses and scenarios of losses that enable the Group's level of exposure to each risk to be determined.

- Analysis of coverage available in the insurance market, as well as preliminary design of the conditions that best adjust to previously identified and assessed needs.
- Technical assessment of the protection level provided by the policy, costs and levels of retention that the Group will assume (franchises and other elements at the responsibility of the insured) in order to decide on their contracting.
- Negotiating with suppliers and awarding of contracts in accordance with the procedures established by the Group.
- Monitoring of incidents declared in the policies, as well as of those not declared or not recovered by an incorrect declaration.
- Analysis of the adequacy of the Group's policies to risks covered, taking the opportune corrective measures for the shortcomings detected.
- Close cooperation between local operational risk executives and local coordinators of insurance to strengthen mitigation of operational risk.
- Regular meetings on specific activities, states of situation and projects in both areas.
- Active participation of both areas in the unit for global sourcing of insurance, the Group's maximum technical body for defining coverage strategies and contracting insurance.

10. Compliance, conduct and reputational risk

10.1. Definitions and objective

The compliance risk is the risk of receiving economic or other sanctions, or other types of disciplinary measures imposed by supervisory bodies for not complying with laws, regulations, rules, standards of self-regulation or codes of conduct applicable to the activity developed.

Conduct risk is that caused by inadequate practices in the Bank's relations with its clients, the treatment and products offered to clients and the suitability and appropiateness of them to each specific client.

Reputational risk is the risk of damage in the perception of the Bank by public opinion, its clients, investors or any other interested party.

The Group's objective in the sphere of managing compliance and conduct risks is: (i) to minimise the probability that irregularities occur; and (ii) that the irregularities that could eventually occur are identified, reported and those that could eventually occur are identified, reported and quickly resolved. As for reputational risk, bearing in mind the diversity of sources from which it can arise, the objective of management is to identify them and ensure that they are duly tended to so that their probability is reduced and the eventual impact is mitigated.

10.2. Corporate governance and the organisational model

In the exercise of its general function of supervision, the Bank's board is responsible for approving the general policy of risks. In the sphere of compliance, conduct and reputational risk, the board is holder of the Group's General Code of Conduct, the global policy for the prevention of money laundering and the financing of terrorism and the marketing policy for products and services.

Reporting on the compliance function to the board will de done as follows: (i) in a permanent way and directly via an executive vice-chairman of the board who supervises Grupo Santander's compliance function; and (ii) via the report presented monthly to the risk supervision, regulation and compliance committee. This committee supports and advises the board regarding the Group's relationship with the supervisors and regulators of the countries in which the Group operates, as well as on the supervision of the codes and rules of an internal nature.

At its meeting on January 16, 2015, the board agreed to appoint an executive vice-chairman of the board to whom the compliance function reports, in accordance with the regulatory recommendations on corporate governance.

In addition and in order to strengthen the importance of the compliance function, the executive committee, at its meeting on February 2, 2015, agreed to appoint an executive vice-president as chief compliance officer.

As collegiate bodies with basic powers in this sphere, there are the corporate committees of regulatory compliance, analysis and resolution and marketing (the latter two, specialised in their respective spheres: anti-money laundering and marketing of products and services), with a global reach (all countries/all businesses) and replicated at the local level.

The risk division supervises the control framework applied in the compliance sphere, from both the area of comprehensive control and internal validation of risks, in the exercise of its functions of supporting the executive risk committee, as well as from the non-financial risk control area created in 2013.

The organisational model revolves around the corporate area of compliance and reputational risk, which is responsible for managing the Group's compliance, conduct and reputational risks. Within the area is the corporate office of risk management of regulatory compliance, the corporate office of conduct risk management and the corporate unit of financial intelligence (CUFI), with anti-money laundering and terrorist financing powers. This structure is replicated in all local units and also in global businesses, having established the opportune functional reports for the corporate area.

10.3. Risk appetite model and exercise of regulatory risk assessment

The Group's risk appetite model applicable to compliance and conduct risks is characterised by the following three elements:

- It stems from a zero appetite declaration for the sphere of compliance and conduct risk.
- The Group's objective is to minimise compliance and conduct risk incidents. Systematic monitoring is carried out via the compliance and conduct risk indicator resulting from assessment matrices prepared for each country.
- Quarterly monitoring of the risk level is conducted country by country.

The assessment matrix is fed with data from the communications received every month from the various supervisors. Each one of these communications is assigned a score on the basis of the risk they represent as regards: (i) costs from fines; (ii) costs of reorganising processes; and (iii) the impact on the brand and reputational risk. These assessments are supplemented by ratings of internal audit in the compliance sphere. Each local unit is assigned a weighting depending on its attributable profit and volume of assets, with which a complete score for the Group is obtained.

The corporate area of compliance assessed regulatory risk (risk assessment) in 2014, focusing on the Group's main countries. This exercise, which stems from identifying regulatory obligations that affect the Group's units, was based on the risk assessment of each obligation, conducted in two phases: the first, of the so called inherent risk, which comes from the very activity of business, and the second, residual risk, once the impact of controls is taken into account.

This regulatory risk assessment exercise will complement the risk appetite model, contributing new metrics.

10.4. Risk management model

The main responsibility of compliance and reputational risk management is shared between the function of compliance and reputational risk and the different business and support units that conduct the activities that give rise to risk. The responsibility for developing corporate policies throughout the Group, establishing controls and monitoring and verifying their application, as well as reporting incidents, lies with the compliance function and reputational risk, which is also responsible for advising senior management in this sphere and for fostering a compliance culture, all of this in the framework of an annual programme whose effectiveness is regularly assessed.

The function directly manages the basic components of these risks (money-laundering, codes of conduct, marketing of products, etc) and ensures that the rest is duly tended to by the corresponding unit of the Group (responsible financing, data protection, customers' complaints, etc), having established the opportune control and verification systems.

The correct execution of the risk management model is supervised by the comprehensive control and internal validation of risk area. At the same time, within its functions, internal audit carries out the tests and reviews required to ensure that the rules and procedures established in the Group are being fulfilled.

The general code of conduct is the central element of the Group's compliance programme. This code, which enshrines the ethical principles and rules of conduct that must govern the actions of all Grupo Santander's employees, is complemented in certain matters by the rules that are in codes and sector manuals[42].

The code also establishes: i) the functions and responsibilities in matters of compliance of the governance organs and of the Group's management areas affected; ii) the rules that regulate the consequences of non-compliance; and iii) a whistle blowing channel for formulating and handling communications for presumably illicit activity.

42. The following form part of the codes and manuals of sectors: the Manual for Anti-Money Laundering and Terrorist Financing, the Code of Conduct in Securities Market, the Manual of Procedures for the Sale of Financial Products, the Code of Conduct for Analysis Activity, the Research Policy Manual, the Manual of Conduct in the Use of Information and Communication Technologies (ICT), the Manual of Conduct in the Management of Real Estate, the Manual of Conduct in Suppliers Relationship, etc, as well as the notes and circulars that develop specific points of these codes and manuals, particularly the corporate circular on the corporate programme to prevent corruption.

The corporate office of regulatory compliance, under the supervision of the committee of risk supervision, regulations and compliance and of the committee of regulatory compliance, is responsible for the effective implementation and monitoring of the general code of conduct.

The committee of regulatory compliance has powers in all matters inherent in the compliance function, without detriment to those assigned to the two specialised bodies in the area (corporate committee of marketing as regards the commercialisation of products and services and the committee of analysis and resolution in the sphere of anti-money laundering and terrorist financing). It is made up of representatives of the general secretariat, risks, human resources, organisation and costs, technology and operations, internal audit, financial management and public policy.

The committee held four meetings in 2014.

The Group's compliance management has the following functions as regards management of compliance, conduct and reputational risks:

1. Implement the Group's general code of conduct and other codes and sector manuals.
2. Supervise the training activity of the compliance programme conducted by the human resources area.
3. Direct investigations into the possible committing of acts of non-compliance, being able to request help from internal audit and propose to the irregularities' committee the sanctions that might be applicable in each case.
4. Cooperate with internal audit in the regular reviews of compliance with the general code and with the codes and sector manuals, without detriment to the regular reviews which, on matters of regulatory compliance, are conducted by compliance management directly.
5. Receive and handle the accusations made by employees or third parties via the whistle blowing channel.
6. Advise on resolving doubts that arise from implementing codes and manuals.
7. Draw up an annual report on implementing the compliance programme to be submitted to the committee of supervision of risks, regulations and compliance.
8. Regularly inform the general secretary, the committee of supervision of risks, regulations and compliance and the board on the implementation of the compliance policy and compliance programme.
9. Assess every year the changes that need to be introduced into the compliance programme, particularly in the event of detecting unregulated business areas and procedures susceptible to improvement, and propose the changes to the committee of supervision of risks, regulations and compliance.

As regards the codes and manuals of the sectors, the focus of the compliance programme is on the following operational spheres, among others:

- Anti-money laundering and terrorist financing.
- Marketing of products and services.
- Conduct in the securities markets.
- Corporate defence.
- Relationships with regulators and supervisors.
- Drawing up and disseminating the Group's institutional information.

Anti-money laundering and terrorist financing

Policies

As a socially responsible institution, it is a strategic objective for Grupo Santander to have an advanced and efficient anti-money laundering and terrorist financing system, constantly adapted to the latest international regulations and with the capacity to confront the appearance of new techniques of criminal organisations.

The function of anti-money laundering and terrorist financing revolves around policies that set minimum standards that Grupo Santander's units must observe. It is formulated in accordance with the principles contained in the 40 recommendations of the Financial Action Task Force (FATF) and the obligations in Directive 2005/60/EC of the European Parliament and of the Council of 26 October, 2005, on anti-money laundering and terrorist financing.

The corporate policy and rules that develop it have to be fulfilled by all the Group's units in the world. By units we mean all those banks, subsidiaries, departments or branches of Banco Santander, both in Spain and abroad, which, in accordance with their legal statute, must submit to the regulations on anti-money laundering and terrorist financing.

Governance and organization

The organisation of the function of anti-money laundering and terrorist financing. (AML/TF) in Grupo Santander rests on the following figures: (i) The board, (ii) The analysis and resolution committee (ARC), (iii) The corporate unit of financial intelligence (CUFI), (iv) Local ARCs, (v) AML/TF local units and (vi) the AML executives at various levels.

The board approves the internal governance framework for anti-money laundering and terrorist financing.

Grupo Santander's CAR is a collegiate body of corporate scope. It comprises representatives from the divisions of risk, internal audit, retail banking, global wholesale banking, human resources, organisation and costs, technology and operations, financial accounting and control, consumer finance and the general secretariat, which defines the general policies and objectives and formulate the rules of the Group's various bodies and entities in the sphere of AML and coordination.

Due to the separation of the local sphere of Spain from the corporate level, a local ARC for Spain was created in 2014 (previously integrated into the corporate ARC) and totally differentiated from the corporate ARC, which assumes the functions of an internal organ of AML/TF control with powers at the local level.

The corporate unit of financial intelligence (CUFI) manages, supervises and coordinates the systems for the prevention of money laundering and financing of terrorism of Grupo Santander's subsidiaries, branches and business areas, requiring the adoption of programmes, measures and necessary improvements.

The local ARCs are internal control organs designed for the prevention of money laundering and financing of terrorism with powers at the local level and comprise representatives of the most directly involved departments.

The local UPBCs are technical units responsible for managing and coordinating the systems and procedures for anti-money laundering and terrorist financing in the countries where the Group operates, as well as the investigation and treatment of communications of suspicious operations and of the information requirements of the corresponding authorities.

There are also executives for the prevention of money laundering and the financing of terrorism at four different levels: area, unit, branch and account. In each case their mission is to support the CUFI and the local UPBCs from a position of proximity to clients and operations.

At the consolidated level, a total of 954 people (83% of them full time) work in prevention activities and tend to 149 units in 35 countries.

Grupo Santander has established in all its units and business areas corporate systems based on decentralised IT applications. These enable operations and customers who, because of their risk, need to be analysed to be presented to the branches of the account or customer relationship managers. These tools are complemented by others of centralised use which are operated by teams of analysts from AML/TF units who, on the basis of certain risk profiles and changes in certain patterns of customer behaviour, enable operations susceptible of being linked to money laundering and/or the financing of terrorism to be analysed, identified early on and monitored.

Banco Santander is a founder member of the Wolfsberg Group, and forms part of it along with 10 other large international banks. The Group's objective is to establish international standards that increase the effectiveness of programmes to combat money laundering and the financing of terrorism in the financial community. Various initiatives have been developed which have treated issues such the prevention of money laundering in private banking, correspondent banking and the financing of terrorism, among others. Regulatory authorities and experts in this area believe that the principles and guidelines set by the Wolfsberg Group represent an important step in the fight against money laundering, corruption, terrorism and other serious crimes.

Main actions

The Group analysed a total of 22.9 million operations in 2014 (27.6 million in 2013) both by the commercial networks as well as by money laundering prevention teams, of which more than one million were by the units in Spain.

The CUFI and the local AML/TF departments conduct annual reviews of all the Group's units in the world.

In 2014, 123 units were reviewed (146 in 2013), 11 of them in Spain and the rest abroad, and reports were issued in all cases stating the measures to be taken (recommendations) to improve and strengthen systems. In 2014, 229 measures to be adopted were established (201 in 2013), which are being monitored until their full and effective implementation.

Training courses were given in 2014 for the prevention of money-laundering to a total of 129,233 employees (108,592 in 2013).

Lastly, many units are submitted to regular reviews by external auditors.

Main indicators of activity

2014	Subsidiaries reviewed *	Cases investigated	Communications to authorities	Employees trained
TOTAL	**123**	**79,978**	**23,844**	**129,233**

* Subsidiaries supervised by the financial intelligence corporate unit and local money laundering prevention units.

Marketing of products and services

Policies

At Grupo Santander management of the risk that could arise from an inadequate sale of products or from an incorrect provision of services by the Group is conducted in accordance with the corporate policies of marketing of products and services.

The corporate framework aims to establish a homogeneous system to market Grupo Santander's products and services, in order to minimise the Group's exposure to risks stemming from marketing, covering all its phases (admission, pre-sale, sale and monitoring).

In order to adapt the framework to Banco Santander and the Group's subsidiaries, these adopt the framework at their corresponding board meetings, adhere to it and make the necessary changes to ensure compliance with the local regulatory requirements.

Governance and organisation
The organisational structure in the risk management sphere that could arise from an inadequate marketing of products or services is based, at both the corporate and local levels, on marketing committees, monitoring committees and conduct risk management offices.

The corporate committee of marketing (CCM) is the maximum decision-making body for approving products and services. It comprises representatives from the divisions of risks, financial management technology and operations, general secretariat, financial accounting and control, internal audit, retail banking and global wholesale banking.

The CCM attaches particular importance to adjusting products and services to the framework where they are going to be marketed, paying special attention to ensuring that:

- Each product or service is sold by suitable staff.
- Customers are provided with the necessary and adequate information.
- The product or service fits the customer's risk profile.
- Each product of service is assigned to the right market, not only for legal or tax reasons, but also to meet the market's financial culture of them.
- The products and services fulfil the requirements of the corporate marketing policies and, in general, the applicable internal and external rules.

At the local level, local marketing committees (LCM) approve new products and channel to the LCM proposals for their validation.

The marketing committees, in the respective approval processes, take a risk-focused approach from the double perspective of bank/client.

The corporate monitoring committee (CMC) is the Group's decision-making body for monitoring products and services. It comprises representatives from the divisions of internal audit, general secretariat, risks and the business areas affected (with permanent representation of commercial banking). It meets every week to raise and resolve specific issues related to the marketing of products and services in all the Group's units.

The corporate office of conduct risk management (COCRM) provides the governance bodies with the information needed for: (i) adequate analysis of risk when validating the product, from a double focus: impact on the Bank and on the client; and (ii) monitoring of products throughout their life cycle.

At the local level there are reputational risk management offices, which are responsible for promoting the risk culture and ensuring that approval and monitoring of products is developed in their respective local sphere in line with the corporate framework.

Main actions
The CCM met 12 times in 2014 (12 in 2013 and 14 in 2012) and analysed 103 new products/services. Moreover, 31 products/services were presented to the corporate office of reputational risk, considered not new for approval and resolved 135 consultations from several areas and countries.

Monitoring of products and services approved is done locally (local committee of monitoring of products or equivalent local body, such as the LCM). The conclusions are set out in reports every four months for the COCRM.

The CMC held 41 meetings in 2014 (41 in 2013 and 44 in 2012) at which incidents were resolved and information analysed on the monitoring of products and services of the Group's units abroad.

Code of Conduct in Securities Markets (CCSM)

Policy
This is set by the code of conduct in securities markets (CCSM), complemented, among others, by the code of conduct for analysis activity, the research policy manual and the procedure for detecting, analysing and communicating operations suspected of market abuse.

Governance and organisation
The organisation revolves around the corporate office of compliance together with local compliance management and that of subsidiaries.

The functions of compliance management with regard to the code of conduct in securities markets are as follows:

1. Register and control sensitive information known and/or generated by the Group.
2. Maintain the lists of securities affected and related personnel, and watch the transactions conducted with these securities.
3. Monitor transactions with restricted securities according to the type of activity, portfolios or collectives to whom the restriction is applicable.
4. Receive and deal with communications and requests to carry out own account trading.
5. Control own account trading of the relevant personnel.
6. Manage failures to comply of the CCSM.
7. Resolve doubts on the CCSM.
8. Register and resolve conflicts of interest and situations that could give rise to them.
9. Assess and manage conflicts arising from the analysis activity.
10. Keep the necessary records to control compliance with the obligations envisaged in the CCSM.
11. Develop ordinary contact with the regulators.

12. Organise the training and, in general, conduct the actions needed to apply the code.

13. Analyse activities suspicious of constituting market abuse and, where appropriate, report them to the supervisory authorities.

Main actions
The compliance corporate office, together with local compliance executives and of the subsidiaries, ensure that the obligations contained in the CCSM are observed by around 12,000 Group employees throughout the world.

The market abuse investigation unit continued to review many transactions that gave rise to opportune communications to the National Securities Market Commission. Moreover, a new unit of market compliance was created in 2014, focusing on controlling operations in the capital markets.

Corporate defence
The Group's compliance management is also responsible for managing the corporate defence management model, created after the entry into force of Organic Law 5/2010, which introduced the penal responsibility of companies for crimes committed on account of and for the benefit of them by administrators or representatives and by employees as a result of the lack of control.

The system of managing risks for the prevention of penal crimes, a key element of which is the whistle blowing channel, obtained the AENOR certification in 2014.

The Group has established 26 such channels, and in 2014 received denunciations in six of them (Germany, Brazil, US, UK, Poland and Spain).

In 2014, more than 400 denunciations were received by any channel. They were handled in accordance with the Group's internal procedures. The most common reasons for the denunciations were failure to comply with the internal rules for employees, either because of inadequate behaviour or for not observing the Group's policies or procedures.

Relationships with the supervisory authorities and dissemination of information to the markets
Compliance management is responsible for tending to the information requirements of the regulatory and supervisory bodies, both those in Spain as well as in other countries where the Group operates, monitoring implementation of the measures resulting from the reports or inspections of these bodies and supervising the way in which the Group disseminates institutional information in the markets transparently and in accordance with the regulators' requirements. The committee of supervision of risks, regulations and compliance (before its creation in June 2014 the audit committee) is informed of the main issues at each of its meetings.

Banco Santander made public 90 relevant facts in 2014, which are available on the Group's web site and that of the National Securities Market Commission (CNMV).

Other actions
Compliance management continued to carry out other activities in 2014 inherent to its sphere (reviewing the bank's internal rules before their publication, ensuring treasury stock operations are in line with internal and external rules, maintaining the section on regulatory information on the corporate website, reviewing the vote recommendation reports for shareholders' meetings drawn up by the leading consultancies in this area, sending periodic regulatory information to the supervisory bodies, etc). It also co-operated in new corporate projects such as the Group's adjustment to the US Volker Rule, the listing of the Santander share on the stock markets of Sao Paulo (via BDRs) and Warsaw and implementing corporate data protection models and prevention of penal risks, among others.

The losses incurred by the Group from compliance, conduct and reputational risks are included in the data base of events which the Group's corporate area of operational risk (CAOR) manages.

11. Model risk

The use of risk management models entails the appearance of model risk, understood as the losses that come from decisions mainly founded on the results of models, due to errors in the definition, application or use of the models.

The risk is manifested in both operational risk (that associated with errors in the data, in the construction, implementation and use), as well as implicitly in the risk associated with the activity it is supporting (be it credit, market or another risk, due to data, construction or inadequate use of the model).

Extending the use of the models to a wide series of activities makes it necessary to establish a series of actions and controls throughout the life cycle of these models in order to know and minimise the risks associated.

Model risk management is structured around three lines of defence that are specified in the following way:

- First line of defence, consisting of owners and developers as well as generators of exposure to this risk.
- Second line of defence, made up of teams specialised in controlling and supervising risks and charged with complementing the control functions of the first line of defence, questioning whether its approaches are opportune and issuing an opinion on this.
- Third line of defence, constituted by Internal audit.

The model risk can be mitigated through an environment of control and management, i.e. a series of controls on the model's life cycle. The cycle covers the very definition of the standards to be used in its development through to regular monitoring and its final completion.

Of particular importance is the **planning phase**, where the priorities of development and management of the models are determined. By drawing up the plans, the needs to be covered are identified and the materiality of the risk involved assessed.

Extracting and validating the information as well as the very **development** of the model are also two fundamental phases. In the case of the development, points of control must be established that enable aspects such as verifying whether the data used is adequate, that the objectives are in accord with what is requested, that the construction has been done following the established lines and that the implementation is viable before the model is put into operation, which will take place once formally approved.

A process of **validation** conducted by a function independent of the developer of the model must exist in order to control the risk associated with the development of models. The scope of the validation will depend on the type of the model, the materiality and the type of development applied.

Lastly, all developments of a new model or changes to the one already existing, or a new use of a model must be reviewed and approved, in accordance with its materiality, by the government established. This process represents the recognition by those involved that they know and are aware of all the risks associated with use of the model, as well as the different assumptions made in its construction and the limitations existing, according to the model's envisaged uses.

Once installed, the models will be supervised regularly to ensure they are used for the purposes for which they were approved and continue to function as expected.

12. Capital management and capital risk control

The Group manages capital in a comprehensive way, seeking to guarantee its solvency and maximise profitability and determined by the strategic objectives and the risk appetite set by the board. A series of practices are defined that shape the focus that the Group wants to give to management of capital:

- Establish adequate planning of capital that enables current needs to be covered and provides the necessary equity to cover the needs of business plans and the short and medium term risks, while maintaining the risk profile approved by the board.
- Ensure that under stress scenarios the Group and its companies maintain sufficient capital to cover the needs arising from the increase in risks resulting from the deterioration of macroeconomic conditions.
- Optimise the use of capital by adequately assigning it among the businesses, based on the relative return on regulatory and economic capital, taking into account the risk appetite, its growth and the strategic objectives.

Santander defines capital risk as the risk that the Group or its companies have an insufficient amount and/or quality of capital to tend to the expectations of its stakeholders, and in accordance with its strategic planning. Of note are the following objectives:

- Comply with the internal objectives for capital and solvency.
- Meet the regulatory requirements.
- Align the Bank's strategic plan with the capital expectations of external agents (rating agencies, shareholders and investors, customers, supervisors, etc).
- Support business growth and the strategic possibilities that arise.

Solvency position

Grupo Santander maintains a very solid solvency position, significantly above the minimum levels required by regulations. In 2014, the Group strengthened its main capital ratios in response to the difficult economic and financial environment and the new regulatory requirements.

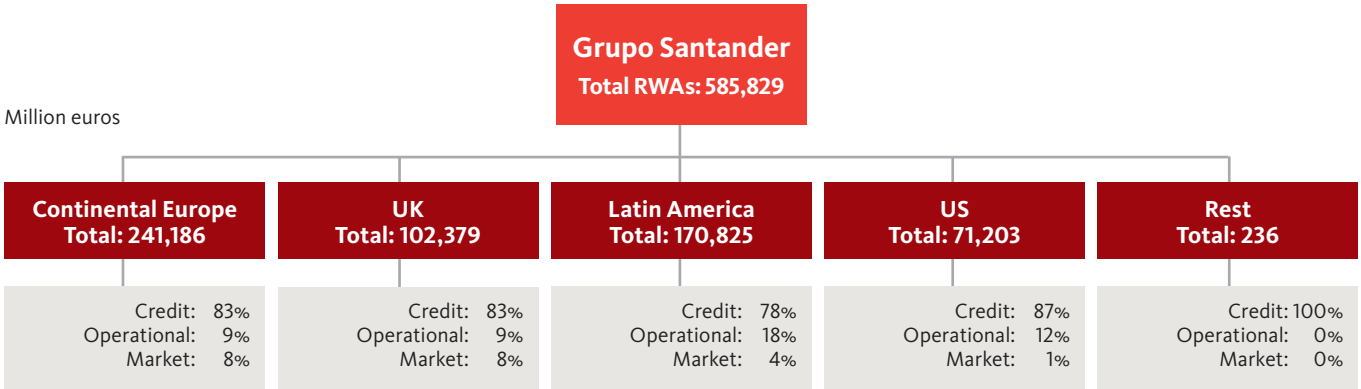
The stress tests conducted by the ECB on Europe's financial industry underscored the quality of Banco Santander's portfolios, the correct valuation of its assets and adequate provisions, as well as the strength of its business model for adverse macroeconomic scenarios. For more detail see item 1 of this chapter.

The Bank completed on January 9, 2015 its EUR 7,500 million capital increase. As a result, it meets the main objective of being able to sustain the organic growth of business, increasing loans and market share in its main markets, accompanying its clients in a new stage of economic growth.

After the capital increase, the Common Equity Tier 1 (CET1 fully loaded) ratio, which represents coverage of risks with the maximum quality capital, increased to 9.7% from 8.3%, in line with Santander's peers. Furthermore, if we take into account the Group's business model, characterised by its high geographic diversification, recurrent results and resilience to adverse environments, as manifested in the recent European stress exercise, the Group's capital standards are among the best in the sector.

The Group's objective is to increase the CET1 fully loaded ratio even more to around 10%-11% in 2017.

The table below shows risk-weighted assets (RWAs) in the main geographic areas and type of risk.



As regards credit risk, Grupo Santander continued its plan to implement Basel's advanced internal rating-based (AIRB) approach for almost all the Group's banks (up to covering more than 90% of net exposure of the credit portfolio under these models). Meeting this objective in the short term will also be conditioned by the acquisition of new entities, as well as by the need for coordination between supervisors of the validation processes of internal models.

The Group operates in countries where the legal framework among supervisors is the same, as is the case in Europe via the Capital Directive. However, in other jurisdictions, the same process is subject to the cooperation framework between the supervisor in the home country and that in the host country with different legislations. This means, in practice, adapting to different criteria and calendars in order to attain authorisation for the use of advanced models on a consolidated basis.

With this objective in mind, Santander continued during 2014 to gradually install the necessary technology platforms and methodological developments that will make it possible to progressively apply advanced internal models for calculating regulatory capital in the rest of the Group's units.

At the moment, Grupo Santander has the supervisory authorisation to use advanced focuses for calculating the regulatory capital requirements by credit risk for the parent bank and the main subsidiaries in Spain, UK, Portugal, and certain portfolios in Mexico, Brazil, Chile, Santander Consumer Finance Spain and the US. The strategy of implementing Basel in the Group is focused on achieving use of advanced models in the main institutions in the Americas and Europe. The calculation of minimum regulatory capital requirements during 2014 of the following portfolios, with a total EAD of around EUR 25,000 million, moved from standard focus to advanced IRB focus: consumer credit portfolios of SC Germany; companies and cards of SC Spain; state governments and promoters of Santander Mexico.

In operational risk, Grupo Santander uses the standard focus for calculating regulatory capital. The Group's project to evolve toward a focus of advanced management models (AMA) is in an advanced phase, gathering sufficient information on the basis of its own management model.

As regards the rest of risks explicitly envisaged in Pillar 1 of Basel, in market risk we have authorisation to use its internal model for the trading activity of treasuries in Spain, Chile, Portugal and Mexico, thereby continuing the plan of gradual implementation for the rest of units presented to the Bank of Spain.

Leverage ratio requirements

The new CRD IV introduces a new leverage ratio that is not sensitive to the risk profile of entities. It is calculated as the ratio between Tier 1 divided by the exposure.

This exposure is calculated as the sum of total assets plus off-balance sheet items (guarantees, unused credit limits granted, documentary credits, mainly). Some technical corrections are made on this sum, such as replacing the value in the asset of derivatives and financing operations of securities by the EaD considered for calculating risk-weighted assets and eliminating the value of assets considered as deductions in Tier 1. In addition, the regulators have incorporated some reduction in the value for off-balance operations related to commerce.

At the moment this ratio does not have to be fulfilled. It must be published as of 2015. The supervisors have made public the intention to make it obligatory to meet a minimum ratio as of 2018, indicating 3% as the minimum reference.

At the end of 2014, the leverage ratio phase-in was 4.5% and the fully-loaded ratio 3.7%. Including the January 2015 capital increase and reflecting the change in the EU Regulation 575/2013 published in January 17, 2015, the ratio would increase by close to one percentage point.

More information on this ratio can be found in the 2014 prudential relevance report (Pillar III).

12.1. New regulatory framework

The regulations known as Basel III came into force in 2014, setting new global standards for banks' capital and liquidity.

From the standpoint of capital, Basel III redefines what is considered as available capital in financial institutions (including new deductions and raising the requirements of eligible capital instruments), increases the minimum capital required, demands that institutions operate permanently with capital buffers and adds new requirements in the risks considered.

Grupo Santander shares the ultimate objective that the regulator pursues with this new framework, which is to make the international financial system more stable and solid. In this sense, for years we have participated in the studies promoted by the Basel Committee and the European Banking Authority (EBA), and coordinated at the local level by the Bank of Spain to calibrate the new regulations.

In Europe, the new regulations have been implemented via EU directive 2013/36, known as CRD IV, and its regulations 575/2013 (CRR), which is directly, applied in all EU countries (single rule book). In addition, these rules are subject to legal developments entrusted to the EBA, some of which will be produced in the coming months/years.

This regulation entered into force on January 1, 2014, with many of the rules subject to different schedules of implementation. This phase of implementation mainly affected the definition of funds that are eligible as capital and will be completed at the end of 2017, except for the deduction of deferred tax credits (DTAs) whose schedule lasts until 2023.

Subsequent to the European legal transposition, the Basel Committee continued to publish additional regulations, some of them as public consultation, which will entail a future modification of the CRD IV directive and of its regulations. Grupo Santander will continue to support regulators, with its opinions and participation in impact studies.

12.2. Economic capital

Economic capital is the capital needed, in accordance with an internally developed model, to support all the risks of business with a certain level of solvency. In the case of Santander, the solvency level is determined by the long term rating objective of AA-/A+, which means a confidence level of 99.95% (above the regulatory 99.90%) to calculate the necessary capital.

Complementing the regulatory focus, Santander's economic capital model includes in its measurement all the significant risks incurred by the Group in its operations (risk of concentration, structural interest, business, pensions and others beyond the sphere of Pillar 1 regulatory capital). Moreover, economic capital incorporates the diversification impact, which in the case of Grupo Santander is vital, because of its multinational nature and many businesses, in order to determine the global risk profile and solvency.

Economic capital is a key tool for the internal management and development of the Group's strategy, both from the standpoint of assessing solvency, as well as risk management of portfolios and businesses.

From the solvency standpoint, the Group uses, in the context of Basel Pillar II, its economic model for the capital self-assessment process (ICAAP). For this, the business evolution and capital needs are planned under a central scenario and alternative stress scenarios. The Group is assured in this planning of maintaining its solvency objectives even in adverse scenarios.

The economic capital metrics also enable risk-return objectives to be assessed, setting the prices of operations on the basis of risk, evaluating the economic viability of projects, units and lines of business, with the overriding objective of maximising the generation of shareholder value.

As a homogeneous measurement of risk, economic capital can be used to explain the risk distribution throughout the Group, putting in a metric comparable activities and different types of risk.

The economic capital requirement at the end of 2014 was EUR 66,457 million, EUR 21,524 million above the EUR 87,980 million available economic capital.

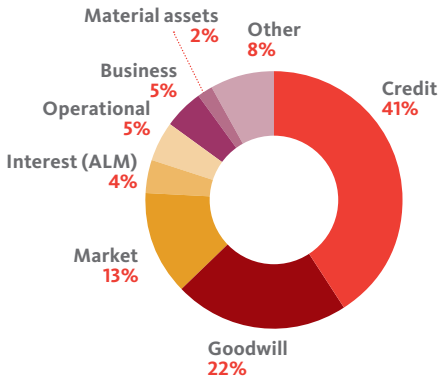
The table below sets out the available economic capital:

Million euros	
Net capital and issue premium	44,851
Reserves	46,227
Retained earnings and valuation adjustments	(9,980)
Minority interests	6,663
Net capital gains of the AFS* portfolio	1,983
Pension deduction	(2,175)
Available economic capital	**87,569**

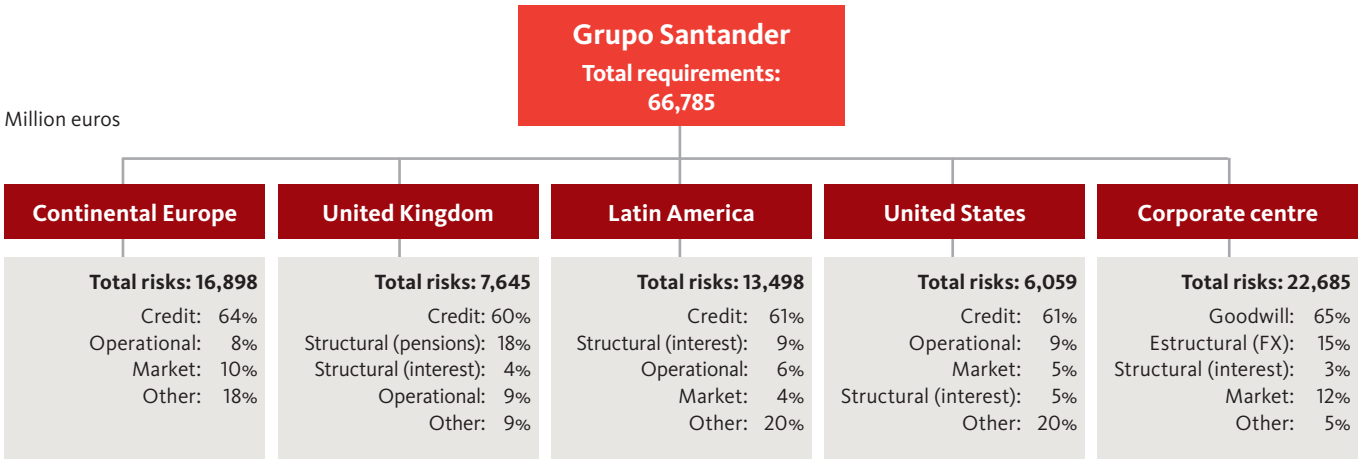
* Available for sale.

The main difference with the regulatory CET1 comes from the treatment of goodwill and other intangibles, which we consider as one more requirement of capital instead of as a deduction from the available capital.

The distribution of economic capital needs by type of risk at the end of 2014 is shown in the folllowing chart:



The table below sets out Grupo Santander's distribution by types of risk and geographic area at the end of 2014:



The distribution of economic capital among the main business areas reflects the diversified nature of the Group's business and risk. Continental Europe represents 25% of the capital, Latin America including Brazil 20%, the UK 11% and the US 9%.

Outside the operating areas, the corporate centre assumes, principally, the risk from goodwill and the risk derived from the exposure to structural exchange rate risk (risk derived from maintaining stakes in subsidiaries abroad denominated in currencies other than the euro).

The benefit of diversification contemplated in the economic capital model, including both the intra-risk diversification (equivalent to geographic) as well as inter-risks amounted to approximately 30%.

Return on risk adjusted capital (RORAC) and creation of value

Grupo Santander has been using RORAC methodology in its credit risk management since 1993 in order to:

- Calculate the consumption of economic capital and the return on it of the Group's business units, as well as segments, portfolios and customers, in order to facilitate optimum assigning of economic capital.
- Budget the capital consumption and RORAC of the Group's business units.
- Analyse and set prices in the decision-taking process for operations (admission) and clients (monitoring).

RORAC methodology enables one to compare, on a like-for-like basis, the return on operations, customers, portfolios and businesses, identifying those that obtain a risk- adjusted return higher than the cost of the Group's capital, aligning risk and business management with the intention of maximising the creation of value, the ultimate aim of the Group's senior management.

The Group regularly assesses the level and evolution of value creation (VC) and the risk-adjusted return (RORAC) of its main business units. The VC is the profit generated above the cost of the economic capital (EC) employed, and is calculated as follows:

Value creation =profit – (average EC x cost of capital)

The profit used is obtained by making the necessary adjustments to the accounting profit so as to extract just the recurrent profit that each unit generates in the year of its activity.

The minimum return on capital that an operation must attain is determined by the cost of capital, which is the minimum required by shareholders. It is calculated objectively by adding to the free return of risk the premium that shareholders demand to invest in our Group. This premium depends essentially on the degree of volatility in the price of the Banco Santander share in relation to the market's performance. The cost of capital in 2014 applied to the Group's various units was 11.59%. As well as reviewing every year the cost of the Group's capital, in a parallel way and for the purposes of internal management, the cost of capital for each business unit is also estimated, taking into account the specific features of each market, under the philosophy of subsidiaries autonomous in capital and liquidity, in order to assess if each business is capable of generating value individually.

A positive return from an operation or portfolio means it is contributing to the Group's profits, but it is only creating shareholder value when that return exceeds the cost of capital.

The performance of the business units in 2014 in value creation varied. The Group's results, and thus the RORAC figures and value creation, are conditioned by the different evolution of the economic cycle in the Group's units.

The creation of value and the RORAC for the Group's main business areas are shown below:

Main segments	RORAC	Value creation
Continental Europe	13.6%	358
UK	20.4%	634
Latin America	29.7%	2,401
US	19.5%	412
Total business units	**20.4%**	**3,805**

12.3 Planning of capital and stress exercises

Stress exercises on capital have assumed particular importance as a dynamic evaluation tool of the risks and solvency of banks. A new model of evaluation, based on a forward-looking approach, is becoming a key element for analysing the solvency of banks.

It is a forward-looking assessment, based on macroeconomic as well as idiosyncratic scenarios of little probability but plausible. It is necessary to have for it robust planning models, capable of transferring the impact defined in projected scenarios to the different elements that influence a bank's solvency.

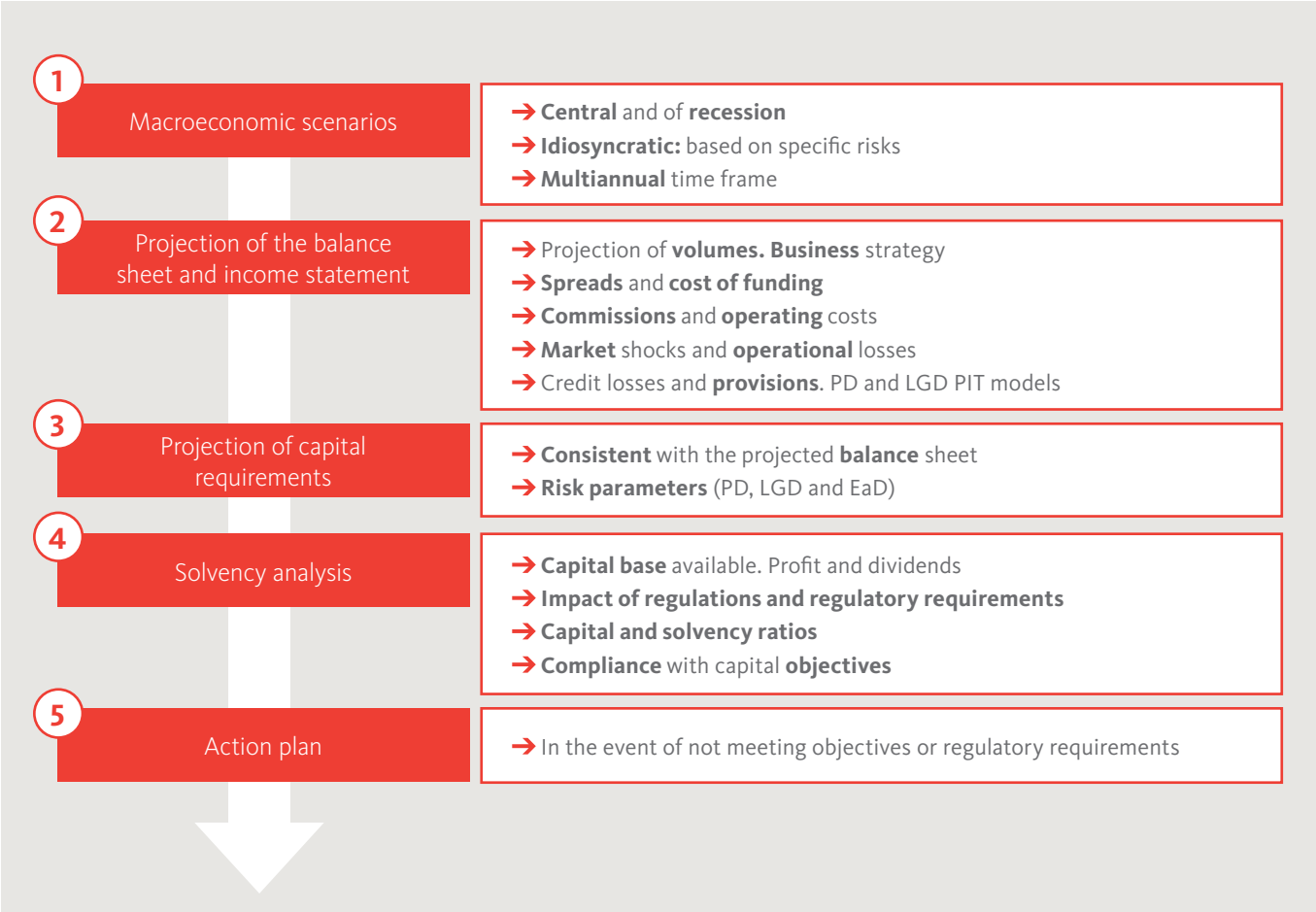
The ultimate objective of the stress exercises is to carry out a full assessment of the risks and solvency of banks, which enables possible capital requirements to be calculated in the event that they are needed because of banks' failure to meet the capital objectives set, both regulatory and internal.

Internally, Grupo Santander has defined a process of stress and capital planning not only to respond to the various regulatory exercises, but also as a key tool integrated in the Bank's management and strategy.

The goal of the internal process of stress and capital planning is to ensure sufficient current and future capital, including for adverse though plausible economic scenarios. Starting from the Group's initial situation (defined by its financial statements, capital base, risk parameters and regulatory ratios), the envisaged results are estimated for different business environments (including severe recessions as well as "normal" macroeconomic situations), and the Group's solvency ratios are obtained for a period usually of three years.

This process provides a comprehensive view of the Group for the time frame analysed and in each of the scenarios defined. It incorporates the metrics of regulatory capital, economic capital and available capital.

The structure of the process is shown below:



The recently presented structure facilitates achieving the ultimate objective which is capital planning, by turning it into an element of strategic importance for the Group which:

- Ensures the solvency of current and future capital, including in adverse economic scenarios.
- Enables comprehensive management of capital and incorporates an analysis of the specific impacts, facilitating their integration into the Group's strategic planning.
- Enables a more efficient use of capital.
- Supports the design of the Group's capital management strategy.
- Facilitates communication with the market and supervisors.

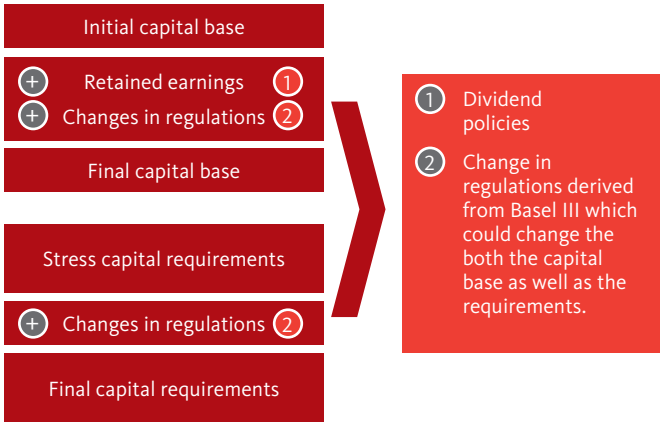
In addition, the whole process is developed with the maximum involvement of senior management and its close supervision, as well as under a framework that ensures that the governance is the suitable one and that all elements that configure it are subject to adequate levels of challenge, review and analysis.

One of the key elements in capital planning and stress analysis exercises, due to its particular importance in forecasting the income statement under defined stress scenarios, consists of calculating the provisions needed under these scenarios, mainly those to cover losses in the credit portfolio. Grupo Santander uses a methodology that ensures that at all times there is a level of provisions that covers all the projected credit losses for its internal models of expected loss, based on the parameters of exposure at default (EaD), probability of default (PD) and loss given default (LGD).

This methodology is widely accepted and it similar to that used in previous stress exercises (for example, the EBA stress exercises in 2011 and 2014 or the health check on the Spanish banking sector in 2012).

Lastly, the capital planning and stress analysis process culminates with analysis of solvency under the various scenarios designed and over a defined time frame, in order to assess the sufficiency of capital and ensure the Group fulfils both the capital objectives defined internally as well as all the regulatory requirements.

Quantification of the sufficiency of capital



In the event of not meeting the capital objectives set, an action plan will be prepared which envisages the measures needed to be able to attain the desired minimum capital. These measures are analysed and quantified as part of the internal exercises, although it is not necessary to put them into force as Santander exceeds the minimum capital thresholds.

This internal process of stress and capital planning is conducted in a transversal way throughout Grupo Santander, not only at the consolidated level, but also locally in the Group's units as they use the process of stress and capital planning as an internal management tool and to respond to their local regulatory requirements.

Throughout the recent economic crisis, Grupo Santander was submitted to five stress tests which demonstrated its strength and solvency in the most extreme and severe macroeconomic scenarios. All of them, thanks mainly to the business model and geographic diversification in the Group, showed that Banco Santander will continue to generate profits for its shareholders and comply with the most demanding regulatory requirements.

In the first one (CEBS 2010), the Group was the entity with a low impact on its solvency ratio, except for those banks that benefited from not distributing a dividend, In the second one, carried out by the EBA in 2011, Santander was not only among the small group of banks that improved its solvency in the stress scenario, but also the one with the highest level of profits.

In the stress exercises conducted by Oliver Wyman on Spanish banks in 2012 (top-down and then bottom-up), Banco Santander again showed its strength to gave with full solvency the most extreme economic scenarios. It was the only bank that improved its core capital ratio, with a surplus of more than EUR 25,000 million over the minimum requirement.

Lastly, in the recent stress test carried out in 2014 by the European Central Bank, in conjunction with the European Banking Authority, as previously commented on, Grupo Santander was the bank with the smallest impact from the adverse scenario among its international peers (EUR 20,000 million capital surplus above the minimum requirement). These results show, once again, that Grupo Santander's business model enables it to face with greater robustness the most severe international crises.

As already mentioned, as well as the regulatory exercises of stress, Grupo Santander annually conducts since 2008 internal exercises of resilience within its self-assessment process of capital (Pillar II). All of them showed, in the same way, Grupo Santander's capacity to meet the most difficult scenarios, both globally as well as in the main countries in which it operates.

13. Appendix: EDTF transparency

Banco Santander has traditionally maintained a clear commitment to transparency, by virtue of which it has participated actively in the Enchanced Disclosure Task Force (EDTF) promoted by the Financial Stability Board (FSB) in order to improve the quality and comparability of the risk information that banks provide to the market, Several studies have analysed the degree of adoption of the 32 recommendations formulated by the EDTF in October 2012, in which Santander stands out as one of the banks that is leading globally the practical application of this initiative.

The table below sets out where the EDTF recommendations can be found in the information published by Grupo Santander.

		EDTF recommendations	Annual report*
General	1	Index with risk information	Executive summary
	2	Terminology and risk measures	4.1; 6.5; 7.1-7.4; 8.2
	3	Top and emerging risk	5
	4	New regulatory ratios and compliance plans	1; 8.3; 12
Risk governance and risk management and bussines model	5	Organisation of risk management, processes and functions	3; 4.2;4.8; 8.2
	6	Risk culture and internal measures	2;4.9
	7	Business model risks, risk management and appetite	4; 12
	8	Stress test uses and process	1; 4.4-4.5; 6.5; 7.2-7.3; 8.2; 12.3
Capital adequacy and risk-weighted assets	9	Minimum capital requirements (Pillar 1)	12; Pillar III - 5.5
	10	Composition of regulatory capital and conciliation with the balance sheet	Pillar III - 3.2; 5.5
	11	Flow statement of movements in regulatory capital	Pillar III - 5.5
	12	Capital planning	12.3; Pillar III - 5.6
	13	Business activities and RWAs	12; Pillar III - 5.5
	14	Capital requirements by method of calculation and portfolio	Pillar III - 5.5
	15	Credit risk by Basel portfolios	Pillar III - 5.5; 7.2-7.4
	16	RWA flow statement by type of risk	Pillar III - 5.5
	17	Backtesting of models (Pillar III)	Pillar III - 7.7; 7.9; 9.2
Liquidity	18	Liquidity needs, management and liquidity reserve	8.2; 8.3
Funding	19	Encumbered and unencumbered assets	8.3
	20	Contractual maturities of assets, liabilities and off-balance sheet balances	8.3
	21	Funding plan	8.3; 8.4
Market risk	22	Balance sheet conciliation with trading and non-trading positions	7.2
	23	Significant market risk factors	7.1-7.3
	24	Market risk measurement model limitations	4.8; 7.2
	25	Management techniques for measuring and assessing the risk of loss	7.2
Credit risk	26	Credit risk profile and conciliation with balance sheet items	6.2
	27	Policies for impaired or non-performing loans and forbearance portfolio	6.2
	28	Conciliation of non-performing loans and provisions	6.2
	29	Counterparty risk resulting from derivative transactions	6.4
	30	Credit risk mitigation	6.5
Other risks	31	Other risks	9; 10; 11
	32	Discussion of risk events in the public domain	9; 10

* The location refers to chapters or sections of this Annual report. In the case of capital recommendations and risk-weighted assets, they also refer to sections of the information of prudential relevance (Pillar III).
In addition, the navigation map has the cross-references of the information published by the Group (Annual report, Pillar III, Auditor's report and annual consolidated accounts).