RISK MANAGEMENT REPORT

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EXECUTIVE SUMMARY

GRUPO SANTANDER RISK MANAGEMENT PRINCIPLES
Pages 166 to 171

- Independence of the risk function from the business.
- Involvement of senior management in decision-taking.
- Collegiate decisions that ensure opinions are contrasted.
- Clear definition of attributions.
- Integrated control and management of risks via a corporate structure with a scope of “all risk, all businesses and all countries”.

ECONOMIC CAPITAL
Pages 250 to 253

DISTRIBUTION OF ECONOMIC CAPITAL

- The Group’s consumption of economic capital at the end of 2012 was EUR 64,384 million compared to an internal capital base of EUR 80,940 million.
- Continental Europe accounted for 27%, Brazil 15% and the UK 9%. The corporate centre, which includes goodwill, accounted for 34%.
- The Group’s diversification enables economic capital savings to be obtained.

MARKET RISK
Pages 206 to 225

VAE PERFORMANCE 2010-2012
Million euros. VaR at 99%, with a time frame of one day.

- Santander maintains a moderate exposure to market risk.
- The average exposure in trading activity was lower than in 2011 and 2010, despite higher volatility in the financial markets.
- The Group continued to reduce in 2012 its already low level of exposure to complex structured assets.
GEOGRAPHICALLY DIVERSIFIED CREDIT RISK

Pages 176 to 205

CREDIT RISK EXPOSURE BY COUNTRIES

%  

- Retail banking profile, more than 80% of total risk is generated by the retail banking business.
- Below industry average NPL ratio in almost all countries where the Group operates.
- Group NPL ratio stood at 4.54% in 2012. In Spain, it was 6.74%, more than three and a half points below the sector average.
- Strong provisions in 2012 increased the Group’s coverage rate by 11 points in 2012, to 73%. Spain’s coverage rate rose by 25 points, to 71%.

FOLLOWING THE PROVISIONS SET ASIDE IN 2012, THE REAL ESTATE CLEAN-UP IN SPAIN WAS COMPLETED

Pages 190 to 191

NET REAL ESTATE EXPOSURE IN SPAIN CUT BY HALF
(Billion euros)

Coverage fund
Net exposure
December 2011
December 2012
24.9
32.0
Net Loans-to-deposit ratio

GROUP TOTAL

117%
117%
113%

SPAIN

119%
118%
96%

NET REAL ESTATE SALES IN SPAIN
(Number of transactions)

2011
2012
x1.9
17,700
33,500
16,000
17,500
Real estate developers
Properties on the balance sheet (foreclosed)

REAL ESTATE EXPOSURE COVERAGE IN SPAIN

%  

- Model of subsidiaries which are autonomous in liquidity.
- In 2012, the focus was mainly on attracting customer deposits, especially in Spain (EUR +22,000 million).
- High issuance capacity: EUR 43,000 million in 2012.
- As a result, all the Group’s ratios and the liquidity position improved …
- … and, in January 2013, Santander and Banesto returned all the funds (EUR 24,000 million) taken in the first auction of LTROs.
1. INTRODUCTION

This section deals with what senior management regards as the main current and emerging risks that could affect the business. It also includes, in line with the best market practices, guidelines that allow the reader to track the main issues discussed in this risk management report through various documents published by the Group (Management Report, Auditors’ Report, Annual Financial Statements and Information of Prudential Relevance).

Main current and emerging risks
Regardless of the risks treated in the various sections of this risk management report, Santander’s senior management believes there are focal points affecting business development and consequently the risks derived from them. These focal points, and the corresponding mitigation measures being adopted, are:

- **Macroeconomic environment.** In times of crisis, it is particularly important to pay attention to the volatility of the macroeconomic environment. On the one hand, Santander uses stress test tools that allow senior management to assess and manage the impact of the different possible scenarios. On the other, geographic diversification protects the Group’s results, as it minimises the impact of volatility on the macroeconomic environment, and enables a medium-low risk profile to be maintained.

- **Regulatory environment.** In response to the financial crisis of the last few years, bank regulators and authorities are designing a series of measures to avoid future crises. Compliance with these measures by banks, especially those designated as systemic, is affecting various spheres: capital and liquidity needs, transparency, etc. Grupo Santander’s solid balance sheet structure and its structure of subsidiaries which are autonomous in capital and liquidity enables it to face with solvency the current and future regulatory requirements. Meanwhile, the traditional focus of Santander’s business model toward retail banking provides greater protection in the face of changes being considered internationally regarding the creation of separated structures for retail and investment banking.

- **Reputational and conduct risk.** Strict management of these risks is increasingly important, because of the impact they have from the financial supervision standpoint as well as that of public opinion in general. In order to mitigate the impact of these risks, in the last few years the bank has notably strengthened control of all aspects related to the marketing of products, customer relations, deep knowledge of customers and compliance with all applicable regulations (including, among others, those regarding money laundering and financing of terrorism).

Of these risks, reputational and conduct are the main emerging risks in the sense that their realization, in the medium and long term, entails significant degrees of uncertainty, even though recurring results and capital surpluses above regulatory minimums would enable potential impacts to be absorbed.

This report provides ample information about the risks facing the Group, the way they are managed and how they are affecting the Group’s activity and results. It also sets out the measures being taken to minimise the risks and to mitigate their severity.

A glossary of terms is also included in the IPR Pillar III document (Information of Prudential Relevance), which sets out the basic terminology of risks expressed in this section, as well as in the IPR.

The table below sets out the issues dealt with in this report and other Group annual reports that contain information on risks:
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2. CORPORATE PRINCIPLES OF RISK MANAGEMENT, CONTROL AND APPETITE

2.1. Corporate principles

High quality management of risk is one of Grupo Santander’s hallmarks and thus a priority in its activity. Throughout its 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 downturn in 2012 severely affected some of the main markets in which the Group operates. This situation particularly tested all its risk admission, monitoring and recovery models. In this context, management of different risks was positive when compared to the performance of the banking sector in these markets, which, combined with the high international diversification of the Group’s businesses, enabled it to produce globally satisfactory results. The experience of 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.

Grupo Santander’s banking business model from the risk standpoint

The Group’s risk management and control systems are adapted to the risk appetite framework approved by its top governance bodies and to its banking business model:

• Santander focuses on retail banking, ensuring an internationally diversified presence characterised by high market shares (more than 10%) in the main markets where it operates. Wholesale banking is carried out particularly in core markets.

• Santander operates through subsidiaries which are autonomous in terms of capital and liquidity, with corporate control. The corporate structure has to be simple, minimising the use of instrumental companies.

• The business model enables a high degree of recurrence in results and its development is backed by a strong capital and liquidity base.

• Santander develops its operational and technological integration model via corporate platforms and tools. This allows information to be steadily aggregated.

• All the Group’s activity is conducted within its social and reputational commitment, in accordance with its strategic objectives.

The economic capital distribution among the Group’s businesses reflects the diversified nature of Santander’s activity. The risk of corporate activities mainly emanates from the capital assigned to goodwill and, to a lesser extent, market risk (structural exchange rate and non-trading portfolio of equities). The operating areas account for most of the credit risk, as befits the nature of the Group’s retail banking.

Section 10 has more details on everything to do with capital.
Santander’s risk management model, underpinning the business model, is based on the following principles:

- **Independence of the risk function from the business areas.** The Group’s 3rd vice-chairman and chairman of the board’s risk committee, heads the risk division and reports directly to the executive committee and to the board. The establishment of separate functions between the business areas and the risk areas, responsible for admission, measurement, analysis, control and information, provides sufficient independence and autonomy to control risks appropriately.

- **Direct involvement of senior management** in all decisions taken.

- **Collegiate decision-making,** ensuring a variety of opinions without results becoming dependent on decisions solely taken by individuals, including at the branch level. Joint responsibility for decisions on credit operations between risk and business areas, with the former having the last word in the event of disagreement.

- **Delegated authorities.** Each risk acceptance and management unit has clearly defined the types of activities, segments and risks it can face and decisions it might make in the sphere of risks, in accordance with delegated powers. Contracting and management procedures, and where operations are recorded, are also defined.

- **Centralised control.** Risk control and management are conducted on an integrated basis through a corporate structure, with global scope responsibilities (all risk, all businesses, all countries).

Risk management and control is done the following way:

- **Set risk appetite.** The purpose is to delimit, synthetically and explicitly, the levels and types of risk that the bank is ready to assume in the course of business.

- **Establish risk policies and procedures.** They constitute the basic framework for regulating risk activities and processes. At the local level, the risk units, through “mirror” structures they have established, incorporate the corporate risk rules to their internal policies.

- **Building, independent validation and approval of the risk models** developed in accordance with the corporate methodological guidelines. These models systemise the risk origination processes as well as their monitoring and recovery processes, calculate the expected loss, the capital needed and evaluate the products in the trading portfolio.

- **Execute a system to monitor and control risks,** which verifies, on a daily basis and with the corresponding reports, the extent to which Santander’s risks profile is in line with the risk policies approved and the limits established.
2.2. Risk culture

The importance and attention attached by senior management to risk management is deeply rooted in Santander’s DNA. This risk culture is 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:

- **Santander’s risk function is independent of the business units.** This enables their criteria and opinions to be taken into account in the various instances where businesses are developed.

- **Santander’s structure for delegating powers** requires a large number of operations to be submitted to the risk committees of the bank’s central services, be it the global committee of the risk division, the board’s risk committee or the Group’s executive committee. The high frequency with which these approval and risk monitoring bodies meet (twice a week in the case of the board’s risk committee; once a week for the executive committee) guarantees great agility in resolving proposals while ensuring senior management’s intense participation in the daily management of risks.

- **Santander has detailed risk management manuals and policies.** Risk and business teams hold regular meetings about the business, which produce actions in accordance with the Group’s risk culture. In addition, the risk and business executives participate in the different bodies for resolving operations of the Group’s central services, and this facilitates transmission of criteria and focuses that emanate from senior management, both to the teams of executives as well as the rest of the risk committees. The lack of powers in any one individual means that all the decisions are resolved by collegiate bodies. This confers greater rigour and transparency on decisions.

- **Risk limits plan.** Santander has established a full system of risk limits which is updated at least annually and covers both credit risk as well as the different market risk exposures, including trading, liquidity and structural (for each business unit and risk factor). Credit risk management is supported by credit management programmes (individuals and small businesses), rating systems (exposures to medium and large companies) and pre-classification (large corporate clients and financial counterparties).

- **Santander’s information systems and aggregation of exposures’ systems enable daily monitoring of exposures, verifying systematic compliance with the limits approved, as well as adopting, where necessary, the pertinent corrective measures.**

- **Main risks are not only analysed at the time of their origination or when irregular situations arise in the process of ordinary recovery. They are overseen permanently for all clients. In addition, the Group’s main portfolios are monitored systematically during the month of August.**

- **Other procedures supporting the dissemination of Santander’s risk culture are the training sessions carried out by the risks corporate school, the remuneration and incentives policy, which includes performance variables that take into account the quality of risk and the bank’s results over the long term, strict compliance by staff with the general codes of conduct and systematic and independent action by the internal auditing services.**

### Risk training activities

Santander’s corporate school of risk management aim is to help consolidate the risk management culture and ensure that all employees in the risks area are trained under the same criteria.

The school, which gave a total of 29,960 hours of training to 4,078 employees in 2012 in 100 activities, is considered a key element to enhance Santander’s leadership in this sphere and strengthen the skills of our staff.

#### TRAINING HOURS

![Training Hours Chart](image)

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.

### 2.3. Grupo Santander’s risk appetite

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 that could have a negative impact on its levels of capital, profitability and/or share price.

The board is responsible for annually setting and updating the risk appetite, monitoring the Bank’s risk profile and ensuring the consistency between both of them. 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’s executive committee.

Senior management is responsible for achieving the desired risk profile—which is reflected in the annual budget and in the medium-term strategic plan—as well as for daily risk
management, so that the usual limit structures set for each risk are adequately connected to the metrics established for the risk appetite.

These structures of limits for each risk are in addition to the risk appetite and essential for articulating effective risk management in the daily course of business. In the event that risk appetite levels set are met and once the board is informed, the necessary management measures have to be adopted for effectively adjusting the risk profile.

The board’s risk committee and the Group’s executive committee verify compliance with the risk appetite at Group and business units on a quarterly basis.

Effective implementation of the risk appetite framework was deepened in 2012 through the corresponding quarterly reviews as well as their development in some of the Group’s main units.

Risk appetite framework
Santander’s risk appetite framework contains quantitative and qualitative elements integrated into series of primary and other metrics.

Quantitative elements of risk appetite
The primary quantitative metrics of the risk appetite are:

- The maximum losses that the institution is willing to assume.
- The minimum capital position that the institution wants to have.
- The minimum liquidity position that the institution wants to keep.

These metrics are calculated using severe stress scenarios, unlikely to occur, but possible.

In addition, the Group has a series of transversal metrics to limit the excessive concentration of the risk profile, both by risk factors as well as in terms of clients, businesses, countries and products.

**Quantitative aspects**

**Loss**
- Maximum loss that the Group is prepared to assume in a harsh scenario
- Minimum return on capital required

**Capital**
- Minimum capital position that the Group is prepared to assume in a harsh scenario

**Liquidity**
- Minimum structural liquidity position
- Minimum position of liquidity horizons that the Group is prepared to assume in various harsh scenarios.

**Concentration**
- 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

**Losses**
One of the three primary metrics used to formulate Santander’s risk appetite is the maximum unexpected impact on results the institution is prepared to assume in unfavourable scenarios, with a low, but possible, probability of occurring.

These scenarios mainly affect both losses resulting from the exposure to retail and wholesale credit risk (both the direct credit loss as well as the reduced revenue), as well as the potential unfavourable impact resulting from the exposure to market risk. After applying these credit and market impacts to budgeted results, in the context of monitoring risk appetite, senior management ensures that the resulting spread is sufficient to absorb the unexpected impacts from technological and operational risk, and from compliance and reputational risk.

The time frame in which the negative impacts for all risks considered materialise is normally 12 months, except in the case of credit risk where an additional impact analysis is conducted using a three-year time frame. The time frame for formulating risk appetite is annual.

As regards the metric of losses, according to Santander’s risk appetite the combined impact in all risks resulting from
these scenarios must be less than net operating income after ordinary provisions (i.e. ordinary profit before tax).

**Capital position**
Santander operates with a comfortable capital base which enables it not only to fulfil regulatory requirements but also have a reasonable surplus of capital. The bank has set a core capital ratio target of more than 9% (Basel II) and has also set minimum goals for the Group’s return on risk-adjusted capital (RORAC).

In addition and in the face of the aforementioned unfavourable scenarios, Santander’s risk appetite establishes that its risk profile must be such that the unexpected impact of these scenarios does not involve a deterioration of more than 100 basis points in the core capital ratio.

This capital focus included in the risk appetite is consistent with the Group’s capital objective approved within the capital planning process (Pillar II) implemented in the Group and covering a three-year period.

**Liquidity position**
The Group’s liquidity management model is based on the following principles:

- Decentralised liquidity model.
- Needs derived from medium and long term activity must be funded by medium and long term instruments.
- High contribution of customer deposits in an essentially retail banking balance sheet.
- Diversification of wholesale funding sources by: instruments/investors; markets/currencies and maturities.
- Limited recourse to short-term funding.
- Availability of a sufficient liquidity reserve, including discounting capacity in central banks to be used in adverse situations.

Bearing in mind the Group’s decision to structure on the basis of autonomous subsidiaries, liquidity management is executed at the level of each subsidiary, while supervised by a corporate control. All the subsidiaries must be self-sufficient as regards availability of liquidity.

Santander’s risk appetite establishes, as regards the liquidity metric, a structural funding ratio of more than 100% (customer deposits, equity and medium and long term issues have to be higher than the structural funding needs defined as lending and stakes in Group companies), as well as demanding objectives of liquidity position and time frames in the face of short term, systemic and idiosyncratic stress scenarios.

**Additional quantitative metrics of risk appetite 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 banking focus with a high degree of international diversification.

**Concentration risk:** this is measured by the following metrics upon which set risk appetite thresholds as a proportion of equity or of lending (in general terms):

- **Client** (as a proportion of 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 to the Bank’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 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 elements of risk appetite**
The qualitative elements of the risk appetite framework define, in general and for the main risk factors, the positioning that Santander’s senior management wishes to adopt or maintain in the course of its business model. Generally speaking, the framework is based on maintaining the following qualitative objectives:

- A medium-low and predictable risk profile based on a diversified business model, focused on retail banking and with an internationally diversified presence and significant market shares, and a wholesale banking model centred on relations with clients in the Group’s main markets.

- A rating objective in the range of between AA- and A-,
both at Group level and in local units (in local scale), on the
basis of both the environment as well as the sovereign risk
performance.

- A stable and recurring policy to generate earnings and
  remunerate shareholders, on a strong capital and liquidity
  base and a strategy of diversification by funding sources
  and maturities.

- An organisational structure based on subsidiaries
  which 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 which 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 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 equity).

- The confidence of clients, shareholders, employees and
  professional counterparties, ensuring that activity is
  carried out in line with Santander’s social and reputational
  commitment, in accordance with the Group’s strategic
  objectives.

- Adequate and sufficient availability of staff, systems and
  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 Bank’s
  long-term results.

The Group’s risk appetite framework also covers other
specific qualitative objectives for the various types of risk.

**Risk appetite and living will**

The Group has an organisational structure based on
subsidiaries which are autonomous and self-sufficient in
terms of capital and liquidity, ensuring that no subsidiary
reaches a risk profile that could jeopardise the Group’s
solvency.

Grupo Santander was the first of the international
financial institutions considered globally systemic by
the Financial Stability Board to present (in 2010) to its
consolidated supervisor (the Bank of Spain) its corporate
living will including, as required, a viability plan and all the
information needed to plan a possible liquidation (resolution
plan). Furthermore, and even though not required, more
summarised individual plans were drawn up for the main
group units, including Brazil, Mexico, Chile, Portugal
and the UK.

A third version of the corporate plan in this respect was
drawn up in 2012. As with the first two versions in 2010 and
2011, the Group presented the third version of its recovery
plan to its crisis management group (CMG) in July 2012. This
plan consists of the corporate plan (for Banco Santander) and
individual plans for many of its most important local units
(UK, Brazil, Mexico and Sovereign). It is important to point
out in the UK case that the plan was also prepared, in parallel
to its in-house development, with respect to local regulatory
initiatives.

The significant contribution of the living will exercise to the
conceptual delimitation of the risk appetite, and the Group’s
risk profile, should also be noted.
3. CORPORATE GOVERNANCE OF THE RISK FUNCTION

The board’s risk committee is responsible for proposing to the board the Group’s risk policy. Its approval corresponds to the board under its powers of administration and supervision. The committee also ensures that the Group’s activities are consistent with its risk tolerance level and establishes the global limits for the main risk exposures, reviewing them systematically and resolving those operations that exceed the powers delegated in bodies lower down the hierarchy.

The committee is of an executive nature and takes decisions in the sphere of the powers delegated in it by the board. It is chaired by the 3rd vice-chairman of Grupo Santander and four other board members are also members of the committee.

The committee met 98 times during 2012, underscoring the importance that Grupo Santander attaches to appropriate management of its risks.

The main responsibilities of the board’s risk committee are to:

- Propose to the board the Group’s risk policy, which must particularly identify:
  - The different types of risk (operational, technological, financial, legal and reputational, among others) facing the Group.
  - The information and internal control systems used to control and manage these risks.
  - Set the level of risk considered acceptable.
  - Identify the measures envisaged to mitigate the impact of identified risks, in the event that they materialise.
  - Systematically review exposures to the main customers, economic sectors, geographic areas and types of risk.
  - Authorise management tools and risk models and be familiar with the results of the internal validation.
  - Ensure that the Group’s actions are consistent with the previously decided risk appetite level.
  - Know, assess and monitor the observations and recommendations periodically formulated by the supervisory authorities in the exercise of their function.
  - Resolve operations beyond the powers delegated to bodies lower down the hierarchy, as well as the global limits of pre-classification of economic groups or in relation to exposures by classes of risk.

The board’s risk committee delegates some of its powers in risk committees which are structured by geographic area, business and types of risk, all of them defined in the corporate governance risk model.

Both the executive committee and the Bank’s board also pay particular attention to management of the Group’s risks.
The Group’s 3rd vice-chairman is the maximum executive in risk management. He is a member of the board and chairman of the risk committee. Two directorates-general of risks, which are independent of the business areas, both from the hierarchical and functional standpoint, report to the 3rd vice-chairman. The organisational and functional framework is as follows:

- **The general directorate of risk** (GDR) is responsible for the executive functions of credit and financial risk management and is adapted to the business structure, both by customer type as well as by activity and country (global/local vision).

The GDR is configured in two blocks:

- **A corporate structure** with global scope responsibilities ("every risk, every country"), entrusted with establishing the policies, methodologies and control. In this block, also denominated intelligence and global control, are the areas/functions of solvency risks, market risk and methodology.

- **A business structure**, focused on executing and integrating management of the risk functions in the Group's local and global commercial businesses. In this block, also denominated execution and integration in management, the following areas/functions are grouped: management of standardised risks, management of segmented company risks, global recoveries, management of wholesale banking risk, management of Santander Consumer Finance risks and management of global business risks.

Between these two blocks is the corporate area of integration in management whose purpose is to intensify and systemise the use of corporate risk management models (credit, market and structural risk), speed up its establishment and ensure integration in the management of all the Group’s units.

Complementing this structure is a local government and systematics area, which supports and advises the GDR, responsible for implementation of the organisational model, and for ensuring effective execution of internal control (including the quality processes), and a development and corporate management area which leads the initiatives and projects of the GDR involving various areas and/or local units, such as a common information model and a global corporate platform.

These functions have a global action sphere, i.e. they intervene in all the units where the risk division acts and the same structure is reflected in the local units. The main elements through which the global functions are replicated in each of the units are corporate frameworks. These are central elements to communicate and transfer global practices, reflect the criteria and policies for each of the areas and set the Group's compliance standards to be applied in all local units.

Generally speaking it is possible to distinguish the main functions developed respectively by the GDR's global areas and by the units:

- The GDR establishes risk policies and criteria, the global limits and the decision-making and control processes; it generates management frameworks, systems and tools; and manages the best practices within and outside the Group.

- The local units apply the policies and systems to the local market: they adapt the organisation and the management frameworks to the corporate frameworks; they contribute critical and best practices and lead the local sphere projects.

- **General directorate of integral control and internal validation of risks.** This is of corporate nature, supporting the Group’s governance bodies, with the following global reach responsibilities:

  - Internal validation of credit, market and economic capital 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.

  - Integral control of risks, the mission of which is to supervise the quality of the Group’s risk management, guaranteeing that the management and control systems of the various risks inherent in its activity comply with the most demanding criteria and best practices observed in the banking industry and/or required by regulators, and verifying that the profile of effective risk assumed is adjusted to what senior management has established.
4. INTEGRAL CONTROL AND INTERNAL VALIDATION OF RISKS

The functions of integral control and internal validation of risks are located at the corporate level in the general directorate of integral control and internal validation of risks, which reports directly to the Group’s 3rd vice-chairman and chairman of the risk committee, and is configured as a support for the Group’s governance bodies in the sphere of control and risk management.

4.1 Function of integral control of risks

Grupo Santander launched in 2008 the function of integral control of risks in order to provide a fully rounded view for top management of all risks that affect development of the Group’s ordinary activity. These risks are: credit risk (including those of concentration and counterparty); market risk (including liquidity as well as the structural risks of interest rates and exchange rates); operational and technological risks and compliance and reputational risks.

Integral control of risks is based on three complementary activities:

1. Guaranteeing 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;

2. Ensuring that senior management has at its disposal an integral vision of the profile of the various risks assumed and that these risks are in line with the previously agreed risk appetite, and;

3. Supervising appropriate compliance in time and form with the recommendations drawn up for risk management matters following inspections by internal auditing 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 and is configured as a third layer of control after that carried out in the first instance by the executive responsible for control and management of each risk in the sphere of each business or functional unit (first layer) as well as by each executive responsible at the corporate level for the control of each risk (second layer). This ensures the vision and thus the integral supervision of all the risks that Santander incurs during the year.

Methodology and tools

This function is backed by an internally developed methodology and a series of tools that support it, in order to systemise the exercise of it and adjust it to Santander’s specific needs. This enables application of the methodology to be formalised and traceable. The methodology and the tools of the three activities are articulated through the following modules:

Module 1

A set of tests or reviews exists for each risk, divided in spheres of control (for example, corporate governance, organisational structure, management systems, integration in management, technology environment, contingency plans and business continuity, etc).

Applying the tests and obtaining the relevant evidence, which in the process is assessed and enables the parameters of control of the various risks to be homogenised, is done every 12 months. New tests are incorporated on the basis of the best practices most recently observed in the industry and/or required by regulators. The support tool is a repository of the results of each test and of its work papers. A review of the situation of each risk is also conducted every six months, with monitoring of the recommendations that emanate from the annual report of integral control.

Module 2

Senior management is able to monitor the integral vision of the various risks assumed and their adjustment to the previously formulated risk appetites.

Module 3

There is a tool to monitor proactively the recommendations made by internal auditing and by the supervisors regarding risk control and management. This also enables the recommendations arising from integral control to be registered.

The Bank of Spain can access these tools if it so wishes and thus also the work papers used to develop the function of integral control of risks.
Activity during 2012

(a) The fourth cycle of reviewing the various risks was completed in close contact with the corporate areas of control, contrasting and assessing the control and management systems of these risks. Improvements were identified and turned into recommendations – with their corresponding schedule for implementation agreed with the risk areas – along with half-yearly monitoring of the progress achieved in the recommendations made in 2011.

(b) The board and executive committee were regularly informed with an integral vision of all risks. The risk committee and the audit and compliance committee were also kept in the picture.

(c) Work continued on extending the integral control of risks model to the Group’s main units, also coordinating the initiatives in this sphere in the various countries.

(d) There was also participation, in coordination with the public policy area and other areas, in representing the Group in forums such as the Financial Stability Board (FSB), IIF, Eurofi and the Enhanced Disclosure Task Force (EDTF, sponsored by the FSB) in matters such as transparency in information on risks.

4.2. Internal independent validation of risk models

As well as being a regulatory requirement, the function of internal validation of risk models constitutes a fundamental support for the risk committee, and for local and corporate risk committees, in their responsibilities of authorisation of the use (management and regulatory) of models and their regular review.

Internal validation of models consists of a specialised unit, with sufficient independence, obtaining 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), concluding on their robustness, use and effectiveness.

Santander’s internal validation of models covers credit risk models, market risk models and those for setting the price of financial assets as well as the economic capital model. 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 (controls, reporting, uses, involvement of senior management, etc.).

The function is global and corporate, in order to ensure homogeneous application, and is conducted via four regional centres in Madrid, London, Sao Paulo and New York. These centres have full functional and hierarchical dependence on the corporate centre, which ensures uniformity in the development of its activities. This facilitates implementation of a corporate methodology that is supported by a series of tools developed internally in 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 on internal validation of the advanced models issued by the Bank of Spain and by the rest of 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 auditing, 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.

* * *

The Group’s main types of risk —credit, market, liquidity and funding, operational, and compliance and reputational— are now set out.
5. CREDIT RISK

5.0 Organisation of the section

After introducing the concept of credit risk and the segmentation that the Group uses for its treatment, the main metrics of 2012 and their evolution are presented (pages 176-184).

This is followed by a look at the countries with the largest concentration, setting out the main features from the credit risk standpoint (pages 185-191).

The qualitative and quantitative aspects of other credit risk matters are then presented, including information on financial markets, concentration risk, country risk, sovereign risk and environmental risk (pages 192-199).

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, sale and after-sale, as well as the main credit risk management metrics (pages 199-205).

5.1. Introduction to the treatment of credit risk

Credit risk is 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 two types of customers:

• Those under individualised management are assigned a risk analyst. This category includes the global wholesale banking customers (corporations, financial institutions and sovereigns), companies within the retail banking scope with a risk level which is above the exposure threshold set by each unit. Risk management is conducted through expert analysis backed up by tools that support decision-making;

• The segment of standardised risks covers those clients who have not been assigned a risk analyst. This category includes individuals, the self-employed and retail banking companies that are not under individualised management. Management of these risks is based on internal models of assessment and automatic decisions, complemented when necessary by expert teams of analysts.

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 over 80% of total risk generated by the retail banking business.

5.2 Main magnitudes and performance

5.2.1. Global credit risk map 2012

Credit exposure in 2012 was EUR 1,231,398 million, most of it with customers and credit entities (87% of the total).

Risk is diversified among the main regions where the Group operates: Europe (72%), Latin America (22%) and the US (6%).

Credit risk exposure increased 1.3% in 2012, largely due to the growth in outstanding loans with credit entities, mainly because of the growth in deposits in central banks.

Excluding the exchange-rate impact of the main currencies against the euro, the increase was 2%.

The table opposite sets out the global credit risk exposure in nominal amounts (except for derivatives and repos exposure, which is expressed in equivalent credit) at 31 December 2012.
### GRUPO SANTANDER - GROSS EXPOSURE TO CREDIT RISK CLASSIFIED IN ACCORDANCE WITH LEGAL COMPANY CRITERIA

Million euros. Data at 31 December 2012

<table>
<thead>
<tr>
<th>Customers</th>
<th>Entities(^2)</th>
<th>Fixed income(^3)</th>
<th>Derivatives and repos</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outstanding(^1) Commitments</td>
<td>Outstanding Commitments</td>
<td>Sovereign Private</td>
</tr>
<tr>
<td>Spain</td>
<td>228,332</td>
<td>45,281</td>
<td>61,669</td>
</tr>
<tr>
<td></td>
<td>Parent bank</td>
<td>140,875</td>
<td>34,352</td>
</tr>
<tr>
<td></td>
<td>Banesto</td>
<td>68,119</td>
<td>6,519</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>19,338</td>
<td>4,410</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>334,697</td>
<td>64,587</td>
<td>42,279</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>30,640</td>
<td>8,349</td>
</tr>
<tr>
<td></td>
<td>Portugal</td>
<td>23,910</td>
<td>5,851</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>242,736</td>
<td>45,262</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>37,412</td>
<td>5,125</td>
</tr>
<tr>
<td>Latin America</td>
<td>152,933</td>
<td>55,879</td>
<td>24,610</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>86,684</td>
<td>39,476</td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td>32,288</td>
<td>7,910</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>21,378</td>
<td>7,604</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>12,582</td>
<td>889</td>
</tr>
<tr>
<td>United States</td>
<td>44,429</td>
<td>17,581</td>
<td>2,755</td>
</tr>
<tr>
<td>Rest of world</td>
<td>382</td>
<td>35</td>
<td>120</td>
</tr>
<tr>
<td>Total Group</td>
<td>760,772</td>
<td>183,362</td>
<td>131,433</td>
</tr>
<tr>
<td>% Total</td>
<td>61.8%</td>
<td>14.9%</td>
<td>10.7%</td>
</tr>
<tr>
<td>% Change/Dec 11</td>
<td>(3.2%)</td>
<td>3.0%</td>
<td>31.2%</td>
</tr>
</tbody>
</table>

### EVOLUTION OF GROSS EXPOSURE TO CREDIT RISK

Million euros. Data at 31 December 2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>411,510</td>
<td>421,142</td>
<td>427,092</td>
<td>(2.3%)</td>
<td>(3.6%)</td>
</tr>
<tr>
<td>Parent bank</td>
<td>285,972</td>
<td>278,663</td>
<td>276,105</td>
<td>2.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Banesto</td>
<td>93,921</td>
<td>101,264</td>
<td>108,556</td>
<td>(7.3%)</td>
<td>(13.5%)</td>
</tr>
<tr>
<td>Others</td>
<td>31,617</td>
<td>41,215</td>
<td>42,430</td>
<td>(23.3%)</td>
<td>(25.5%)</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>473,337</td>
<td>447,754</td>
<td>428,525</td>
<td>5.7%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>40,659</td>
<td>33,541</td>
<td>22,984</td>
<td>21.2%</td>
<td>76.9%</td>
</tr>
<tr>
<td>Portugal</td>
<td>39,243</td>
<td>41,241</td>
<td>43,272</td>
<td>(4.8%)</td>
<td>(9.3%)</td>
</tr>
<tr>
<td>UK</td>
<td>344,413</td>
<td>327,321</td>
<td>325,624</td>
<td>5.2%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Others</td>
<td>49,023</td>
<td>45,651</td>
<td>36,645</td>
<td>7.4%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Latin America</td>
<td>266,304</td>
<td>272,297</td>
<td>271,106</td>
<td>(2.2%)</td>
<td>(1.8%)</td>
</tr>
<tr>
<td>Brazil</td>
<td>163,915</td>
<td>176,317</td>
<td>174,263</td>
<td>(7.0%)</td>
<td>(9.9%)</td>
</tr>
<tr>
<td>Chile</td>
<td>46,722</td>
<td>43,406</td>
<td>43,296</td>
<td>7.6%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Mexico</td>
<td>37,836</td>
<td>32,777</td>
<td>35,361</td>
<td>15.4%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Others</td>
<td>17,832</td>
<td>19,797</td>
<td>18,186</td>
<td>(9.9%)</td>
<td>(2.0%)</td>
</tr>
<tr>
<td>United States</td>
<td>79,707</td>
<td>73,717</td>
<td>78,590</td>
<td>8.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Rest of world</td>
<td>539</td>
<td>964</td>
<td>1,009</td>
<td>(44.1%)</td>
<td>(46.6%)</td>
</tr>
<tr>
<td>Total Group</td>
<td>1,231,398</td>
<td>1,215,874</td>
<td>1,206,322</td>
<td>1.3%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

---

(1) Balances with customers include contingent risks (see the auditor’s report and annual consolidates statements, note 35) and exclude repos (EUR 4,707 million) and other customer financial assets (EUR 23,686 million).

(2) Balances with credit entities and central banks include contingent risks and exclude repos, the trading portfolio and other financial assets. Of the total, EUR 104,454 million are deposits in central banks.

(3) Total fixed income excludes the trading and investment portfolio of third party takers of insurers.

(4) ECR (equivalent credit risk: net value of replacement plus the maximum potential value. Includes mitigants).
5.2.2. Performance of magnitudes in 2012
The table below sets out the main items related to credit risk derived from our activity with customers.

<table>
<thead>
<tr>
<th>GRUPO SANTANDER - RISK, NPLS, COVERAGE, PROVISIONS AND COST OF CREDIT*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit Risk with customers</strong> (million euros)</td>
</tr>
<tr>
<td>Continental Europe</td>
</tr>
<tr>
<td>Santander Branch Network</td>
</tr>
<tr>
<td>Banesto</td>
</tr>
<tr>
<td>Santander Consumer Finance</td>
</tr>
<tr>
<td>Portugal</td>
</tr>
<tr>
<td>Poland</td>
</tr>
<tr>
<td><strong>UK</strong></td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Chile</td>
</tr>
<tr>
<td>Puerto Rico</td>
</tr>
<tr>
<td>Argentina</td>
</tr>
<tr>
<td><strong>Sovereign</strong></td>
</tr>
<tr>
<td><strong>Total Group</strong></td>
</tr>
</tbody>
</table>

**Memo item:**

Spain | 249,477 | 271,180 | 283,424 | 16,809 | 14,900 | 12,007 | 6.74 | 5.49 | 4.24 |

<table>
<thead>
<tr>
<th>Coverage (%)</th>
<th>Spec. provs. net of recovered write-offs (million euros)</th>
<th>Credit cost (% of risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental Europe</td>
<td>72.5</td>
<td>55.8</td>
</tr>
<tr>
<td>Santander Branch Network</td>
<td>67.5</td>
<td>39.9</td>
</tr>
<tr>
<td>Banesto</td>
<td>71.3</td>
<td>53.1</td>
</tr>
<tr>
<td>Santander Consumer Finance</td>
<td>109.5</td>
<td>109.3</td>
</tr>
<tr>
<td>Portugal</td>
<td>53.1</td>
<td>54.9</td>
</tr>
<tr>
<td>Poland</td>
<td>68.3</td>
<td>65.2</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>45.4</td>
<td>40.2</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td>87.5</td>
<td>97.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>90.2</td>
<td>95.2</td>
</tr>
<tr>
<td>Mexico</td>
<td>157.3</td>
<td>175.7</td>
</tr>
<tr>
<td>Chile</td>
<td>57.7</td>
<td>73.4</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>62.0</td>
<td>51.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>143.3</td>
<td>206.9</td>
</tr>
<tr>
<td>Sovereign</td>
<td>105.9</td>
<td>96.2</td>
</tr>
<tr>
<td><strong>Total Group</strong></td>
<td>72.6</td>
<td>61.4</td>
</tr>
</tbody>
</table>

**Memo item:**

Spain | 70.6 | 45.5 | 57.9 | 2,993 | 2,821 | 4,352 | 1.23 | 1.04 | 1.53 |

---

* So that like-for-like comparisons can be made between 2012 and 2011, the data for 2011 has been restated.
1. Includes gross loans to customers, guarantees, documentary credits and clients’ mark to market (MtM) derivatives (EUR 5,735 million).
2. Bad debts recovered (EUR 1,321 million).
3. Excludes provisions/bad debts recovered/total average credit risk.
4. Excludes the incorporation of Bank Zachodni WBK.
5. Excludes AIG from Santander Consumer Finance in Poland.
At the end of 2012, non-performing loans amounted to EUR 36,100 million and the Group's NPL ratio stood at 4.54% (+65 b.p.), mainly due to the situation in Spain. It is important to point out that this ratio is below the sector’s average in almost all the countries in which the Group operates.

These NPLs are covered by EUR 12,574 million of specific loan-loss provisions net of insolvencies. Total loan-loss provisions were EUR 26,194 million.

The Group’s coverage ratio was 72.6%, up from 61.4% in 2011. It is important to bear in mind that this ratio is affected by the weight of mortgages (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. Credit risk also includes guarantees and derivatives. The following chart shows the relation between the concepts that comprise these magnitudes.

![Credit Risk Chart](image-url)
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 structure of the main magnitudes by geographic area:

- **Continental Europe**
  - **Spain**\(^1\) NPL ratio was 6.74% (+125 b.p.). The ratio for the whole banking system was 10.58%, widening the spread by 143 b.p. over that in 2011. The efforts made in provisions for the real estate sector brought the coverage level to 70.6%.
  - **Portugal**\(^1\) NPL ratio was 6.56% and coverage 53.1%. Santander Totta was positively viewed in the programme of special inspections by the Bank of Portugal and the troika. It was the only bank that did not require additional provisions.
  - **Poland**\(^2\) NPL ratio was 4.72% (-17 b.p.) and coverage 68.3%.
  - **The UK**\(^2\) recorded a NPL ratio of 2.05% (+21 b.p.) and a coverage ratio of 45.4%.

- **Brazil**\(^3\) NPL ratio was 6.86% (+148 b.p.) and coverage 90.2%.

- **Latin America excluding Brazil**
  - The overall NPL ratio was 3.62% and coverage 81.2%.
  - Lending in **Chile** accounted for 4.1% of the Group’s total, with a mix of diversified portfolio and balanced between individual borrowers and companies. The NPL ratio was 5.17% and coverage 57.7%.
  - **Mexico’s** lending grew 13.3% in 2012, driven by the macroeconomic scenario. This growth went hand in hand with good credit quality indicators. The NPL ratio was 1.94%, one of the lowest in the country, and coverage 157.3%, also well above the banking system’s average.
  - **Sovereign’s** NPL ratio was 2.29% (-56 b.p.). Coverage rose by 9.7 p.p. to 105.9%.

### Structure of NPLs and provisions

#### Evolution of NPLs by the Concepts that Comprise Them

<table>
<thead>
<tr>
<th>Million euros</th>
<th>NPLs 2010</th>
<th>Net entries</th>
<th>Perimeter and change</th>
<th>Write-offs</th>
<th>NPLs 2011</th>
<th>Net entries</th>
<th>Perimeter and change</th>
<th>Write-offs</th>
<th>NPLs 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPLs</td>
<td>28,522</td>
<td>15,381</td>
<td>563</td>
<td>12,430</td>
<td>32,036</td>
<td>16,647</td>
<td>36,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific</td>
<td>20,748</td>
<td>14,901</td>
<td>520</td>
<td>19,461</td>
<td>15,474</td>
<td>13,195</td>
<td>21,858</td>
<td>Generic</td>
<td>4,336</td>
</tr>
<tr>
<td>Specific</td>
<td>5,846</td>
<td>11,844</td>
<td>583</td>
<td>4,187</td>
<td>5,639</td>
<td>358</td>
<td>36,100</td>
<td>Specific</td>
<td>26,904</td>
</tr>
<tr>
<td>Specific</td>
<td>603</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. More detail at 5.3.2. Spain.
2. More detail at 5.3.1. United Kingdom.
3. More detail at 5.3.3. Brazil.
Restructured/refinanced portfolio
The general term restructured/refinanced portfolio, in accordance with Bank of Spain circular 6/2012, refers to those operations in which the client has presented, or it is envisaged might present, financial difficulties in meeting their payment obligations in the prevailing contractual terms and, for this reason, it could be advisable to modify, cancel or even formalise a new transaction.

The restructuring/refinancing of debts is part of the usual risk management with clients, although it is at times of economic weakening that it assumes greater importance.

Grupo Santander follows very rigorous definitions and policies in this management process, which is conducted in accordance with the best practices and within the strictest compliance with regulatory requirements.

Grupo Santander has a detailed corporate policy for restructuring/refinancing, which meets the Bank of Spain’s rules via circulars 4/2004 and 6/2012 and which is applied to all countries and clients. This policy establishes rigorous criteria that underscore Santander’s prudence in assessing these risks, noteworthy among which are those regarding its restricted use and the classification of this type of operation:

• There must be restrictive use of restructurings, which must be accompanied by guarantees or additional efforts by the client, avoiding actions that only postpone recognition of the non-performing loan.

• The aim is to recover all the amounts owed, which entails recognising as soon as possible the amounts that it is estimated cannot be recovered. Delaying immediate recognition of losses would be contrary to good management practices.

• The restructuring must always envisage maintaining the existing guarantees and, wherever possible, improving them and/or increasing the coverage. Effective guarantees not only serve to mitigate the severity, but also can reduce the probability of default.

• This practice should not mean granting additional financing to the client, nor serve to refinance the debt other banks, nor be used as an instrument of cross-selling.

• It is necessary to assess all the refinancing alternatives and their effects, ensuring that the results would be better than those likely to be achieved in the event of not doing it.

• The new operation cannot mean an improvement in the classification as long as a satisfactory experience with the client does not exist.

From the management standpoint, taking into account the client’s different situation of irregularity at the time of restructuring/refinancing, there are two types of operation:

• Those that arise from a non-doubtful loan situation. These operations refer to clients who, due to a change in their economic circumstances, are envisaged could experience an eventual reduction in their payment capacity, although at the time they are up to date with payments or have not failed to make payments for more than three months. This contingency can be resolved by adapting the debt conditions to the client’s new payment capacity, which facilitates compliance with their obligations. Of the total restructured/refinanced portfolio, 77% corresponds to this type of operation.

• Operations that arise from a doubtful situation whether for subjective or objective reasons, when at least three months have passed since the first non-payment. These operations do not signify a release of provisions, as the doubtful risk classification remains, unless the criteria set out in the regulatory rules based on Bank of Spain circulars are fulfilled (payment of ordinary interest pending and, in all cases, contribution of new effective guarantees or a reasonable certainty of payment capacity), as well as the cautions which, under a criterion of prudence, are set out in the Group’s corporate policy (sustained payment during a period on the basis of the features of the operation and the type of guarantees existing).

These operations are classified in accordance with their features in the following way:

• Doubtful: those restructurings in a process of normalisation or which, being classified as normal or sub standard, during the life of the operation, present new payment difficulties. In the event of this deterioration intensifying, in accordance with the criterion of corporate prudence, the loan will be considered as a write-off.

• Substandard: those restructurings emanating from doubtful loans which have met sustained payment for a certain period on the basis of the features of the operation and the type of guarantees existing.

In the particular case of those operations with a grace period on capital payments, the restructuring will be classified as sub standard risk, if it is not already classified as doubtful risk, and must be maintained as such until the grace period ends

• Normal: those restructurings emanating from doubtful or substandard loans which have exceeded a period of observation which shows the re-establishment of the payment capacity in accordance with the periods established in the corporate policy.

4 The main principles of restructuring are rigorously applied to standardised clients, while tending to one-off exceptional circumstances. In the case of individualised clients these principles can be used as a reference element, but individualised analysis of each case is particularly important, both for their correct identification as well as their subsequent classification, monitoring and adequate provisioning.
According to this policy, the operations in normal situation must be kept under this special watch for a minimum, precautionary period of two years and have amortised 20% of the principal of the loan, except for those articulated via some type of haircut which will be maintained until its extinction.

The total portfolio stood at EUR 55,714 million at the end of 2012 and was distributed as follows:

<table>
<thead>
<tr>
<th>RESTRUCTURED/REFINANCED PORTFOLIO</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Substandard</td>
</tr>
<tr>
<td>Operations arising from non-doubtful situation</td>
<td>18,638</td>
</tr>
<tr>
<td>Operations arising from doubtful situation</td>
<td>3,601</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,239</strong></td>
</tr>
</tbody>
</table>

A more detailed breakdown of this portfolio can be found in the Auditor’s Report and Annual Consolidated Accounts (Note 54).

From the credit classification standpoint, 67% of the total is classified in a non-doubtful status, while the other 33% which was in a doubtful situation, had a specific coverage of 43%.

Preventative risk management in this portfolio shows that 77% comes from a non-doubtful origin, while that from doubtful situations only accounts for 1.5% of the Group’s total credit risk with clients.

From the standpoint of its guarantees, more than 70% of the total portfolio has real guarantees (more than 92% in the case of the portfolio of companies with real estate purpose).

**Of the Group’s total portfolio, Spain’s accounts for 59% (EUR 32,867 million) with the following features:**

- The amount corresponding to companies with a real estate purpose was EUR 11,256 million, 72% of which is classified as doubtful or sub-standard with specific coverage of 46%. Total coverage of this portfolio including the provisions set aside for the normal portfolio which correspond to it is 44%. Following the provisions made in 2012, the real estate provisioning is effectively completed.

- Of the total portfolio in Spain, 34% was in a doubtful situation with coverage of 42%.

- From a management standpoint, it is important to highlight the preventative management of risk together with the high level of existing guarantees:
  - 89% (EUR 29,380 million) emanates from operations that come from a non-doubtful situation and 82% have real guarantees.
  - Only the remaining 11% (EUR 3,487 million) emanates from doubtful situation operations and 84% have real guarantees.

In the rest of the countries where the Group operates the restructured/refinanced portfolio does not account in any of them, for more than 1% of the Group’s total credit risk with clients.

**Management metrics**

Credit risk management uses other metrics to those already mentioned, 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 evolution and future prospects of the portfolio.

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.

---

5 For more detail on these metrics see 5.5.5. measurement and control in this section.
The VMG is frequently considered in relation to the average loan that generated it, giving rise to what is known as the risk premium, whose evolution can be seen below.

**NON-PERFORMING LOANS VARIATION, NET OF WRITE-OFFS AND RECOVERY**
Change in doubtful loans plus net write-offs (% of average balances)

Despite the unfavourable economic environment, the Group’s risk premium was virtually unchanged over 2011, due to the geographic distribution.

The expected loss is the estimate of the economic loss during the following year of the portfolio existing 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 of 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, the result of the recovery that occurs in the event of a default via the mortgaged property.

The expected loss of the exposure with clients is 1.27% (1.30% in 2011) and 0.99% for the whole of the Group’s credit exposure (1.05% in 2011), which underscores the medium-low risk profile assumed.

### SEGMENTATION OF THE CREDIT RISK EXPOSURE

<table>
<thead>
<tr>
<th>Segment</th>
<th>EaD</th>
<th>%</th>
<th>Average PD</th>
<th>Average LGD</th>
<th>Expected loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sovereign debt</td>
<td>179,588</td>
<td>17.2%</td>
<td>0.10%</td>
<td>9.62%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Banks and other fin. inst.</td>
<td>62,363</td>
<td>6.0%</td>
<td>0.35%</td>
<td>54.41%</td>
<td>0.19%</td>
</tr>
<tr>
<td>Public sector</td>
<td>14,853</td>
<td>1.4%</td>
<td>2.87%</td>
<td>7.91%</td>
<td>0.23%</td>
</tr>
<tr>
<td>Corporate</td>
<td>135,640</td>
<td>13.0%</td>
<td>0.64%</td>
<td>33.88%</td>
<td>0.22%</td>
</tr>
<tr>
<td>SMEs</td>
<td>162,733</td>
<td>15.6%</td>
<td>5.20%</td>
<td>36.70%</td>
<td>1.91%</td>
</tr>
<tr>
<td>Individual mortages</td>
<td>318,947</td>
<td>30.6%</td>
<td>2.97%</td>
<td>8.65%</td>
<td>0.26%</td>
</tr>
<tr>
<td>Consumer credit (individuals)</td>
<td>115,577</td>
<td>11.1%</td>
<td>6.94%</td>
<td>55.25%</td>
<td>3.83%</td>
</tr>
<tr>
<td>Credit cards (individuals)</td>
<td>37,209</td>
<td>3.6%</td>
<td>5.05%</td>
<td>68.18%</td>
<td>3.44%</td>
</tr>
<tr>
<td>Other assets</td>
<td>14,643</td>
<td>1.4%</td>
<td>4.07%</td>
<td>29.44%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Memorandum item</td>
<td>784,959</td>
<td>75.4%</td>
<td>3.71%</td>
<td>34.20%</td>
<td>1.27%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,041,553</td>
<td>100.0%</td>
<td>2.89%</td>
<td>34.10%</td>
<td>0.99%</td>
</tr>
</tbody>
</table>

Data at December 2012.
1. Excludes doubtful loans.
2. Million euros.
3. Excludes sovereign debt, banks and other financial institutions and other assets.
5.3. Geographic areas with the largest concentration of risk

The portfolios with the largest concentration of risk are set out below, based on the figures in “5.2.2. Performance of magnitudes in 2012.”

5.3.1. United Kingdom

5.3.1.1. General view of the portfolio

Santander UK’s loans amounted to EUR 255,519 million at the end of 2012 (32.1% of the Group’s total), with the following distribution by segments:

SEGMENATION OF THE PORTFOLIO

<table>
<thead>
<tr>
<th>Segment</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgages for individuals</td>
<td>79%</td>
</tr>
<tr>
<td>Other individual borrowers</td>
<td>3%</td>
</tr>
<tr>
<td>SMEs and companies</td>
<td>18%</td>
</tr>
</tbody>
</table>

5.3.1.2. Mortgage portfolio

Santander UK’s mortgage portfolio at the end of 2012 was EUR 191,827 million and its evolution over the last three years is set out in the chart below:

EVOLUTION OF THE MORTGAGE PORTFOLIO

<table>
<thead>
<tr>
<th>Year</th>
<th>Million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>192,590</td>
</tr>
<tr>
<td>2011</td>
<td>198,789</td>
</tr>
<tr>
<td>2012</td>
<td>191,827</td>
</tr>
</tbody>
</table>

This portfolio consists of first mortgages for buying or reforming homes, granted to new as well as existing clients. 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. Mortgages can be granted for properties outside the UK, but the collateral for such mortgages must consist of a property in the UK.

Most of the mortgages are in Greater London, where housing prices are more stable even during a period of economic slowdown.

All the properties are assessed independently before each new operation is approved, in accordance with the principles established by the Group for risk management.

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.

In 2012, the NPL ratio of this portfolio rose to 1.74% from 1.46% at the end of 2011, although always below the ratio for the whole of the banking sector, according to the data published by the Council of Mortgage Lenders.

This growth is due to the following reasons: fall in lending as a result of stricter credit and pricing policies implemented in previous years, lower balances of non-performing loans during 2012 and local changes to the definition of what constitutes a NPL.

As regards the reduction in NPL exits during the year, this was mainly due to implementing new collection procedures, within the framework of the regulatory initiative known as treating customers fairly, which generated an increase in administrative tasks that must be carried out when managing non-payments, which implies that clients remain in a NPL situation for a longer time.

The adoption of a more conservative focus in the definition of a non-performing loan meant an extraordinary impact of EUR 99 million, corresponding to clients with payment delays of between 30 and 90 days and which were in a process of bankruptcy in the last two years.

As for the portfolio’s profile, applying strict credit policies enabled NPL entries to remain at levels very similar to those in 2011. The maximum loan-to-value (LTV) requirement was reduced to 75% for those loans that amortized capital
and interest and to 50% for those that amortized interest regularly and the capital on maturity. The average simple value of this metric for the whole of the portfolio was 52.2%, while the average weighted loan-to-value was 49%. The proportion of the portfolio with a loan-to-value of more than 90% remained at 12%, well below the UK market’s average of more than 17% (CACI mortgage market data).

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 2012:

1. Loan to value: relation between the amount of the loan and the appraised value of the property.
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 following table shows the distribution by type of loan:

<table>
<thead>
<tr>
<th>SANTANDER UK: DISTRIBUTION BY TYPE OF LOAN</th>
<th>December 2012</th>
<th>December 2011</th>
<th>December 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Portfolio</td>
<td>% of total</td>
<td>Portfolio</td>
</tr>
<tr>
<td>Residential mortgages</td>
<td>191,827</td>
<td>75.1%</td>
<td>198,789</td>
</tr>
<tr>
<td>First-time buyer</td>
<td>32,838</td>
<td>12.9%</td>
<td>33,010</td>
</tr>
<tr>
<td>Mover</td>
<td>75,920</td>
<td>29.7%</td>
<td>71,295</td>
</tr>
<tr>
<td>Remortgage</td>
<td>83,069</td>
<td>32.5%</td>
<td>94,484</td>
</tr>
</tbody>
</table>

1. Percentage calculated for interest only loans. If we include loans with some component of interest only the percentage of the portfolio increases to 46%.
2. First-time buyer: customers who buy a home for the first time.
3. Mover: customers who change home with or without changing the bank that granted the mortgage.
4. Remortgage: customers who transfer their mortgage from another bank.

There are various 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** (35.0%)*: The customer amortizes every month the interest and capital at maturity. An appropriate repayment vehicles such as a pension plan, mutual funds, etc is needed. This is a regular product in the UK market for which 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 evolution of the payment capacity simulating the amortisation of capital and interest payments instead of just interest. New loans of this type were reduced by 60% in 2012.

- **Flexible Loans** (11.4%): 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** (1.31%): 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 2012. In 2012, after the improvement in market conditions, only EUR 18 million a month was approved (around 2% of the total monthly admission) and under strict risk policies.
An additional indicator of the portfolio's good performance is the small volume of foreclosed homes (EUR 157 million at the end of 2012, only 0.1% of the total mortgage exposure). Efficient management of these cases and the existence of a dynamic market for this type of property, which enables sales to take place in a short period, contributed to the good results.

5.3.1.3. SMEs and companies

As shown in the chart on the segmentation of the portfolio at the beginning of this section, lending to SMEs and companies (EUR 42,176 million) represented 18% of the total at Santander UK.

**SME AND COMPANY PORTFOLIO SEGMENTS**

![Chart showing the segmentation of the portfolio](chart.png)

**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 lending at the end of 2012 amounted to EUR 4,248 million, with a NPL ratio of 7.1% (7.4% at the start of the year).

**Companies**: This includes those under individualised risk management (i.e. have a risk analyst assigned). Also included are portfolios considered as not strategic (legacy and non-core). Lending at the end of 2012 amounted to EUR 23,389 million, with a NPL ratio of 5.8% (6.2% at the beginning of the year).

**SGBM**: This includes companies under the risk management model of Global Wholesale Banking. Lending was EUR 4,865 million at the end of 2012 and there were virtually no NPLs.

**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. Lending stood at EUR 9,674 million at the end of 2012.

In line with the objective of becoming the reference bank for SMEs and companies, the most representative portfolios of this segment grew by around 18% in 2012 (excluding legacy and non-core portfolios).

5.3.2. Spain

5.3.2.1. General view of the portfolio

The total credit risk (including guarantees and documentary credits) of Santander’s businesses in Spain amounted to EUR 249,477 million at the end of 2012 (31% of the Group’s total), with an adequate level of diversification, by both product and customer segment.

Lending declined as a result of the fall in demand for credit, the economic situation and, as regards real estate balances, the active policy of reducing these exposures.

**CREDIT RISK DISTRIBUTION, SPAIN**

<table>
<thead>
<tr>
<th>Million euros</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
<th>Change 12/11 (%)</th>
<th>Change 11/10 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total credit risk*</td>
<td>249,477</td>
<td>271,180</td>
<td>283,424</td>
<td>(8%)</td>
<td>(4%)</td>
</tr>
<tr>
<td>Home mortgages</td>
<td>55,423</td>
<td>58,535</td>
<td>61,387</td>
<td>(5%)</td>
<td>(5%)</td>
</tr>
<tr>
<td>Rest of loans to individuals</td>
<td>24,645</td>
<td>24,963</td>
<td>28,377</td>
<td>(1%)</td>
<td>(12%)</td>
</tr>
<tr>
<td>Companies without real estate purpose**</td>
<td>139,851</td>
<td>151,157</td>
<td>152,900</td>
<td>(7%)</td>
<td>(1%)</td>
</tr>
<tr>
<td>Real estate purpose</td>
<td>15,867</td>
<td>23,442</td>
<td>27,334</td>
<td>(32%)</td>
<td>(14%)</td>
</tr>
<tr>
<td>Public administrations</td>
<td>13,692</td>
<td>13,083</td>
<td>13,426</td>
<td>5%</td>
<td>(3%)</td>
</tr>
</tbody>
</table>

* Including guarantees and documentary credits.  
** Including financing for public sector suppliers (4bn).

The NPL ratio for the total portfolio increased during the year, as a result of the deterioration of the real estate portfolio, to 6.74%, 384 b.p. below the ratio for the whole of the banking system. The differential with the banking system widened in 2012, reflecting Santander’s hallmark criterion of prudence in risk management.

Excluding the portfolio with real estate purpose, the NPL ratio was 4.0% (+65 b.p.) and mainly due to the reduction in lending.
A significant effort was made in 2012 in provisions, which produced a notable rise in coverage levels. At the end of 2012, provisions covered 70.6% of doubtful loan balances, up from 45.5% at the end of 2011. This effort was particularly intense in the real estate portfolio, as shown below, and covers all the requirements of the Royal Decree Laws 2/2010 and 18/2010 on coverage of problematic real estate loans.

Below are the main portfolios.

### 5.3.2.2. Home mortgages

Lending to households to buy a home by the main businesses in Spain amounted to EUR 55,997 million at the end of 2012 (22.4% of total credit), of which 98.9% had mortgage guarantee.

#### LENDING TO HOUSEHOLDS TO ACQUIRE HOMES

<table>
<thead>
<tr>
<th>Million euros</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross amount</td>
<td>55,997</td>
<td>59,453</td>
<td>61,936</td>
</tr>
<tr>
<td>Without mortgage guarantee</td>
<td>574</td>
<td>918</td>
<td>549</td>
</tr>
<tr>
<td>With mortgage guarantee</td>
<td>55,423</td>
<td>58,535</td>
<td>61,387</td>
</tr>
<tr>
<td>of which doubtful</td>
<td>1,425</td>
<td>1,607</td>
<td>1,388</td>
</tr>
<tr>
<td>Without mortgage guarantee</td>
<td>8</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>With mortgage guarantee</td>
<td>1,417</td>
<td>1,579</td>
<td>1,358</td>
</tr>
</tbody>
</table>

The NPL ratio of the portfolio with mortgage guarantee was slightly lower than in 2011 and ended 2012 at 2.6%, well below that for the rest of businesses 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.
- 89% of the portfolio has a loan-to-value of less than 80% (total risk/latest available value of the home).
- Average affordability rate of close to 29%. 

---

### NPL RATIO SPAIN

<table>
<thead>
<tr>
<th>%</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>17.0%</td>
<td>28.7%</td>
<td>47.7%</td>
</tr>
<tr>
<td>Total without real estate purpose</td>
<td>4.2%</td>
<td>5.5%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Real estate purpose</td>
<td>2.9%</td>
<td>3.3%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

### COVERAGE RATIO, SPAIN

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>68%</td>
<td>64%</td>
<td>65%</td>
<td>57.9%</td>
<td>53%</td>
<td>49%</td>
<td>46%</td>
<td>46%</td>
<td>53%</td>
<td>65%</td>
<td>57.9%</td>
<td>68%</td>
<td></td>
</tr>
</tbody>
</table>

---

### NPL RATIO OF HOME MORTGAGES IN SPAIN

<table>
<thead>
<tr>
<th>%</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2%</td>
<td>2.7%</td>
<td>2.6%</td>
<td></td>
</tr>
</tbody>
</table>
RANGES OF TOTAL LTV
Million euros

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross amount with mortgage guarantee</td>
<td>55,423</td>
<td>58,535</td>
</tr>
<tr>
<td>LTV &lt; 40%</td>
<td>12,774</td>
<td>13,020</td>
</tr>
<tr>
<td>LTV between 40% and 60%</td>
<td>16,443</td>
<td>16,503</td>
</tr>
<tr>
<td>LTV between 60% and 80%</td>
<td>19,915</td>
<td>21,940</td>
</tr>
<tr>
<td>LTV between 80% and 100%</td>
<td>5,702</td>
<td>6,474</td>
</tr>
<tr>
<td>LTV &gt; 100%</td>
<td>589</td>
<td>597</td>
</tr>
<tr>
<td>of which doubtful</td>
<td>1,417</td>
<td>1,579</td>
</tr>
</tbody>
</table>

AFFORDABILITY RATE
Average 29.3%

- AR<30%
- 30%<AR<40%
- AR>40%

LOAN TO VALUE

- LTV<40%
- 80% - 100%
- 40% - 60%
- >100%

Despite the economic situation and the gradual deterioration over the last few years, the loan admission measures produced a good evolution of vintages. For example, for the years 2008-2012 in the Santander branch network in Spain, the maturity of mortgage vintages was as follows:

The NPL ratio of this portfolio remained at levels lower than the total of businesses in Spain and at the end of 2012 was 4.4%.
5.3.2.4. Portfolio with real estate purpose

The exposure net of provisions dropped by EUR 12,383 million in 2012 to EUR 12,509 million and represented 1.7% of the Group's total credit portfolio. This decline was due to the effort made to reduce the portfolio with real estate purpose and to the increase in coverage provisions.

**EXPOSURE OF REAL ESTATE PURPOSE PORTFOLIO**

<table>
<thead>
<tr>
<th>Million de euros</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross balance</strong></td>
<td><strong>%</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>1. Loans</td>
<td>15,867</td>
<td>44%</td>
</tr>
<tr>
<td>a. Normal</td>
<td>6,142</td>
<td>39%</td>
</tr>
<tr>
<td>b. Substandard</td>
<td>2,149</td>
<td>39%</td>
</tr>
<tr>
<td>c. Doubtful</td>
<td>7,576</td>
<td>50%</td>
</tr>
<tr>
<td>2. Foreclosed</td>
<td>7,838</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Total real estate loans (1+2)</strong></td>
<td><strong>23,705</strong></td>
<td><strong>47%</strong></td>
</tr>
</tbody>
</table>

As for the reduction of the portfolio, at the end of 2012 the gross exposure with real estate purpose in Spain was EUR 23,705 million, of which EUR 15,867 million were loans and EUR 7,838 million foreclosures. This was a decline of EUR 8,289 million (EUR 714 million foreclosures and EUR 7,575 million loans) over 2011 (-25.9%) and 44.2% since the onset of the crisis in 2008.

**REAL ESTATE EXPOSURE IN SPAIN**

<table>
<thead>
<tr>
<th>Million euros</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties foreclosed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>34,842</td>
<td>31,994</td>
<td>23,705</td>
</tr>
<tr>
<td>-7,509</td>
<td>-8,289</td>
<td>-7,575</td>
<td>15,867</td>
</tr>
<tr>
<td>-27,334</td>
<td>-23,442</td>
<td>-20,867</td>
<td></td>
</tr>
</tbody>
</table>

The Group assigned dedicated teams to reduce the real estate risk, which resulted in 33,500 operations, double the number in 2011. Of this number, 31,000 were homes and 2,500 other properties. A total of 17,500 foreclosed homes were sold and 16,000 sales of financed real estate developers.

**REAL ESTATE SALES IN SPAIN**

<table>
<thead>
<tr>
<th>(Number operations)</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real estate developer homes</td>
<td>17,700</td>
<td>17,500</td>
</tr>
<tr>
<td>Foreclosed homes</td>
<td>16,000</td>
<td>17,500</td>
</tr>
</tbody>
</table>

As a result of this, 2012 was the first year when there was a fall in foreclosures, as seen in the chart below:

**QUARTERLY EVOLUTION OF FORECLOSURES 2011 AND 2012**

<table>
<thead>
<tr>
<th>Million euros</th>
<th>Q1’11</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q1’12</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>+373</td>
<td>+453</td>
<td>+225</td>
<td></td>
<td></td>
<td></td>
<td>+37</td>
<td>-7</td>
<td>-202</td>
</tr>
</tbody>
</table>

As regards coverage, the Group set aside EUR 6,140 million of provisions for real estate loans in Spain, more than that required by the Spanish government’s two real decree laws. Following provisions made in 2012, the real estate provisioning is effectively completed. Coverage of the real estate exposure in Spain was 47%, up from 22% at the end of 2011.
Coverage increased in all tranches including in portfolios in normal and sub-standard situation, which significantly lifted their levels of provisions.

Coverage by the type of real estate that guarantees the loans (regardless of their classification by credit quality as doubtful, sub-standard or normal) or by foreclosed properties is as follows:

<table>
<thead>
<tr>
<th>Exposures and Coverage</th>
<th>Million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Real estate loans</strong></td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>Coverage</td>
</tr>
<tr>
<td>Total</td>
<td>15,867</td>
</tr>
<tr>
<td>Finished buildings</td>
<td>7,025</td>
</tr>
<tr>
<td>Developers</td>
<td>1,494</td>
</tr>
<tr>
<td>Land</td>
<td>5,126</td>
</tr>
<tr>
<td>Rest of guarantees</td>
<td>2,222</td>
</tr>
<tr>
<td><strong>Foreclosed properties</strong></td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>Coverage</td>
</tr>
<tr>
<td>Total</td>
<td>7,838</td>
</tr>
<tr>
<td>Finished buildings</td>
<td>2,440</td>
</tr>
<tr>
<td>Developers</td>
<td>668</td>
</tr>
<tr>
<td>Land</td>
<td>4,730</td>
</tr>
<tr>
<td>Rest of guarantees</td>
<td>2,222</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23,705</td>
</tr>
<tr>
<td>Finished buildings</td>
<td>9,465</td>
</tr>
<tr>
<td>Developers</td>
<td>2,162</td>
</tr>
<tr>
<td>Land</td>
<td>9,856</td>
</tr>
</tbody>
</table>

5.3.3. Brazil

Brazil's lending rose 9.58% in 2012 (excluding the exchange rate impact) to EUR 89,142 million (11% of the Group's total lending). This growth was aligned with the expansion of the Brazilian economy.

The portfolio is diversified by customers and has a big volume of retail operations: 56.1% to individuals, consumer finance and SMEs.

<table>
<thead>
<tr>
<th>Portfolio Mix</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td>25.9%</td>
</tr>
<tr>
<td>Companies</td>
<td>14.2%</td>
</tr>
<tr>
<td>SMEs</td>
<td>15.5%</td>
</tr>
<tr>
<td>San. Finan.*</td>
<td>12.6%</td>
</tr>
<tr>
<td>Individuals</td>
<td>29.4%</td>
</tr>
<tr>
<td>Others</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

Lending to individuals grew 11%. The segment that grew the most was mortgages, though its share of the portfolio remains low (5% of the total).

Lending by Santander Financiamentos, specialised in consumer finance, mainly auto finance, fell 3%, in line with the trend in these portfolios in the banking system. Loans to SMEs and large companies rose 13%.

LENDING: SEGMENTATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>26,187</td>
<td>23,514</td>
<td>18,890</td>
<td>11%</td>
<td>24%</td>
</tr>
<tr>
<td>Mortgages</td>
<td>4,651</td>
<td>3,755</td>
<td>2,504</td>
<td>24%</td>
<td>50%</td>
</tr>
<tr>
<td>Consumer</td>
<td>14,395</td>
<td>13,344</td>
<td>11,142</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>Cards</td>
<td>5,983</td>
<td>5,232</td>
<td>3,980</td>
<td>14%</td>
<td>31%</td>
</tr>
<tr>
<td>Others</td>
<td>1,159</td>
<td>1,184</td>
<td>1,264</td>
<td>(2%)</td>
<td>(6%)</td>
</tr>
<tr>
<td>Santander Financiamentos</td>
<td>11,208</td>
<td>11,518</td>
<td>10,036</td>
<td>(3%)</td>
<td>15%</td>
</tr>
<tr>
<td>SMEs and large companies</td>
<td>49,599</td>
<td>44,023</td>
<td>38,814</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>SMEs</td>
<td>13,829</td>
<td>11,489</td>
<td>9,064</td>
<td>20%</td>
<td>27%</td>
</tr>
<tr>
<td>Companies</td>
<td>12,647</td>
<td>12,115</td>
<td>9,893</td>
<td>4%</td>
<td>22%</td>
</tr>
<tr>
<td>Corporate</td>
<td>23,123</td>
<td>20,419</td>
<td>19,857</td>
<td>13%</td>
<td>3%</td>
</tr>
</tbody>
</table>

The NPL ratio was 6.86% at the end of 2012, up from 5.38% a year earlier, against a backdrop of a slowdown in the Brazilian economy which produced a rise in NPLs throughout the banking system.

NPL RATIOS

<table>
<thead>
<tr>
<th>Q4’11</th>
<th>Q1’12</th>
<th>Q2’12</th>
<th>Q3’12</th>
<th>Q4’12</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.38%</td>
<td>5.76%</td>
<td>6.51%</td>
<td>6.79%</td>
<td>6.86%</td>
</tr>
</tbody>
</table>

Coverage was 90.2% (95% in 2011).
5.4. Other credit risk optics

5.4.1. 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 the Group’s clients.

Risk is measured by its prevailing market as well as potential value (value of risk positions taking into account the future variation of underlying market factors in contracts). The equivalent credit risk (ECR) is the net replacement value plus the maximum potential value of these contracts in the future. The capital at risk or unexpected loss is also calculated (i.e. the loss which, once the expected loss is subtracted, constitutes the economic capital, net of guarantees and recovery).

Exposure in derivatives
The total exposure to credit risk from activities in the financial markets amounted to EUR 52,184 million and is concentrated in high quality counterparties (76.6% of the risk with counterparties has a rating equal to or more than A-).

---

**OTC DERIVATIVES DISTRIBUTION BY EQUIVALENT CREDIT RISK AND MARKET VALUE INCLUDING THE MITIGATION IMPACT**

<table>
<thead>
<tr>
<th></th>
<th>End 2012</th>
<th></th>
<th>End 2011</th>
<th></th>
<th>End 2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross Exposure</td>
<td>Gross MtM</td>
<td>Gross Exposure</td>
<td>Gross MtM</td>
<td>Gross Exposure</td>
<td>Gross MtM</td>
</tr>
<tr>
<td>CDS Protection Acquired</td>
<td>699</td>
<td>610</td>
<td>2,269</td>
<td>2,316</td>
<td>1,324</td>
<td>1,144</td>
</tr>
<tr>
<td>CDS protection sold</td>
<td>478</td>
<td>467</td>
<td>231</td>
<td>228</td>
<td>131</td>
<td>622</td>
</tr>
<tr>
<td>Total credit derivatives</td>
<td>1,177</td>
<td>1,077</td>
<td>2,500</td>
<td>2,544</td>
<td>1,455</td>
<td>1,766</td>
</tr>
<tr>
<td>Equity forwards</td>
<td>616</td>
<td>339</td>
<td>437</td>
<td>147</td>
<td>369</td>
<td>146</td>
</tr>
<tr>
<td>Equity options</td>
<td>2,582</td>
<td>1,203</td>
<td>2,635</td>
<td>1,516</td>
<td>3,028</td>
<td>1,834</td>
</tr>
<tr>
<td>Equity spot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Equity swaps</td>
<td>1,347</td>
<td>176</td>
<td>914</td>
<td>385</td>
<td>677</td>
<td>237</td>
</tr>
<tr>
<td>Total equity derivatives</td>
<td>4,544</td>
<td>1,719</td>
<td>3,986</td>
<td>2,053</td>
<td>4,076</td>
<td>1,947</td>
</tr>
<tr>
<td>Fixed-income forwards</td>
<td>143</td>
<td>5</td>
<td>59</td>
<td>0</td>
<td>121</td>
<td>30</td>
</tr>
<tr>
<td>Fixed-income spot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total fixed income derivatives</td>
<td>143</td>
<td>5</td>
<td>136</td>
<td>0</td>
<td>135</td>
<td>31</td>
</tr>
<tr>
<td>Forward and spot rates</td>
<td>4,409</td>
<td>1,235</td>
<td>6,340</td>
<td>1,648</td>
<td>5,271</td>
<td>1,812</td>
</tr>
<tr>
<td>Exchange-rate options</td>
<td>1,744</td>
<td>662</td>
<td>2,058</td>
<td>604</td>
<td>1,319</td>
<td>466</td>
</tr>
<tr>
<td>Other exchange rate derivatives</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Exchange-rate swaps</td>
<td>27,230</td>
<td>9,422</td>
<td>28,837</td>
<td>10,599</td>
<td>24,957</td>
<td>10,545</td>
</tr>
<tr>
<td>Total exchange rate derivatives</td>
<td>33,389</td>
<td>11,321</td>
<td>37,241</td>
<td>12,851</td>
<td>31,560</td>
<td>12,825</td>
</tr>
<tr>
<td>Asset Swaps</td>
<td>928</td>
<td>870</td>
<td>904</td>
<td>850</td>
<td>342</td>
<td>692</td>
</tr>
<tr>
<td>Call Money Swaps</td>
<td>1,141</td>
<td>673</td>
<td>1,544</td>
<td>573</td>
<td>951</td>
<td>324</td>
</tr>
<tr>
<td>Interest rate structures</td>
<td>2,487</td>
<td>2,137</td>
<td>2,364</td>
<td>1,866</td>
<td>2,029</td>
<td>1,709</td>
</tr>
<tr>
<td>Forward interest rates - FRAs</td>
<td>104</td>
<td>40</td>
<td>174</td>
<td>69</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>IRS</td>
<td>117,127</td>
<td>89,278</td>
<td>106,414</td>
<td>72,048</td>
<td>52,810</td>
<td>46,731</td>
</tr>
<tr>
<td>Other interest-rate derivatives</td>
<td>5,827</td>
<td>4,415</td>
<td>5,471</td>
<td>3,608</td>
<td>3,174</td>
<td>3,069</td>
</tr>
<tr>
<td>Total interest-rate derivatives</td>
<td>127,614</td>
<td>97,412</td>
<td>116,871</td>
<td>79,014</td>
<td>59,344</td>
<td>52,540</td>
</tr>
<tr>
<td>Commodities</td>
<td>459</td>
<td>286</td>
<td>877</td>
<td>402</td>
<td>580</td>
<td>313</td>
</tr>
<tr>
<td>Total commodity derivatives</td>
<td>459</td>
<td>286</td>
<td>877</td>
<td>402</td>
<td>580</td>
<td>313</td>
</tr>
<tr>
<td>Total gross derivatives</td>
<td>167,326</td>
<td>111,821</td>
<td>161,611</td>
<td>96,864</td>
<td>97,131</td>
<td>69,422</td>
</tr>
<tr>
<td>Total net derivatives (without collateral)**</td>
<td>62,738</td>
<td>6,922</td>
<td>64,866</td>
<td>7,381</td>
<td>53,766</td>
<td>3,002</td>
</tr>
<tr>
<td>Collateral</td>
<td>(10,535)</td>
<td>-</td>
<td>(11,508)</td>
<td>-</td>
<td>(6,873)</td>
<td>-</td>
</tr>
<tr>
<td>Total net</td>
<td>52,184</td>
<td>6,922</td>
<td>53,358</td>
<td>7,381</td>
<td>46,893</td>
<td>3,002</td>
</tr>
</tbody>
</table>

* Opening of the exposure by products in gross risk as it is methodologically not possible to separate out net risk by product.
** Market value used to include the effects of mitigant agreements to calculate the exposure by counterparty risk.
Around 50% of the exposure with derivatives is with banks 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.

**NOTIONAL OTC DERIVATIVE PRODUCTS BY MATURITY**

<table>
<thead>
<tr>
<th></th>
<th>Until 1 year</th>
<th>1-5 years</th>
<th>5-10 years</th>
<th>Over 10 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS protection acquired</td>
<td>27</td>
<td>324</td>
<td>92</td>
<td>278</td>
<td>699</td>
</tr>
<tr>
<td>CDS protection sold</td>
<td>77</td>
<td>354</td>
<td>25</td>
<td>1</td>
<td>478</td>
</tr>
<tr>
<td><strong>Total credit derivatives</strong></td>
<td>104</td>
<td>678</td>
<td>117</td>
<td>279</td>
<td>1,177</td>
</tr>
<tr>
<td>Equity forwards</td>
<td>408</td>
<td>208</td>
<td>0</td>
<td>0</td>
<td>616</td>
</tr>
<tr>
<td>Equity options</td>
<td>978</td>
<td>1,361</td>
<td>176</td>
<td>67</td>
<td>2,582</td>
</tr>
<tr>
<td>Equity spot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Equity swaps</td>
<td>1,156</td>
<td>190</td>
<td>0</td>
<td>0</td>
<td>1,347</td>
</tr>
<tr>
<td><strong>Total equity derivatives</strong></td>
<td>2,542</td>
<td>1,759</td>
<td>176</td>
<td>67</td>
<td>4,545</td>
</tr>
<tr>
<td>Fixed-income forwards</td>
<td>133</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>143</td>
</tr>
<tr>
<td>Fixed-income spot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total fixed income derivatives</strong></td>
<td>133</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>143</td>
</tr>
<tr>
<td>Forward and spot rates</td>
<td>3,590</td>
<td>793</td>
<td>26</td>
<td>0</td>
<td>4,409</td>
</tr>
<tr>
<td>Exchange-rate options</td>
<td>1,344</td>
<td>400</td>
<td>0</td>
<td>0</td>
<td>1,744</td>
</tr>
<tr>
<td>Other exchange rate derivatives</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Exchange-rate swaps</td>
<td>7,521</td>
<td>12,139</td>
<td>5,082</td>
<td>2,487</td>
<td>27,230</td>
</tr>
<tr>
<td><strong>Total exchange rate derivatives</strong></td>
<td>12,461</td>
<td>13,333</td>
<td>5,108</td>
<td>2,487</td>
<td>33,389</td>
</tr>
<tr>
<td>Asset Swaps</td>
<td>18</td>
<td>119</td>
<td>204</td>
<td>588</td>
<td>928</td>
</tr>
<tr>
<td>Call Money Swaps</td>
<td>545</td>
<td>504</td>
<td>44</td>
<td>49</td>
<td>1,141</td>
</tr>
<tr>
<td>Interest rate structures</td>
<td>19</td>
<td>63</td>
<td>53</td>
<td>2,352</td>
<td>2,487</td>
</tr>
<tr>
<td>Forward interest rates - FRAs</td>
<td>103</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>IRS</td>
<td>4,384</td>
<td>27,151</td>
<td>34,586</td>
<td>51,006</td>
<td>117,127</td>
</tr>
<tr>
<td>Other interest-rate derivatives</td>
<td>270</td>
<td>1,103</td>
<td>3,002</td>
<td>1,452</td>
<td>5,827</td>
</tr>
<tr>
<td><strong>Total interest-rate derivatives</strong></td>
<td>5,359</td>
<td>28,940</td>
<td>37,888</td>
<td>55,447</td>
<td>127,614</td>
</tr>
<tr>
<td>Commodities</td>
<td>85</td>
<td>373</td>
<td>0</td>
<td>0</td>
<td>459</td>
</tr>
<tr>
<td><strong>Total commodity derivatives</strong></td>
<td>85</td>
<td>373</td>
<td>0</td>
<td>0</td>
<td>459</td>
</tr>
<tr>
<td><strong>Total gross derivatives</strong></td>
<td>20,664</td>
<td>45,093</td>
<td>43,290</td>
<td>58,280</td>
<td>167,326</td>
</tr>
<tr>
<td>Collateral</td>
<td>(10,555)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* **Opening of the exposure by products in gross risk as it is methodologically not possible to separate out net risk by product.**

**After mitigants are applied (netting and collateral), total net risk is EUR 52,184 million.**

The distribution of risk in derivatives by type of counterparty was 48.4% with banks, 26.4% with large companies and 9.2% with SMEs.

**DISTRIBUTION OF RISK IN OTC DERIVATIVES BY TYPE OF COUNTERPARTY**

- **Companies** 48.4%
- **Institutions** 10.1%
- **Corporate** 26.4%
- **Securitisation** 5.3%
- **Sovereign** 0.6%

As regards the geographic distribution of risk, 16.5% is with Spanish counterparties, 20% with UK counterparties (mainly Santander UK’s operations), 31% the rest of Europe, 10% the US and 7% Latin America.
**GEOGRAPHIC DISTRIBUTION OF RISK IN DERIVATIVES**

- **UK**: 20.3%
- **US**: 10.1%
- **Spain**: 16.5%
- **Latin America**: 6.9%
- **Rest of Europe**: 31.0%
- **Others**: 15.2%

**OTC derivatives, 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, both if settled by clearing house or if remaining bilateral. Since 2011, 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, credit risk is not considered as incurred 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. The following table show the relative share in total derivatives of new operations settled by clearing house at the end of 2012 and the significant evolution of operations settled by clearing house since 2011.

**RISK DISTRIBUTION ON THE BASIS OF SETTLEMENT IN CCPS AND BY TYPE OF DERIVATIVE AND EVOLUTION**

<table>
<thead>
<tr>
<th>Gross exposure. Million euros</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity derivatives</td>
<td>4</td>
<td>2</td>
<td>61</td>
</tr>
<tr>
<td>Exchange rate derivatives</td>
<td>11</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Interest rate derivatives</td>
<td>17,711</td>
<td>12,770</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17,726</td>
<td>12,785</td>
<td>96</td>
</tr>
</tbody>
</table>

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.

**RISK DISTRIBUTION ON THE BASIS OF THE COLLATERAL TYPE BY OTCS NOT SETTLED IN CCPS**

<table>
<thead>
<tr>
<th>Gross exposure MtM</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>With collateral</td>
<td>103,016</td>
<td>(1,810)</td>
</tr>
<tr>
<td>Without collateral</td>
<td>46,584</td>
<td>13,344</td>
</tr>
</tbody>
</table>

In general, the collateral contracts that the Group signs are bilateral. There are some exceptions mainly with multilateral entities and securitisation funds.

**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, 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 47,105 million of acquired protection and EUR 42,529 million of sold protection.

At 31 December 2012, for the Group’s trading activity, the sensitivity of lending to increases in spreads of one basis point was minus EUR 0.3 million, similar to 2011, and the average VaR during the year was EUR 2.9 million, significantly lower than in 2011 (average VaR of EUR 10.6 million).
5.4.2. Concentration risk
Control of concentration risk 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’s risk committee establishes the policies and reviews the appropriate exposure limits for appropriate management of the degree of concentration of credit risk portfolios6.

The Group is subject to the Bank of Spain regulation on large risks. In accordance with Circular 3/2008 (on determining and control of minimum equity) and subsequent changes, the value of all the risks that a credit institution contracts with the same person, entity or economic group, including that in the part which is non-consolidatable, cannot exceed 25% of its equity. The risks maintained with the same person, whether an individual or a company or an economic group, are considered large risks when their values exceeds 10% of the equity of the credit institution. The exception from this treatment are exposures to OECD governments and central banks.

At 31 December 2012, there were several financial groups initially exceeded 10% of shareholders’ funds: three EU financial institutions, two US financial entities, an oil company and a EU central counterparty entity. After applying risk mitigation techniques and the rules for large risks, all of them were below 5.5% of eligible equity.

At 31 December 2012, the 20 largest economic and financial groups, excluding AAA governments and sovereign securities denominated in local currency, represented 5.0% of the outstanding credit risk of the Group’s clients (lending plus guarantees), the same level as in 2011. The distribution of the portfolio of companies by sectors is adequately diversified.

The Group has no exposure with any international financial institution which is more than 5% of equity. A EU bank has the largest exposure. The Top 10 of IFIs account for EUR 15,713 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.

5.4.3. Country risk
Country risk is a credit risk component 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 which could affect international financial activity (wars, natural disasters, balance of payments crisis, etc).

The exposure susceptible to country-risk provisions at the end of 2012 was EUR 342 million. At the end of 2011, the total country risk in need of provisions was EUR 380 million. Total provisions in 2012 stood at EUR 45 million compared with EUR 55 million in 2011. Of note in 2012 was that three countries improved their classification according to Bank of Spain criteria: Uruguay and Colombia (from Group 4 to Group 3, with provisions passing from 22.8% to 10.1%) and Peru (from Group 3 to Group 2, with provisions no longer needed).

The exposure is moderate and has been on a downward path in recent years. 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 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 relation with customers.

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6 For more detail, see “Supplementary quantitative metrics of risk appetite of concentration” in Section 2, “Corporate management principles, control and risk appetite.”
5.4.4. Sovereign risk

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 the Republic (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.

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

In general the exposure to sovereign risk mainly emanates from the obligations to which our subsidiary banks are subject regarding the establishment of certain deposits in central banks as well as fixed-income portfolios maintained as part of the risk management strategy for structural interest. Most of these exposures are in local currencies and are financed with deposits captured locally, also in local currencies. The exposures in the local sovereign but in currencies different to the official one of the country of issuance is not very significant (EUR 4,872 million, 2.8% of the total sovereign risk), and less so the exposure in non-local sovereign issuers, which means cross-border risk (EUR 2,907 million, 1.7% of the total sovereign risk).

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.

<table>
<thead>
<tr>
<th>EXPOSURE BY LEVEL OF RATING</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>34%</td>
<td>29%</td>
<td>61%</td>
</tr>
<tr>
<td>AA</td>
<td>3%</td>
<td>26%</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>29%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>BBB</td>
<td>31%</td>
<td>38%</td>
<td>34%</td>
</tr>
<tr>
<td>Under BBB</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

As expected, the distribution of sovereign risk by level of rating was affected by many rating revisions of sovereign issuers in the last few years, mainly Spain, Portugal, the US and Chile.

7 Countries classified as low risk by the Bank of Spain (Group 1, according to the terminology) are not considered.
8 Internal ratings used.
9 The extraordinary liquidity deposited in the Bank of Spain after ECB long term liquidity auctions (3 years) are not included.
### 31 Dec 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Liquidity</th>
<th>Risk by portfolio</th>
<th>Rest of sovereign risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deposits in central banks</td>
<td>Trading portfolio bonds</td>
<td>Portfolio available for sale</td>
</tr>
<tr>
<td>Spain</td>
<td>1,574</td>
<td>5,814</td>
<td>31,362</td>
</tr>
<tr>
<td>Portugal</td>
<td>1,150</td>
<td>590</td>
<td>1,771</td>
</tr>
<tr>
<td>Italy</td>
<td>0</td>
<td>179</td>
<td>208</td>
</tr>
<tr>
<td>Greece</td>
<td>0</td>
<td>0</td>
<td>84</td>
</tr>
<tr>
<td>Ireland</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rest of euro zone</td>
<td>0</td>
<td>1,374</td>
<td>345</td>
</tr>
<tr>
<td>UK</td>
<td>21,499</td>
<td>6,889</td>
<td>0</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>1,136</td>
<td>2,449</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>260</td>
<td>1,354</td>
<td>3</td>
</tr>
<tr>
<td>US</td>
<td>10,755</td>
<td>(218)</td>
<td>3,522</td>
</tr>
<tr>
<td>Brazil</td>
<td>18,943</td>
<td>7,567</td>
<td>12,589</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,740</td>
<td>7,125</td>
<td>3,463</td>
</tr>
<tr>
<td>Chile</td>
<td>3,713</td>
<td>(249)</td>
<td>1,942</td>
</tr>
<tr>
<td>Rest of Latam</td>
<td>1,355</td>
<td>130</td>
<td>1,341</td>
</tr>
<tr>
<td>Rest of world</td>
<td>0</td>
<td>837</td>
<td>516</td>
</tr>
</tbody>
</table>

Million euros.

### 31 Dec 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Liquidity</th>
<th>Risk by portfolio</th>
<th>Rest of sovereign risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deposits in central banks</td>
<td>Trading portfolio bonds</td>
<td>Portfolio available for sale</td>
</tr>
<tr>
<td>Spain</td>
<td>5,495</td>
<td>3,035</td>
<td>26,262</td>
</tr>
<tr>
<td>Portugal</td>
<td>500</td>
<td>359</td>
<td>2,731</td>
</tr>
<tr>
<td>Italy</td>
<td>0</td>
<td>361</td>
<td>0</td>
</tr>
<tr>
<td>Greece</td>
<td>0</td>
<td>251</td>
<td>0</td>
</tr>
<tr>
<td>Ireland</td>
<td>0</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Rest of euro zone</td>
<td>0</td>
<td>(2,118)</td>
<td>0</td>
</tr>
<tr>
<td>UK</td>
<td>23,800</td>
<td>2,833</td>
<td>0</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>0</td>
<td>3,352</td>
<td>120</td>
</tr>
<tr>
<td>US</td>
<td>7,719</td>
<td>73</td>
<td>423</td>
</tr>
<tr>
<td>Brazil</td>
<td>19,026</td>
<td>2,833</td>
<td>19,823</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,898</td>
<td>4,300</td>
<td>4,444</td>
</tr>
<tr>
<td>Chile</td>
<td>2,640</td>
<td>480</td>
<td>1,541</td>
</tr>
<tr>
<td>Rest of Latam</td>
<td>1,497</td>
<td>144</td>
<td>1,338</td>
</tr>
<tr>
<td>Rest of world</td>
<td>0</td>
<td>0</td>
<td>1,078</td>
</tr>
</tbody>
</table>

Million euros.
In general, the total exposure to sovereign risk remained relatively stable in the last few years, with a slight downward trend, which seems reasonable if we bear in mind the strategic factors behind it, which have been commented on.

As regards the exposure in Spain (sovereign of the country of origin of the Group), compared with our peers it is not high in terms of total assets or equity. However, in 2012 the exposure in Spanish public fixed income was reduced, both in the trading portfolio (-21%) as well as in the portfolio available for sale, where the exposure to Spain sovereign risk declined by 5%, despite the rise in the first quarter.

Total exposure to Spanish sovereign risk at the end of 2012 was EUR 41,855 million (EUR 40,805 million in 2011). Santander included in 2012 the contribution to the Fund for Paying Suppliers (EUR 3,943 million), which was offset by the reduction during the year of the exposure to sovereign bonds.

According to the criteria of the European Banking Authority, the evolution is similar. The total exposure remained stable (EUR 45,586 million, compared to EUR 45,695 million at the end of 2011), with the same dynamics as commented on.

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

5.4.5. 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. The assumption of these principles represents a commitment to assess the operation, taking into account the social and environmental risks, and to only finance those projects that can accredit adequate management of the social and environmental impacts. The methodology used is set out below:
  - For operations with an amount equal to or more than $10 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 and non-high income OECD), 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). Specific questionnaires have been developed for those sectors where the bank is most active. The bank also gives training courses in social and environmental matters to risk teams as well as to those responsible for business.
In 2012, 22 projects were analysed under the Equator principles for a total amount of EUR 9,280 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 2012, 37,020 clients were assessed by this tool in Spain (total risk of EUR 55,559 million).

### ENVIRONMENTAL RISK CLASSIFICATION

<table>
<thead>
<tr>
<th>Million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

VL: very low; L: low; M: medium and H: high.
VIDA companies assessed in the retail banking network in Spain.

Low or very low environmental risk accounts for 89% of total risk. In 2012, there was a sharp fall in average environmental risk (50% less than in 2011).

5.5 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 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 after-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.
5.5.1. 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.”

5.5.2. 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.

In the sphere of standardised risk, the planning and setting of limits is done through credit management programmes (CMPs), a document reached by consensus between the business and risk areas and approved by the risk committee or committees delegated by it. The CMPs set out the expected results of business in terms of risk and return, as well as the limits to which activity is subject and management of the associated risks.

The most basic level in the individualised management sphere is the customer and when certain features are present - generally of relative importance – an individual limit (pre-classification) is set.

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 is used for those companies who meet certain requirements (high knowledge, rating, etc).

Analysis of scenarios
An important part of planning is to consider the volatility of macroeconomic variables that help to support the budgetary process.

The Group conducts simulations of its portfolio using various adverse scenarios and stress tests to assess the Group’s solvency in the face of certain situations in the future.

These simulations cover all the Group’s most relevant portfolios and are done systematically using a corporate methodology which:

- Determines the sensitivity of risk factors (PD, LGD) to certain macroeconomic variables.
- Defines reference scenarios (at the global level as well as for each of the Group’s units).
- Identifies rupture scenarios (levels as of which the sensitivity of risk factors to macroeconomic variables is more accentuated) and the distance of these scenarios from the current situation and the reference scenarios.
- Estimates the expected loss of each scenario and the evolution of the risk profile of each portfolio in the face of movements in certain macroeconomic variables.
The simulation models use the data of a complete economic cycle to measure the performance of risk factors in the face of changes in macroeconomic variables.

The scenarios take into account the vision of each unit as well as the global vision. The macroeconomic variables in these scenarios include:

- The unemployment rate
- Property prices
- GDP
- Interest rates
- Inflation

The analysis of scenarios enables senior management to better understand the foreseeable evolution of the portfolio in the face of market conditions and changing situations, and it is a key tool for assessing the sufficiency of the provisions established for stress scenarios.

Definition of suppositions and scenarios (baseline/acid)
The projections of the risk and loss parameters, usually with a time frame of three years are executed under different economic scenarios.

The scenarios defined are supported in different levels of stress, from the central (baseline) one or the most likely to the most acid scenarios which although are unlikely are possible.

These scenarios are set by the Group’s research department in coordination with the research service of each unit and use as their reference the figures published by the main international institutions.

A global acid (stress) scenario is always defined which describes a world crisis situation and the way in which it would affect each of the countries where Grupo Santander operates. A local stress scenario is also defined which would only affect some of the Group’s main units and with a greater degree of stress than the global stress one.

In the capital coordination committee, senior management studies the situation, proposes the changes and formally approves the set of definitive scenarios to be used in the Group’s stress test.

Stress test uses and integration in the management of scenario analysis
Analysis of scenarios is a useful tool throughout the credit risk cycle. Grupo Santander has different uses for the stress test and analysis of scenarios:

- **Internal uses**, for example to do with risk appetite and the drawing up of risk and business plans and budgets. It integrates the corporate stress test methodology into the management of the Group’s different areas and informs senior management of the results from the following angles:
  - Impact on the income statement and on capital.
  - Evolution envisaged for the next three years of the cost of credit with the strategy of business planned.
  - Sufficiency of funds and provisions.
  - Measures the level of sensitivity of each portfolio to the economic environment.
  - Diversification of the portfolio in acid scenarios.
  - Contrast with other estimates made locally.

- **External uses**, such as, for example, the European Banking Authority’s stress tests, annual ICCAP, bottom up and top down stress tests of the Spanish system, etc. With these uses, an external agent or regulatory would request the results of the stress test after execution of the Group’s corporate methodology. In other cases, details of the performance of the portfolio can be requested so that the risk parameters can be exercised under defined scenarios.

Results obtained and impact on capital
The various stress test exercises, from both an internal and external standpoint, underlined the strength and validity of Grupo Santander’s business model, as can be seen in the results published by the Bank of Spain of the bottom up test conducted in September 2012 led by Oliver Wyman.

The analyses conducted, in both baseline and acid scenarios, for the whole Group and for each of its units, with a time frame of three years, shows the strength of the balance sheet to different market and macroeconomic situations.

As well as these results, after the latest updating of risk appetite presented to the board, it was concluded that Grupo Santander would maintain positive results and solvency even in the most adverse scenarios, with conservative assumptions.

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10 More details on risk appetite in section 2 of this report.
5.5.3. Decisions on operations

The sales phase comprises decision-taking, giving support to the business units that need analysis and approval of risks in order to be able to conduct an operation.

The decision-taking process involves analysing and resolving operations. Approval by the risk areas 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 clients under standardized management, the administration of large volumes of credit operations with the use of automatic decision models is facilitated, which classifies the client/operation binomial. Investment 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 clients under individualised management:

- 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

Although they are relevant in all phases of the credit risk cycle, mitigation techniques play a particularly important role in taking decisions on operations.

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:

Settlement of positions

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

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

An important aspect of the framework contracts is that they represent a single legal obligation that covers all operations. This is fundamental when it comes to being able to settle the risks of all operations covered by said 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. From the position of the regulatory capital calculation, not all can be considered as reduction factors, only those which meet the minimum qualitative requirements set out in the Basel agreements.
A very important case of a real financial guarantee are collateral agreements. These are a series of instruments with economic value that are deposited 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 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 through recovering part or all of the profits/benefits (credit granted to the counterparty) generated over a period of time by the operation (valued at market prices).

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

As regards real estate guarantees, there are regular re-appraisal processes, based on the real market values which for the different types of property are provided by valuation agencies, 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 which 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 type 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 on 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 section “8.6. 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 “5.4.1. Credit risk by activities in financial markets” of this report.

5.5.4. 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 the segmentation of customers, and is carried out by local and global risk dedicated teams, backed by internal auditing.

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 auditing, 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 standardised clients, 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.

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

- **Expected loss (EL) and regulatory capital**
  The expected loss is the estimate of the economic loss that would occur during the next year of the portfolio existing at that time.

  It is one more cost of activity, which must have a repercussion on the price of operations. Its calculation is mainly based on three parameters:

  - Probability of default (PD): maximum amount that could be lost as a result of a default.
  - Exposure at default (EaD): the probability of a client’s default during the next 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 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 section 10 on capital.

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 directorate general of integral control and internal validation of risks, within 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

## 5.5.5. Measurement and control

As well as monitoring of 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 drawing up 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 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 which allows a response to deteriorations observed in the evolution of NPLs.
requirements and the best practices observed in industry and/or required by regulators. In addition, internal auditing is responsible for ensuring that the policies, methods and procedures are adequate, are effectively implemented and regularly reviewed.

5.5.6. Recovery management

Recovery management is a strategic element in the Bank’s risk management.

In order to conduct recovery management adequately, it is done in four main 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 where great importance is attached to debt recovery in order to ensure that this quality always remains within the expected levels.

The Group has a corporate management model that sets the guidelines and general pattern of actions applied to the various countries, always taking into account the local features that recovery activity requires, be it the economic environment, the business model or a mixture of both. This model is constantly reviewed and the processes and management methodology that sustains it improved. Recovery management for Santander directly involves all the management areas (commercial staff, technology, operations, human resources and risks) has helped to incorporate solutions that improve the model’s effectiveness and efficiency.

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

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

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, stock and performance. These policies are reviewed and regularly adopted in order to reflect both the better management practices as well as the regulatory changes that are applied.

As well as measures focused on adapting operations to the client’s payment capacity, recovery management is also noteworthy in seeking solutions other than judicial ones for the payment in advance 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 guarantee the loans. In countries with a high exposure to real estate risk, such as Spain, there are strong mechanisms for the evacuation of properties which, with their sale, enable the capital to be returned to the bank and reduce the worrying stock in the balance sheet at a much faster speed than those of its competitors.
6. MARKET RISK

6.0. Structure of this section

We will first describe the activities subject to market risk, setting out the different risk types and factors (pages 206-207).

Then we will look at the evolution of market risks and results in 2012, distinguishing trading activity from structural risks (pages 208-219).

The methodologies and various metrics used in Santander are analysed, again making a distinction between trading activity and structural risks (pages 220-222).

The market risk management framework is described, the organisational and governance structure and the system of controlling limits (pages 223-225).

Lastly, the current perimeter of trading activity is examined, the regulatory capital of which is calculated by internal advanced models (pages 225).

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

The market risk area has a perimeter for measuring, controlling and monitoring that covers those operations where equity risk is assumed as a result of changes in market factors. This risk comes from the change in risk factors - interest rates, inflation rates, exchange rates, share prices, the spread on loans commodities prices and the volatility of each of these elements - as well as the liquidity risk of the various products and markets in which the Group operates.

- **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 change 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 equity markets 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 the 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 change in prices. The Group’s exposure to this risk is not significant and is concentrated in derivative operations on commodities with clients.

- **Volatility risk** is the risk or sensitivity of the value of a portfolio to changes in the volatility of risk factors: volatility of interest rates, exchange rates, shares, credit spreads and of 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 a 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, market instability and increases 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.

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

(a) **Trading.** This includes financial services to customers and purchase-sale and positioning mainly in fixed-income, equity and currency products.

(b) **Structural risks.** Constituted by market risks inherent in the balance sheet excluding the trading portfolio. They 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, exchange rate hedging of future results generated in currencies other than the euro (hedging of results).

• **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.

The Global Banking and Markets division is mainly responsible for managing the taking of trading activity positions, in order to develop the activity of clients in financial markets and to a much lesser extent take its own positions.

The financial management area is responsible for implementing the management strategy for structural risks, applying standardized methodologies adapted to each market where the Group operates, either directly in the case of the parent bank or in coordination with the rest of units. The management decisions for these risks are taken by each country’s ALCO (ALM) committee in coordination with the Group’s markets’ committee. The aim is to inject stability and recurrence into the net interest margin of commercial activity and the Group’s economic value, while maintaining adequate levels of liquidity and solvency.

Each of these activities is measured and analysed with different metrics in order to show their risk profile in the most precise way.
6.2. Market risks in 2012

6.2.1. Trading activity
6.2.1.1. Value at Risk (VaR) analysis

Grupo Santander stepped up its strategy of concentrating its trading activity in customer business, minimising where possible exposures of directional risk opened in net terms. This was reflected in the VaR evolution, which declined over previous years.

**EVOLUTION OF VaR 2010-2012**

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

VaR during 2012 fluctuated between EUR 9.4 million (the lowest in the last few years) and EUR 22.4 million. It rose a little during the fourth quarter, because of the rise of risk in Brazil’s treasuries (in interest rates and exchange rates) and Madrid (in interest rate and credit spread).

The VaR reported as of 15 November 2011 excludes the risk from changes in the credit spreads of securitisations and portfolios affected by credit correlation. For regulatory reasons (BIS 2.5), these exposures are considered as banking book for capital purposes. This change caused a decline in risk in VaR terms, both at the total level as well as by credit spread.

The average VaR of the Group’s trading portfolio in 2012 (EUR 14.9 million) was lower than in 2011 (EUR 22.4 million) and 2010 (EUR 28.7 million), for the reason already mentioned of the greater concentration of activity in customers and, to a lesser degree, the reduction in volatility in the markets, despite the continued sovereign debt crisis in Europe. In relation to other comparable financial groups, the Group can be said to have a low risk trading profile.

The histogram below shows the distribution of average risk in terms of VaR between 2010 and 2012 where the accumulation of days with levels between EUR 12.5 million and EUR 28.5 million can be seen (91.5%). The higher values of EUR 28.5 million (7.2%) were concentrated in periods mainly caused 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
Risk by factor
The minimum, average, maximum and year-end 2012 values in VaR terms are shown below:

### VaR Statistics by Risk Factor

<table>
<thead>
<tr>
<th>Risk by factor</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Average</td>
<td>Maximum</td>
</tr>
<tr>
<td><strong>Total trading</strong></td>
<td>9.4</td>
<td>14.9</td>
<td>22.4</td>
</tr>
<tr>
<td>Diversification effect</td>
<td>(9.1)</td>
<td>(15.2)</td>
<td>(25.8)</td>
</tr>
<tr>
<td>Interest rate VaR</td>
<td>7.4</td>
<td>11.8</td>
<td>23.3</td>
</tr>
<tr>
<td>Equity VaR</td>
<td>4.1</td>
<td>7.0</td>
<td>11.2</td>
</tr>
<tr>
<td>FX VaR</td>
<td>1.9</td>
<td>5.0</td>
<td>12.2</td>
</tr>
<tr>
<td>Credit spread VaR</td>
<td>2.2</td>
<td>6.1</td>
<td>13.0</td>
</tr>
<tr>
<td>Commodities VaR</td>
<td>0.2</td>
<td>0.4</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td>5.0</td>
<td>10.1</td>
<td>20.5</td>
</tr>
<tr>
<td>Diversification effect</td>
<td>(3.1)</td>
<td>(6.4)</td>
<td>(12.5)</td>
</tr>
<tr>
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<td>8.8</td>
<td>20.0</td>
</tr>
<tr>
<td>Equity VaR</td>
<td>0.7</td>
<td>3.1</td>
<td>9.7</td>
</tr>
<tr>
<td>FX VaR</td>
<td>0.5</td>
<td>3.1</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>US and Asia</strong></td>
<td>0.5</td>
<td>0.9</td>
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<td>Diversification effect</td>
<td>(0.2)</td>
<td>(0.5)</td>
<td>(1.1)</td>
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<tr>
<td>Interest rate VaR</td>
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<td>1.3</td>
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<tr>
<td>Equity VaR</td>
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<td>0.8</td>
</tr>
<tr>
<td>FX VaR</td>
<td>0.1</td>
<td>0.6</td>
<td>1.7</td>
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<tr>
<td><strong>Europe</strong></td>
<td>7.2</td>
<td>11.0</td>
<td>16.5</td>
</tr>
<tr>
<td>Diversification effect</td>
<td>(7.7)</td>
<td>(12.9)</td>
<td>(20.6)</td>
</tr>
<tr>
<td>Interest rate VaR</td>
<td>5.4</td>
<td>7.9</td>
<td>15.4</td>
</tr>
<tr>
<td>Equity VaR</td>
<td>4.1</td>
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<tr>
<td>FX VaR</td>
<td>1.0</td>
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<tr>
<td>Credit spread VaR</td>
<td>2.1</td>
<td>5.4</td>
<td>10.0</td>
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<tr>
<td>Commodities VaR</td>
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<td>0.4</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Global activities</strong></td>
<td>0.8</td>
<td>2.7</td>
<td>10.2</td>
</tr>
<tr>
<td>Diversification effect</td>
<td>(0.2)</td>
<td>(0.6)</td>
<td>(5.0)</td>
</tr>
<tr>
<td>Interest rate VaR</td>
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<tr>
<td>Credit spread VaR</td>
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<tr>
<td>FX VaR</td>
<td>0.0</td>
<td>0.4</td>
<td>1.9</td>
</tr>
</tbody>
</table>

1 The VaR of global activities includes operations that are not assigned to any particular country.
2 In Latin America, the US and Asia, the VaR levels of the spread credit and commodity factors are not shown separately because of their scant or zero materiality.
The average VaR declined again in 2012 by EUR 7.5 million over 2011. The reduction occurred in all risk factors except for equities, which increased from EUR 4.8 million to EUR 7 million. Of note was the drop in the average VaR of interest rates and exchange rates in Europe and the credit spread in global activities.

**VaR BY RISK FACTOR**
Million euros. VaR at 99% with a time frame of one day (15-day moving average)

The VaR evolution by risk factor in general also declined, with peaks and troughs sharper in the case of the VaR by credit spread, partly due to the exclusion of the risk spread of securitisations and credit correlation which by BIS 2.5 is considered as banking book for the purposes of regulatory capital as of 15 November 2011. The temporary changes in the VaR of various factors was due more to the temporary rises in the volatility of market prices than to significant changes in positions.

### DISTRIBUTION OF RISK BY TIME AND RESULTS IN 2012: PERCENTAGES OF ANNUAL TOTALS
Average VaR (at 99%, with a time frame of one day) and annual accumulated management result (million euros)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average monthly VaR</th>
<th>Monthly economic result</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>10.1</td>
<td>17.8</td>
</tr>
<tr>
<td>February</td>
<td>9.1</td>
<td>8.6</td>
</tr>
<tr>
<td>March</td>
<td>8.7</td>
<td>8.1</td>
</tr>
<tr>
<td>April</td>
<td>8.0</td>
<td>9.1</td>
</tr>
<tr>
<td>May</td>
<td>8.0</td>
<td>8.8</td>
</tr>
<tr>
<td>June</td>
<td>7.6</td>
<td>7.0</td>
</tr>
<tr>
<td>July</td>
<td>6.3</td>
<td>5.7</td>
</tr>
<tr>
<td>August</td>
<td>6.3</td>
<td>5.5</td>
</tr>
<tr>
<td>September</td>
<td>7.6</td>
<td>5.5</td>
</tr>
<tr>
<td>October</td>
<td>7.5</td>
<td>6.7</td>
</tr>
<tr>
<td>November</td>
<td>7.5</td>
<td>9.7</td>
</tr>
<tr>
<td>December</td>
<td>7.7</td>
<td>9.1</td>
</tr>
</tbody>
</table>

52.6% of global risk, contributed 60.6% of results, as its treasury activity was more focused on providing service to professional and institutional clients compared with that of Latin America. However, there was a gradual homogenisation in the profile of activity in the Group’s different units.

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

### 6.2.1.2. Monthly distribution of risks and results
The next chart shows the risk assumption profile, in terms of VaR, compared to results in 2012. The average VaR remained stable, while results evolved in a more irregular way during the year. January and July were positive months, particularly January, and August to October negative, with results below the annual average.

**DISTRIBUTION OF RISK BY TIME AND RESULTS IN 2012: PERCENTAGES OF ANNUAL TOTALS**
Average VaR (at 99%, with a time frame of one day) and annual accumulated management result (million euros)

### 6.2.1.2.2. Geographic distribution

6.2.1.2.1. Geographic distribution
In trading activity, the average contribution of Latin America to the Group’s total VaR in 2012 was 44% compared with a contribution of 33.3% in economic results. Europe, with

13 Results in terms that can be assimilated to the gross margin (excluding operating costs, financial ones are the only cost)
The following histogram of frequencies shows the distribution of daily economic results on the basis of their size between 2010 and 2012. The daily yield\textsuperscript{14} was between -EUR 10 and +EUR 15 million on 90% 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.

These transactions include options on equities, fixed-income and exchange rates.

The units where this activity mainly takes place are: Madrid, Banesto, Santander UK and, to a lesser extent, Brazil and Mexico.

The chart below shows the VaR Vega\textsuperscript{15} performance of structured derivatives business over the last three years. It fluctuated at around an average of EUR 6.8 million. The periods with higher VaR levels related to episodes of significant rises in volatility in the markets (of equities in the euro zone, interest rates in Brazil, etc.).

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\textsuperscript{14}Yields “clean” of commissions and results of intraday derivative operations.

\textsuperscript{15}Vega, a Greek term, means here the sensitivity of the value of a portfolio to changes in the price of market volatility.
As regards the VaR Vega by risk factor, the exposure was concentrated, in this order, in equities, interest rates, exchange rates and commodities. This is shown in the table below:

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Average</td>
<td>Maximum</td>
</tr>
<tr>
<td>Total VaR Vega</td>
<td>3.9</td>
<td>6.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Diversification impact</td>
<td>(1.4)</td>
<td>(3.0)</td>
<td>(4.4)</td>
</tr>
<tr>
<td>Interest rate VaR</td>
<td>1.5</td>
<td>2.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Equity VaR</td>
<td>2.7</td>
<td>6.5</td>
<td>9.0</td>
</tr>
<tr>
<td>FX VaR</td>
<td>0.3</td>
<td>0.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Commodities VaR</td>
<td>0.2</td>
<td>0.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Average</td>
<td>Maximum</td>
</tr>
<tr>
<td>Total VaR Vega</td>
<td>3.9</td>
<td>6.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Parent-holding</td>
<td>1.4</td>
<td>4.6</td>
<td>7.1</td>
</tr>
<tr>
<td>Banesto</td>
<td>1.5</td>
<td>3.4</td>
<td>6.5</td>
</tr>
<tr>
<td>Santander UK</td>
<td>1.5</td>
<td>2.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.4</td>
<td>1.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.4</td>
<td>0.7</td>
<td>1.3</td>
</tr>
</tbody>
</table>

The average risk in 2012 (EUR 6.8 million) was equal to the combined average of the last three years, which underscores the stability of the exposure opened in financial instruments linked to volatility.

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 2012, the Group had:

- **CDOs and CLOs:** the position continues to be not very significant (EUR 207 million). An important part of it is the result of integrating the portfolio of Alliance & Leicester in 2008.

- **Hedge funds:** the total exposure is not significant (EUR 274 million at the end of 2012) and most of it is via the financing of these funds (EUR 169 million), with the rest direct participation in portfolio. This exposure has low loan-to-value levels of below 20% (collateral of EUR 1,480 million at the end of 2012). 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 151 million at the end of 2012, mainly indirect exposure, and EUR 145 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 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 23% lower than in 2011.

In short, the exposure to this type of instruments as a result of the Group’s usual operations, continued to decline in 2012. Its origin was mainly due to the integration of positions of institutions acquired by the Group, such as Alliance & Leicester and Sovereign (in 2008 and 2009, respectively). 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.

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16 Guarantees provided by monolines for bonds issued by US states (municipal bonds) are not considered as exposure. As a result of the acquisition of Sovereign Bank, the Group incorporated a portfolio of these bonds which amounted to EUR 1,341 million at the end of 2011.
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, and;
- The degree of liquidity of the product or underlying asset, in order to make possible their coverage when deemed opportune.

**6.2.1.4. Gauging and contrasting measures**

In 2012, the Group continued to regularly conduct analysis and contrasting tests on the effectiveness of the Value at Risk (VaR) calculation model, obtaining the same conclusions that enable us to verify the model’s reliability. The objective of these tests is to determine whether it is possible to accept or reject the model used to estimate the maximum loss of a portfolio for a certain level of confidence and a specific time frame.

The most important test is backtesting, analysed at the local and global levels by the market risk control units. The methodology of backtesting is implemented in the same way for all the Group’s portfolios and sub-portfolios.

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.

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.
- "Dirty" backtesting: the daily VaR is compared with the day’s net results, including the results of the intraday operations and those generated by commissions.
- "Dirty" backtesting 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 were three exceptions in 2010 of VaR at 99% (days when the daily loss was higher than the VaR): two in May - the first due to a more than usually high rise in the Brazilian currency inflation-indexed curve after the publication of a higher than expected inflation figure, and the second because of higher than normal increases in Spain’s and Mexico’s interest rate curves –, and one in June, due to the sudden widening of credit spreads, falls in stock markets and the depreciation of most currencies against the US dollar as a result of the deterioration of expectations on the outcome of the summit of EU heads of state (June 29).

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).
The backtesting exercises are regularly conducted for each relevant portfolio or strategy of the Group, and its main objective (as in the rest of contrasting tests) is to detect anomalies in the VaR model of each portfolio (for example, shortcomings in the parametrisation of the valuation models of certain instruments, not very adequate proxies, etc.). This is a dynamic process contextualised in the framework of the procedure for reviewing and validating the model.

6.2.1.5. Analysis of scenarios

Various stress scenarios were calculated and analysed regularly in 2012 (at least every month) at the local and global levels for all the trading portfolios and using the same suppositions 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 typical deviations is applied. The scenario is defined by taking each risk factor the movements 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 in Latin American markets and falls in core markets ("flight into quality"), declines in stock markets, depreciation of all currencies against the euro, greater volatility and credit spreads. The table below shows the results of this scenario at the end of 2012.

<table>
<thead>
<tr>
<th>Interest rates</th>
<th>Equities</th>
<th>Exchange rates</th>
<th>Credit spread</th>
<th>Commodities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total trading</strong></td>
<td>(87.8)</td>
<td>(15.5)</td>
<td>(23.1)</td>
<td>(20.9)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Europe</td>
<td>(7.1)</td>
<td>(2.3)</td>
<td>(18.6)</td>
<td>(20.2)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Latin America</td>
<td>(77.7)</td>
<td>(13.0)</td>
<td>(2.7)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>US</td>
<td>(2.1)</td>
<td>(0.2)</td>
<td>(1.6)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Global activities</td>
<td>(0.9)</td>
<td>0.0</td>
<td>(0.2)</td>
<td>(0.7)</td>
<td>0.0</td>
</tr>
</tbody>
</table>

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.

- **Crisis 11S**: 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 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.

- **Sovereign crisis**: the severest historic scenario by the Committee of European Banking Supervisors (CEBS) to measure the market’s shock capacity between 15 April and 1 September 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.

Every month a consolidated stress test report is drawn up with explanations of the main changes in results for the various scenarios and units supervised by the global committee of market risks. An early warning mechanism has also been established so than when the loss of a scenario is high in historic terms and/or the capital consumed by the portfolio in question, the business executive is informed.
Here we show the results of the global scenarios for 2011 and 2012.

**STRESS TEST RESULTS: COMPARISON OF THE 2011 AND 2012 (ANNUAL AVERAGES)**

<table>
<thead>
<tr>
<th>Million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>-100</td>
</tr>
<tr>
<td>-300</td>
</tr>
<tr>
<td>-500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Worst case</th>
<th>Abrupt case</th>
<th>115.1 historic</th>
<th>115.2 historic</th>
<th>07-08 crisis 1d</th>
<th>07-08 crisis 10d</th>
<th>Sovereign crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Below are the parts of the balance sheet of the Group’s consolidated position that are subject to market risk, showing the positions whose main risk metric is the VaR and where monitoring is also carried out with other metrics.

| RELATION OF RISK METRICS TO BALANCE SHEET OF GROUP’S CONSOLIDATED POSITION |
|-----------------------------|-----------------------------|-----------------------------|
| Million euros               | Balance | VaR   | Others | Main risk factor for balance in “others” |
| Assets subject to market risk | 310,929 | 204,668 | 106,261 | Interest rate, credit spread |
| Trading portfolios          | 177,917 | 176,781 | 1,136 | Interest rate, credit spread |
| Other financial assets at reasonable value | 28,356 | 27,887 | 469 | Interest rate, credit spread |
| Financial assets available for sale | 92,266 | - | 92,266 | Interest rate, equities |
| Equities                    | 4,454 | - | 4,454 | Equity stakes |
| Hedging derivatives         | 7,936 | - | 7,936 | Interest rate, exchange rate |
| Liabilities subject to market risk | 195,104 | 194,754 | 621 | Interest rate, credit spread |
| Trading portfolio           | 143,242 | 143,242 | 271 | Interest rate, credit spread |
| Other financial liabilities at reasonable value | 45,418 | 45,068 | 350 | Interest rate, credit spread |
| Hedging derivatives         | 6,444 | 6,444 | - | |

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

In the case of the trading portfolio, the securitisations and “level III” exposures (those in which not observable market data constitutes 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, recovery rate, etc). For “level III” exposures, which are not very significant in Santander (basically derivatives linked to the home price index (HPI) in the activity of markets in Santander UK, and the not very significant portfolio of illiquid CDOs in the activity of markets of the parent bank), 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.
6.2.2. Structural market risks

6.2.2.1. Structural interest rate

6.2.2.1.1. Europe and the United States

Generally, in these mature markets and in a context of low interest rates, the general positioning has been to maintain balance sheets with positive sensitivity to interest rate rises, both for the net interest margin (NIM) as well as for the economic value (market value of equity, MVE).

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

At the end of 2012, the sensitivity of the NIM at one year to parallel rises of 100 basis points was concentrated in the euro interest rate curve, the US dollar and sterling, with the parent bank, the US subsidiary and Santander UK the units that contributed the most (EUR 183 million, $60 million and £14 million, respectively). Also important in the euro interest rate curve is the contribution of the risk of Banesto and Santander Consumer Finance. The sensitivity of the margin to the rest of convertible currencies is not significant.

At the same date, the main sensitivity of equity to parallel rises in the yield curve of 100 basis points was in the euro interest rate curve in the parent bank (EUR 527 million). As regards the dollar and sterling curves, the amounts were $297 million and £215 million, respectively).

6.2.2.1.2. Latin America

Due to differences in the macroeconomic context and the degree of maturity of these markets, the positioning with regard to the NIM was not homogeneous. There are countries with balance sheets positioned for interest rate rises and others for interest rate falls.

With regard to MVE, the general positioning of the balance sheets was such that the average duration of the asset was higher than that of the liability (negative sensitivity to interest rate rises).

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

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17 Includes the entire balance sheet except for the trading portfolios.
18 Betas are used to aggregate the sensitivities of different curves.
19 Betas are used to aggregate the sensitivities of different curves.
At the end of December 2012, risk consumption for the region, measured to 100 b.p. of asset value, was EUR 916 million (EUR 957 million at December 2011). Over 95% of the asset value risk was concentrated in the same three countries: Brazil, Chile y Mexico.

**MVE SENSITIVITY BY COUNTRIES TO 100 B.P.**

<table>
<thead>
<tr>
<th>Country</th>
<th>% of the total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>63.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>16.1%</td>
</tr>
<tr>
<td>Chile</td>
<td>16.7%</td>
</tr>
<tr>
<td>Other</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

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

The gap tables show the risk maturity structure in Latin America at the end of 2012.

**LATIN AMERICA: REPRICING GAP OF INTEREST RATES* (31 DECEMBER 2012)**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>3 months</th>
<th>6 months</th>
<th>1 year</th>
<th>3 years</th>
<th>5 years</th>
<th>&gt;5 years</th>
<th>Non sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td>335,544</td>
<td>110,329</td>
<td>28,284</td>
<td>28,334</td>
<td>55,765</td>
<td>19,476</td>
<td>24,093</td>
<td>69,263</td>
</tr>
<tr>
<td>Local currency</td>
<td>295,569</td>
<td>89,498</td>
<td>22,386</td>
<td>25,453</td>
<td>51,589</td>
<td>17,566</td>
<td>21,242</td>
<td>67,836</td>
</tr>
<tr>
<td>Dollar</td>
<td>39,975</td>
<td>20,832</td>
<td>5,898</td>
<td>2,881</td>
<td>4,175</td>
<td>1,910</td>
<td>2,850</td>
<td>1,428</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td>335,544</td>
<td>157,545</td>
<td>6,767</td>
<td>20,145</td>
<td>41,762</td>
<td>7,855</td>
<td>7,661</td>
<td>93,808</td>
</tr>
<tr>
<td>Local currency</td>
<td>293,407</td>
<td>139,213</td>
<td>3,695</td>
<td>15,495</td>
<td>37,005</td>
<td>2,933</td>
<td>3,751</td>
<td>91,315</td>
</tr>
<tr>
<td>Dollar</td>
<td>42,137</td>
<td>18,332</td>
<td>3,073</td>
<td>4,650</td>
<td>4,758</td>
<td>4,922</td>
<td>3,910</td>
<td>2,493</td>
</tr>
<tr>
<td><strong>Off-balance sheet</strong></td>
<td>0</td>
<td>5,814</td>
<td>1,025</td>
<td>758</td>
<td>(3,482)</td>
<td>(3,447)</td>
<td>(1,524)</td>
<td>856</td>
</tr>
<tr>
<td><strong>Gap</strong></td>
<td>0</td>
<td>(41,402)</td>
<td>22,542</td>
<td>8,948</td>
<td>10,520</td>
<td>8,174</td>
<td>14,908</td>
<td>(23,689)</td>
</tr>
</tbody>
</table>

* Aggregate gap of all currencies in the balance sheets of Latin American units, expressed in euros.
6.2.1.3. Structural interest rate VaR of the balance sheet
As well as sensitivity to interest rate movements, 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.

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

<table>
<thead>
<tr>
<th>BALANCE SHEET STRUCTURAL INTEREST RATE RISK (VaR)</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Average</td>
<td>Maximum</td>
</tr>
<tr>
<td>Structural interest rate risk (VaR)*</td>
<td>361.7</td>
<td>446.4</td>
<td>525.7</td>
</tr>
<tr>
<td>Diversification impact</td>
<td>(78.1)</td>
<td>(124.4)</td>
<td>(168.1)</td>
</tr>
<tr>
<td>Europe and US</td>
<td>334.4</td>
<td>451.4</td>
<td>560.8</td>
</tr>
<tr>
<td>Latin America</td>
<td>105.5</td>
<td>119.5</td>
<td>133.0</td>
</tr>
</tbody>
</table>

* Includes VaR by credit spread in the ALCO portfolios.

The structural interest rate risk, measured in VaR terms at one day and at 99%, was an average of EUR 446.4 million in 2012. The contribution to it of the balances of Europe and the US was greater than that of Latin America. Of note was the high diversification between both areas.

6.2.2. 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 hedging of these investments.

This management is dynamic and seeks to limit the impact on equity of currency depreciations and optimise the financial cost of hedging.

As regards the exchange rate risk of permanent investments, the general policy is to finance them in the currency of the investment provided the depth of the market allows it and the cost is justified by the expected depreciation. One-off hedging is also done when a local currency could weaken against the euro beyond what the market estimates.

At the end of 2012, the largest exposures of a permanent nature (with potential impact on equity value) were concentrated 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.
6.2.2.3. 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.

These 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 2012, the VaR at 99% with a one day time frame was EUR 281.4 million (EUR 305.7 million and EUR 218.5 million at the end of 2011 and 2012, respectively).

6.2.2.4. Balance sheet market risk
With a homogeneous metric such as the VaR, the total market risk in the banking book can be monitored, distinguishing between fixed income (both interest rate as well the credit spread for the ALCO portfolios), exchange rate and equities.

The total VaR is not high in terms of the Group's volume of assets or equity. It has declined over the last few years due to the reduction in exchange rate risk and structural equity risk.

### VaR of the balance sheet excluding trading activity
VaR at 99%, with a time frame of one day. Million euros

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th></th>
<th>2011</th>
<th></th>
<th>2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Average</td>
<td>Maximum</td>
<td>Year-end</td>
<td>Average</td>
<td>Year-end</td>
</tr>
<tr>
<td>Non-trading VaR</td>
<td>454.8</td>
<td>593.1</td>
<td>659</td>
<td>659</td>
<td>460.4</td>
<td>534.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversification effect</td>
<td>(355.5)</td>
<td>(390.7)</td>
<td>(561.9)</td>
<td>(347.1)</td>
<td>(419.4)</td>
<td>(446.2)</td>
</tr>
<tr>
<td>Interest rate VaR*</td>
<td>361.7</td>
<td>446.4</td>
<td>525.7</td>
<td>517.5</td>
<td>273.1</td>
<td>328.1</td>
</tr>
<tr>
<td>Exchange rate VaR</td>
<td>182.8</td>
<td>237.0</td>
<td>340.1</td>
<td>207.3</td>
<td>372.7</td>
<td>346.8</td>
</tr>
<tr>
<td>Equity VaR</td>
<td>265.7</td>
<td>300.4</td>
<td>355.0</td>
<td>281.4</td>
<td>234.0</td>
<td>305.7</td>
</tr>
</tbody>
</table>

* Includes VaR by credit spread in the ALCO portfolios.
6.3. Methodologies

6.3.1. Trading activity

6.3.1.1. VaR

The standard methodology that Grupo Santander applied to trading activities during 2012 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. 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 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 suppositions of formal functions nor of correlations between market factors, etc.), but also has limitations. The most important ones are the high sensitivity to the historic window used, the incapacity to capture large impact possible events if they do not occur in the window used, the existence of valuation parameters which do not have market input (such as correlations, dividends and recovery rate) and the slow adjustment to 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 (see later) and calculating the VaR with exponential decay and applying conservative valuation adjustments.

6.3.1.2. Analysis of scenarios

The VaR is not the only measurement. It is used because of its calculation facility and for being a good benchmark of the Group’s risk level, but other measures are also employed which allow for greater control of risks in all the markets where the Group operates.

Among these measures is analysis of scenarios, which consists of defining alternatives for the performance of different financial variables and obtain the impact on results by applying them to activities. These scenarios can replicate events that happened in the past (crisis) or determine possible alternatives that do not correspond to past events.

The potential impact on results of applying different stress scenarios to all the trading portfolios and considering the same suppositions by risk factor is calculated and analysed at least monthly. Three types of scenario are defined: possible, severe and extreme, obtaining along 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 by the global committee of market risks so that, if required, senior management is informed.

6.3.1.3. Analysis of positions, sensitivities and results

The market risk area, in line with the principle of independence of the business units, monitors the positions daily, both those of each unit as well as globally, and conducts an exhaustive control of the changes in the portfolios in order to detect possible incidents so that they can be corrected immediately.

The positions are traditionally used to quantify the net volume of the market values of the transactions in portfolio, grouped by main risk factor, and 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 of homogenising information.

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

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

6.3.1.4. Credit management activity

Control of derivative activities and credit management should also be mentioned. This control, because of its atypical nature, is conducted daily according to specific measures. In the case of derivative activities, sensitivity to the price movements of the underlying asset (delta and gamma), volatility (vega) and time (theta) is controlled. In the case of credit management, measures such as the spread sensitivity, jump-to-default, and concentration of positions by rating levels, etc., are systematically reviewed.
As regards the credit risk inherent in trading portfolios and in line with the recommendations of the Basel Committee on Banking Supervision and prevailing regulations, an additional measurement began to be calculated (incremental risk charge, IRC), in order to cover the risk of default and rating migration that is not adequately captured in the VaR, via changes in credit spreads. The controlled products are basically fixed-rate bonds, both public and private sector, 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 of the tails of the distribution of losses to the appropriate percentile (99.9%). The Monte Carlo methodology is used, applying a million simulations.

6.3.1.5. Other measures: stressed VaR (sVaR) and expected shortfall
As well as the usual VaR, Santander began to calculate stressed VaR every day, as of October 2011, 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 figures, instead of one of 520 for the VaR.
- 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.

All the other aspects regarding the methodology and the inputs for calculating the stressed VaR are the same as those for the VaR. 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 taking into account the most relevant positions of the books.

Moreover, the expected shortfall (ES) has begun to be 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.

6.3.2. Structural market risks
6.3.2.1. 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, Value at Risk (VaR), for the purposes of calculating economic capital.

6.3.2.1.1. Interest rate gap of assets and liabilities
Interest rate gap analysis focuses on lags or mismatches between changes in the value of asset, liability and 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 maturities. It is also a useful tool for estimating the impact of eventual interest rate movements on net interest margin or 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.

6.3.2.1.2. 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.

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20 The Basel Committee published in May 2012 a consultative document, "Fundamental review of the trading book", which, among other things, recommends the use of the expected shortfall as the main metric for measuring the market risk of trading activity.
6.3.2.1.3. 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 the equity value on the basis of the impact of a change in interest rates on the current values of financial assets and liabilities.

6.3.2.1.4. 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.

The 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 customer (in this case analysis of historic data is combined with the expert business view).
• Market data.
• Historic data of the portfolio.

6.3.2.1.5. 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 which seek to capture the pre-payment performance. Some of the factors 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;
• 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.

6.3.2.1.6. 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.

6.3.2.2. Structural exchange rate risk/hedging of results
These activities are monitored via position measurements, VaR and results, on a daily basis.

6.3.2.3. Structural equity risk
These activities are monitored via position measurements, VaR and results, on a monthly basis.
6.4. Management framework

6.4.1. Organisational and governance structure

The market and structural risks area is integrated into one of the Group’s two general risk directorates. The missions of the market risk function are:

- To define and supervise the market risk management model, which includes corporate policies, defining the risks map and segmentation criteria.
- Control and manage the consolidation, reporting and centralised admission process of market risks.

These missions rest on five basic pillars, vital for correct management of market risks:

- Measurement, analysis and control of market and liquidity risks.
- Calculation, analysis, explanation and conciliation of results.
- Defining, capturing, validating and distributing market data.
- Admission of limits, products and underlying assets.
- Consolidation of information.

In turn, market risks management is guided by the following basic principles:

- Involvement of senior management.
- Independence of the risk function from business.
- Clear definition of powers.
- Risk measurement.
- Limiting risks.
- Analysis and control of risk positions.
- Establishing risk policies and procedures.
- Assessing risk methodologies.

For the correct functioning of global policies and local execution, the global area of market risks and local units carry out different functions:

- Global market risk:
  - Establish, propose and document risk policies and criteria, the global limits and the decision-making and control processes.
  - Generate management frameworks, systems and tools.
  - Promote and support their implementation and ensure they function effectively in all units.
  - Know, assimilate and adapt the best practices inside and outside the Group.
  - Promote activity for obtaining results.
  - Consolidate, analyse and control the market risk incurred by all units of the perimeter.

- Local market risk units:
  - Manage risks.
  - Transfer, adapt and assume internally the corporate policies and procedures through local approval.
  - Define and document policies and lead local sphere projects.
  - Apply policies and decision-making systems to each market.
  - Adapt the organisation and management frameworks and corporate rules.
  - Contribute critical and best practices, as well as local knowledge and proximity to customers/markets.
  - Assume greater responsibilities in decisions, control and management of risks.
  - Measure, analyse and control market risk within the sphere of responsibility.

In the same way that the market risks function is structured at the corporate or global level, each local market risk unit has and arranges its functions, with the adjustments that arise in accordance with its specific business, operational and legal requirement features, etc.
The committees, by hierarchical order, which have powers in decision-making, control and monitoring of market risks are set out above.

The collegiate organ of the market risks area is the global market risk committee (GMRC). This committee is responsible for the functioning of market risk in Grupo Santander, both at the centralised level (global areas) and local level (local units). It gets its powers directly from the risk committee, the maximum organ responsible for the risks function in Grupo Santander.

### 6.4.2. 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 2.3 of this report). This process is part of the annual limits plan, which is drawn up by the Group’s senior management and administered by the general directorate of risks in a way that involves all the Group’s institutions.

#### 6.4.2.1. Definition of limits

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:

- **Trading limits:**
  - 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 already 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.**

**Structural interest rate risk of the balance sheet:**

- Sensitivity limit of net interest margin at 1 year.

- Sensitivity limit of equity value.

**Structural exchange rate risk:**

- Net position in each currency (for positions of hedging results).

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.

6.4.2.2. Structure of limits

The table below shows the levels of applying limits, the categories and the sphere of control in which they are classified and their levels of approval.

<table>
<thead>
<tr>
<th>Levels Activity / Unity</th>
<th>Category/Control</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global/Global control</td>
<td>Risk Committee</td>
<td></td>
</tr>
<tr>
<td>Global/Local control</td>
<td>Global Market Risk Committee</td>
<td></td>
</tr>
<tr>
<td>Local/Local control</td>
<td>Local market risks</td>
<td></td>
</tr>
</tbody>
</table>

- Global limits of global control: The Risks Committee approves the limits at the activity/unit level in the annual process of setting limits. Changes that are subsequently made can be approved by the Global Market Risk Committee, in accordance with the powers delegated in it.

These limits are requested by the relevant business executive in each country/entity on the basis of the nature of the business and the budget established, seeking consistency between limits and the return/risk ratio.

- Global limits of local control: On the basis of the local features of products, and of the internal organisation of business, sub-limits are set for the aforementioned activities in order to exercise greater control of the positions maintained in each business. Sub-limits are set by risk factor, currency positions, equity positions, sensitivity by currencies and maturities, vega by maturities, etc.

6.4.2.3. Compliance and control of limits

Business units must comply with the approved limits. The possible excesses trigger a series of actions by the local and global market risk areas, risk management committees or the Risks Committee in order to reduce the risk levels and control them more strictly or execute actions, which can make the risk takers reduce the risks levels assumed.

The local executives for market risk notify the excesses to the business executives. These have to explain the reasons for the excess and, where appropriate, provide the plan of action to correct the situation. The business executive must respond, in writing and on the day, to the requirement made. The alternatives are to reduce the position to the prevailing limits or set out the strategy that justifies an increase in the limits.

If the excess situation continues without a response by the business unit for three days, the market risks area contacts the relevant global business executives and informs them of this, and requests adjustment measures be taken. If this situation persists 10 days after the first excess, the market risks area will contact senior risk management so that a decision can be taken.

6.5. Internal model

Grupo Santander had, at the end of 2011, approval from the Bank of Spain for its internal market risk model for calculating regulatory capital in the trading portfolios of units in Spain, Chile, Mexico and Portugal. The Group’s objective is to gradually increase approval to the rest of units.

The regulatory capital consolidated by the internal model of market risks for Grupo Santander is obtained by adding the regulatory capital of each of the units for which there is the corresponding Bank of Spain approval. A conservative criterion is used for consolidating the Group’s capital, as it does not take into account the savings in capital derived from the diversification impact among various countries.

As a result of this approval, the regulatory capital of trading activity for the commented perimeter is calculated via advanced methods, using VaR as the fundamental metric, the stressed VaR and the incremental risk charge (IRC), in line with the new capital requirements demanded by the Basel agreements.

We closely co-operate with the Bank of Spain in order to advance in the perimeter susceptible of entering into the internal model (at the geographic and operational levels), as well as in analysis of the impact of new requirements, in line with the documents published by the Basel Committee to strengthen the capital of banks.
7. LIQUIDITY RISK AND FUNDING

7.0. Structure of this section

After an introduction to the liquidity risk concept and funding in Grupo Santander (pages 226-227), we present the liquidity management framework set by the Group, including monitoring and control of liquidity risk (pages 227-230).

We then look at the funding strategy for the Group and its subsidiaries over the last three years (pages 231-233), with particular attention to the liquidity evolution in 2012. The evolution of the liquidity management ratios in 2012 and business and market trends that gave rise to it are shown on pages 233-236.

The section ends with a qualitative description of the prospects for funding in 2013 for the Group and its main countries (page 236).

7.1. Introduction to the treatment of liquidity risk and funding

- Santander 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 business model in order to maintain comfortable liquidity positions at Group level.

- In the last few years, it has been necessary to adapt the funding strategies to the new commercial business trends and the markets’ conditions.

- In 2012, and in a very demanding environment, the Group strengthened its liquidity situation and that of its subsidiaries, enabling it to tackle 2013 from a good starting point.

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.

Relegated during the expansion period to a second level importance, liquidity has recovered its importance in the last few years because of the rising 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 its 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.

This better position for the whole Group has been supported by a decentralised funding model consisting of autonomous subsidiaries and 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 the Group and of other areas, as could happen in the case of a centralised funding model.

This funding structure also benefits from the opportunities of a solid retail banking model: with a significant presence (market shares of around 10% or more) in 10 high potential markets, 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.
At the end of 2012, the Group’s large management units, from the standpoint of funding, were self-financing except for Santander Consumer Finance because of the nature of its business. The main balance sheet items were as follows:

**MAIN UNITS AND BALANCE SHEET ITEMS**
December 2012. EUR billion

<table>
<thead>
<tr>
<th>Total assets</th>
<th>Net loans</th>
<th>Customer deposits*</th>
<th>M/LT funding**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>356.1</td>
<td>194.2</td>
<td>201.9</td>
</tr>
<tr>
<td>SCF</td>
<td>74.0</td>
<td>56.7</td>
<td>31.9</td>
</tr>
<tr>
<td>Portugal</td>
<td>42.2</td>
<td>26.0</td>
<td>24.0</td>
</tr>
<tr>
<td>Poland- BZ</td>
<td>14.9</td>
<td>9.7</td>
<td>11.2</td>
</tr>
<tr>
<td>UK</td>
<td>359.7</td>
<td>250.5</td>
<td>194.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>148.7</td>
<td>74.5</td>
<td>69.8</td>
</tr>
<tr>
<td>Mexico</td>
<td>46.9</td>
<td>20.4</td>
<td>24.7</td>
</tr>
<tr>
<td>Chile</td>
<td>40.7</td>
<td>29.7</td>
<td>22.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>8.3</td>
<td>5.2</td>
<td>6.3</td>
</tr>
<tr>
<td>US</td>
<td>62.9</td>
<td>41.3</td>
<td>38.1</td>
</tr>
<tr>
<td><strong>Total Group</strong></td>
<td><strong>1,269.6</strong></td>
<td><strong>720.5</strong></td>
<td><strong>638.2</strong></td>
</tr>
</tbody>
</table>

* Includes retail commercial paper in Spain.
** M/L term issues in the market, securitisations and other secured financing in markets, and funds borrowed from FHLB lines. All of them for their nominal value.

Santander’s management of funding and liquidity risk, both theoretical and practical, is set out in the following sections:

- Liquidity management framework – monitoring and control of liquidity risk.
- Funding strategy and evolution of liquidity in 2012.
- Outlook for 2013.

**7.2. 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 term and cost, avoiding the assumption of undesired liquidity risks.

**Santander’s liquidity management** is based on the following principles:

- Decentralised 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 short-term funding.
- Availability of a sufficient liquidity reserve, which includes the discount capacity in central banks to be used in adverse situations.

The effective application of these principles by all the entities that comprise the Group required development of a unique management framework built around three essential pillars:

- A solid organisational 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.

**7.2.1. Organisational model and governance**

Decision-taking process regarding structural risks, including liquidity risk, is carried out by local asset and liability committees (ALCOs) in coordination with the markets committee.

The markets committee is the main body at Group levels, which coordinates and supervises all the global decisions that influence measurement, management and control of liquidity risk. It is headed by the chairman of the bank and comprises the 2nd vice-chairman and chief executive officer, the 3rd vice-chairman (who is, in turn, the chairman of the delegated risk committee), the chief financial officer and the senior vice-chairman for risk and those responsible for the business and analysis units.
In line with these principles, the local ALCO set the strategies that ensure and/or anticipate the funding needs of their business. They are supported by the financial management and market risk areas, which present analysis and proposals for a correct management and control compliance with the limits set.

In line with best governance practices, the Group establishes a clear division between executing the financial management strategy (the responsibility of the financial management area) and monitoring and control (the responsibility of market risks).

7.2.2. Balance sheet analysis and measurement of liquidity risk

Taking decisions on funding and liquidity is based on a deep understanding of the Group’s current situation (environment, strategy, balance sheet and liquidity position), of future liquidity needs generated from businesses (projection of liquidity), as well as from expected access to and current 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 sources of funding, 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 stress tests are also conducted taking into account the additional needs that could arise from various extreme, although possible, events. These could affect the various items of the balance sheet and/or sources of financing differently (degree of renewal of wholesale financing, deposit outflows, deterioration in the value of liquid assets, etc.), whether for global market reasons or specific ones of the Group.

The inputs for drawing up the various contingency plans for the Group are obtained from the results of the analysis of balance sheets, forecasts and scenarios which, in turn, enable a whole spectrum of potentially adverse circumstances to be anticipated.
All these actions are in line with the practices being fostered by the Basel Committee in order to strengthen the liquidity of banks, whose objective is to define a framework of principles and metrics that is still under observation.

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 objectives of the Group’s liquidity risk measures are:

- To achieve greater efficiency in measuring and controlling liquidity risk.
- To support financial management, for which the measures are adapted to the form of managing the Group’s liquidity.
- Alignment with BIS III to avoid “conflicts” between different limits and facilitate their management.
- Be 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 the analysis and adaptation of each unit is needed.

There are two types of basic metrics used to control liquidity risk: dynamic and static ones. 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 contractual and estimated (by hypothesis) cash inflows and outflows for a certain period of time, for each of the main 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 homogenise the building of liquidity risk profiles for each unit as well as be presented in a comparable way to the bank’s senior management.

In the Group’s case, a consolidated look at the liquidity gaps is of very limited use for managing and understanding liquidity risk. This use is even more reduced if the gaps result from the use of contractual maturities.

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, in a scenario in which wholesale funding is not renewed at its 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 2012, this wholesale liquidity gap is closely monitored in the parent bank and in the euro zone units.

At the end of 2012, 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 financing structure of the balance sheet. The Group’s criterion is to ensure that the structural needs (customer loans, fixed assets, etc.) are covered by an adequate combination of wholesale funding sources and a stable base of retail deposits.

Each unit draws up its liquidity balance sheet in accordance with the features of their businesses and compare 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) by classifying the various asset and liability items and off-balance sheet ones on the basis of their nature for the purposes of liquidity. This determines the financing structure that must comply 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 a sound financial structure and the sustainability of business plans.

At the end of 2012, the Group had a structural liquidity surplus of EUR 157,000 million following improvements in the main units.

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 in each 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: systemic, idiosyncratic and hybrid. These 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 a 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 tensions suffered by countries on the periphery of the euro zone.

- **A systemic crisis is an attack by the international financial markets on the country where the local 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 has. 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 whose market value would be significantly reduced.**

- **Hybrid 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.**

These metrics and scenarios are directly linked to the process of drawing up and executing the liquidity contingency plan by the financial management area.

**At the end of 2012**, and in a scenario of a potential systemic crisis affecting the wholesale funding of units in Spain, Grupo Santander had an appropriate liquidity position. The wholesale liquidity metric horizon in Spain (included within the liquidity gap measures) showed levels of more than 90 days during which the liquidity reserve would cover all the maturities of wholesale financing.

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 in daily warning 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 level of CDS, the evolution of deposits from customers and the interest rate trend of central banks.

**7.2.3. Management adapted to business needs**

In practice, and in line with the financing principles set out, Grupo Santander's liquidity management 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, an issuance and securitisation plan for the year for each subsidiary/global business is established by the financial management area.**

- **Monitor during the year the evolution of the balance sheet and of the financing needs of the subsidiaries/businesses, which gives rise to updating the plan.**

- **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 is based on implementation in all subsidiaries. Each subsidiary budgets the liquidity needs based on its 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.

The Group’s main subsidiaries are self-sufficient as regards their structural financing. The exception is Santander Consumer Finance 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 financing is always done at market prices on the basis of the maturity term and the internal rating of the borrower.

In any case, the parent bank's support for Santander Consumer Finance has been reduced to less than a third in the last three years (from EUR 15,000 million in 2009 to around EUR 4,500 million). The developments underway to attain self-financing levels similar to those of the rest of the subsidiaries, through recourse to retail clients as well as wholesale funding, are successfully covering their phases and will be completed in the short term.

**7.3. Financing strategy and evolution of liquidity in 2012**

**7.3.1. Funding strategy**

Santander’s financing activity over the last few years has achieved its objective of adequately funding the Group’s recurring activity in a very demanding environment characterised by a greater perception of risk, scarce liquidity in certain maturity terms and their higher cost.

This good performance was supported by extending the management model to all the Group’s subsidiaries, including new ones, and, on top of that, adapting the subsidiaries’ strategy to the increasing requirements of markets. These requirements have not been the same for all markets and have attained 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 **in the last three years**. They are the following:

- **Lower growth in lending because of the environment, particularly in countries such as Spain and Portugal**
undergoing adjustments. On the other hand, growth in emerging markets (Latin America) and in units and businesses under development (US, Germany, Poland and UK SMEs).

Group loans excluding repos increased by around EUR 40,000 million since the end of 2009 (+6%), including those by new units incorporated to the Group (Poland and Germany).

- **Priority focus on capturing customer funds.** Group deposits excluding repos but including retail paper rose by EUR 122,000 million (+26%), a growth three times more than that of lending.

All countries increased deposits, particularly those units that grew the most in lending and those under higher stress from the markets. Among the first group are Brazil, Mexico and Chile with a combined rise in deposits of 31% in local currency, and among the second Spain and Portugal whose deposits grew by 33% in the last three years.

- **Maintain adequate and stable levels of medium and long term wholesale funding** at the Group level (22% of balance sheet for liquidity management purpose at the end of 2012 vs. 23% in 2009). The decentralised model for subsidiaries helped to maintain a high level of activity in wholesale markets in a more demanding period.

Of note was the greater activity in the UK resulting from the change in regulatory conditions, and of the main Latin American countries (Brazil, Mexico and Chile) because of their strong growth in lending.

In Europe, the securitisation activity of Santander Consumer Finance was extended to new markets such as Finland, Sweden and Norway, converting their units into pioneers in securitisation of auto finance. Also noteworthy was the incorporation in 2012 of SHUSA, Santander Group’s holding in the US, to the pool of the Group’s significant issuers.

Lastly, in Spain, where business required reduced liquidity needs in the last three years, the Group maintained a conservative issuance policy (EUR 54,000 million of medium and long term debt in 2010-2012, close to 80% of maturities and amortisations), taking advantage of the strength of the Santander brand and credit quality.

- **Ensure a sufficient volume of assets eligible for discount in central banks and other public institutions** as part of the liquidity reserve (as set out in page 235 of this report) to meet stress situations in wholesale markets.

The Group increased its total discounting capacity in 2012 to around EUR 130,000 million (close to EUR 100,000 million in 2010 and 2011). This required from the subsidiaries a continuous strategy to generate assets eligible for discount in order to compensate for the reduction in the value of guarantees as a result of downgrading of ratings in the period, particularly of sovereign debt and related assets.

A large part of this total discounting capacity was generated by the units in the euro zone. These benefited from the quality of their assets and from the extraordinary monetary policy measures implemented by the European Central Bank (ECB) at the end of 2011 and the beginning of 2012 (basically, widening of collateral and three-year liquidity auctions) in order to boost its liquidity buffer notably.

At the end of 2012, Santander had a total volume eligible for discounting that comfortably exceeded the commercial gap (i.e. the difference between net loans and deposits) at Group level. It represents more than 160% of the gap after the dynamics of the aforementioned volumes, which were developed more intensely in 2012.

During 2012, and faced with the situation in the euro markets, Santander followed a prudent policy of depositing in the same central banks included in the Eurosystem most of the funds raised from them, as an immediate liquidity reserve, making its global net position virtually zero.

In January 2013, the improvement in the Group’s liquidity position and that of the units in Spain, combined with an easing in the wholesale funding markets, led Santander to return all of the funds taken by Banco Santander and
Banesto in the first auction of Long Term Refinancing Operations (LTROs) conducted by the ECB in December 2011. Santander returned EUR 24,000 million deposited in the Eurosystem central banks, the maximum allowed in the first repayment window offered by the ECB.

All these developments made on the foundations of a solid liquidity management model made it possible for Santander to enjoy a very robust financing structure that sets it apart from most of its international peers. 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 financing. Including retail commercial paper (given its role as replacing time deposits in Spain), they accounted for around two-thirds of the Group’s funding and 89% of net loans at the end of 2012.

They are also very stable funds given their retail origin (more than 85% of the deposits come from retail banking).

- Diversified wholesale funding focused on the medium and long term and with a very small relative share of short term.

Medium and long term funding accounts for less than one quarter of the Group’s funding and comfortably covers the rest of net loans not financed by customer deposits (commercial gap).

This funding is well balanced by instruments (approximately 1/3 senior debt, 1/3 covered bonds, 1/3 securitisations and the rest) and also by markets so that those with the highest shares in issues are those where investor activity is the strongest.

The charts showing the geographic distribution of gross loans and of medium and long term funding are shown below so that their similarity can be appreciated.

The bulk of medium and long term wholesale funding consists of debt issues. Their outstanding balance at the end of 2012 was EUR 153,000 million nominal, with an average maturity of 3.8 years and an appropriate distribution profile.
The distribution by instruments, the evolution over the last three years and their maturity profile were as follows:

### MEDIUM AND LONG TERM DEBT ISSUES, GRUPO SANTANDER

#### Million euros

<table>
<thead>
<tr>
<th>Instrument</th>
<th>December 2012</th>
<th>December 2011</th>
<th>December 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred shares</td>
<td>4,765</td>
<td>5,657</td>
<td>7,525</td>
</tr>
<tr>
<td>Subordinated debt</td>
<td>11,004</td>
<td>14,184</td>
<td>20,633</td>
</tr>
<tr>
<td>Senior debt</td>
<td>69,916</td>
<td>73,693</td>
<td>63,519</td>
</tr>
<tr>
<td>Covered bonds</td>
<td>67,468</td>
<td>68,240</td>
<td>62,974</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>153,152</strong></td>
<td><strong>161,774</strong></td>
<td><strong>154,651</strong></td>
</tr>
</tbody>
</table>

#### Distribution by maturity, December 2012*

<table>
<thead>
<tr>
<th>Maturity</th>
<th>0-1 month</th>
<th>1-3 months</th>
<th>3-6 months</th>
<th>6-9 months</th>
<th>9-12 months</th>
<th>12-24 months</th>
<th>2-5 years</th>
<th>Over 5 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred shares</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4,765</td>
<td>4,765</td>
</tr>
<tr>
<td>Subordinated debt</td>
<td>0</td>
<td>194</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>227</td>
<td>4,824</td>
<td>5,759</td>
<td>11,004</td>
</tr>
<tr>
<td>Senior debt</td>
<td>4,533</td>
<td>6,436</td>
<td>6,840</td>
<td>4,297</td>
<td>4,389</td>
<td>15,438</td>
<td>23,368</td>
<td>4,615</td>
<td>69,916</td>
</tr>
<tr>
<td>Covered bonds</td>
<td>0</td>
<td>2,808</td>
<td>3,551</td>
<td>4,696</td>
<td>300</td>
<td>11,267</td>
<td>29,811</td>
<td>15,035</td>
<td>67,468</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,533</strong></td>
<td><strong>9,437</strong></td>
<td><strong>10,391</strong></td>
<td><strong>8,993</strong></td>
<td><strong>4,689</strong></td>
<td><strong>26,932</strong></td>
<td><strong>58,003</strong></td>
<td><strong>30,174</strong></td>
<td><strong>153,152</strong></td>
</tr>
</tbody>
</table>

* 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 (EUR 10,000 million at the end of 2012) and by funds obtained from securitisation activities. The latter includes securitisation bonds placed in the market, other collateralised financing and other special ones for a total amount of EUR 50,000 million and an average maturity of around 2.5 years, which compares well with market standards.

The **wholesale funding of short term issuance programmes** is a marginal part of the structure as it accounts for less than 2% of financing (excluding the aforementioned retail commercial paper) and is well covered by liquid financial assets.

The outstanding balance at the end of 2012 was EUR 17,000 million, mainly raised by the UK unit and the parent bank through existing issuance programmes: various programmes of CDs and commercial paper of the UK (60%), European commercial paper and US commercial paper of the parent bank (25%), and from other units (15%).

In short, Santander enjoys a **very solid and robust financing structure** based on an essentially retail banking balance sheet that enables the Group 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.

This robustness at the Group level is also distinctive of the balance sheets of the countries in which we operate and of the main subsidiaries, except for Santander Consumer Finance. The commercial gap of these subsidiaries is amply covered by issues and medium and long term financing, the recourse to short-term funds is very small and, as a result, there is a structural liquidity surplus.

### 7.3.2. Evolution of liquidity in 2012

- **Further improvement in liquidity ratios (Group LTD: 113%)**, backed by deleveraging in key markets and by issuance of the main subsidiaries (EUR 43,000 million of medium and long term issues and securitisations).
- **Strengthened position with a high liquidity reserve (EUR 217,000 million).**
- **Facing 2013 from a comfortable position enabled the repayment of the EUR 24,000 million borrowed from the ECB** (100% of funds borrowed by Banco Santander and Banesto in the first LTROs auction).

From the funding standpoint, 2012 was the most demanding of the last few years. The intensified Greek crisis and doubts on the euro’s survival sharply pushed up the risk premiums of the sovereign debt of many European countries to their highest levels since the creation of the single currency. This tension led to the narrowing of wholesale markets for most of the year, particularly in countries on the periphery, with reduced issuing “windows” at the start and the end of the year only for the best credit quality companies. This issuance difficulty increased the appetite for retail deposits even further; they had already been the object of strong competition in most European markets.
In this context Santander managed to improve its liquidity position as reflected in two basic aspects:

1. Improvement in basic liquidity ratios

The table shows the evolution in the last few years of the basic metrics for monitoring liquidity at the Group level:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net loans/net assets*</td>
<td>74%</td>
<td>77%</td>
<td>75%</td>
<td>79%</td>
<td>79%</td>
</tr>
<tr>
<td>Net loan-to-deposit ratio</td>
<td>113%</td>
<td>117%</td>
<td>117%</td>
<td>135%</td>
<td>150%</td>
</tr>
<tr>
<td>Customer deposits and medium and long term funding/net loans</td>
<td>118%</td>
<td>113%</td>
<td>115%</td>
<td>106%</td>
<td>104%</td>
</tr>
<tr>
<td>Short term wholesale funding/net liabilities</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Structural liquidity surplus (%/net liabilities*)</td>
<td>16%</td>
<td>13%</td>
<td>14%</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

* Balance sheet for liquidity management purposes.
Note: in 2011 and 2012, customer deposits include retail commercial paper in Spain (excluding short term wholesale funding).

At the end of 2012, and compared to 2011, Grupo Santander registered:

- A fall in the ratio of loans/net assets (total assets less trading derivatives and interbank balances) to 74% due to the decline in lending in the environment of deleveraging. The ratio reflects the retail nature of Santander's balance sheet.

- An improvement in the net loan-to-deposit ratio to 113% (including retail commercial paper) from 117% in 2011. This continued the downward trend started in 2008 (150%), the result of the effort made to capture retail deposits throughout the Group.

- The ratio customer deposits and medium and long term financing/lending also improved, combining the improvement in liquidity from business management with the Group's issuance capacity. The ratio was 118% (113% in 2011), well above 104% in 2008.

- Recourse to short-term wholesale funding was also reduced (below 2%), in line with that in 2011.

- Lastly, the Group's structural surplus (i.e., the excess of structural financing funds -deposits, medium and long term funding and capital- over structural liquidity needs -net loans and fixed assets-) rose significantly in 2012 to EUR 157,000 million, basically due to the reduction in the commercial gap.

This improvement in the Group's liquidity position is the result of the evolution of several subsidiaries. Of note were Spain and Portugal with a combined loan-to-deposit ratio (including retail commercial paper) of 97% at the end of 2012 (118% in 2011), which improved the Group's average ratio.

The table below sets out the most frequently used liquidity ratios for Santander's main units at the end of 2012.

<table>
<thead>
<tr>
<th>LIQUIDITY RATIOS FOR THE MAIN UNITS</th>
<th>December 2012. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net loan-to-deposit ratio</td>
<td>Deposits+M &amp; LT funding/net loans</td>
</tr>
<tr>
<td>Spain</td>
<td>96</td>
</tr>
<tr>
<td>Portugal</td>
<td>108</td>
</tr>
<tr>
<td>Santander Consumer Finance</td>
<td>178</td>
</tr>
<tr>
<td>Poland-BZ WBK</td>
<td>87</td>
</tr>
<tr>
<td>UK</td>
<td>129</td>
</tr>
<tr>
<td>Brazil</td>
<td>107</td>
</tr>
<tr>
<td>Mexico</td>
<td>82</td>
</tr>
<tr>
<td>Chile</td>
<td>132</td>
</tr>
<tr>
<td>Argentina</td>
<td>83</td>
</tr>
<tr>
<td>US</td>
<td>108</td>
</tr>
<tr>
<td>Total Group</td>
<td>113</td>
</tr>
</tbody>
</table>

* Balance sheet for liquidity management purposes.
Note: in Spain, including retail commercial paper in deposits.

The drivers behind the improvements in the liquidity ratios in 2012, at Group level and in the subsidiaries, were:

- A generalised reduction in the commercial gap, taking advantage of the capacity to capture customer funds and the deleveraging trends in some countries, and;

- A high issuance capacity in wholesale markets.

As regards the first factor, many units in 2012 focused on increasing their customer deposits as the basis for financing growth in lending.

The greater growth was concentrated in Spain (+EUR 22,000 million) where Santander took advantage of customers searching for quality to gain market share (via deposits and retail commercial paper) in a market undergoing restructuring. The combination of this trend with the decline in lending because of deleveraging explains the significant improvement in liquidity ratios. Portugal shows similar, but not so strong, trends.

Overall, these trends enabled the units in Spain and Portugal to reduce by more than EUR 42,000 million their commercial gap, a volume almost double that of the maturities in their issues of medium and long term debt during the year.

In the UK, the US and Latin America, where there is increasing access to more normalised medium and long term wholesale markets, the evolution of deposits in the various units was limited to accompanying growth in lending. In the case of Santander Consumer Finance and Poland's BZ WBK (the latter with a surplus of deposits over loans) management was more centred on optimising the cost of funds.
As regards issuance, the Group was supported by market and currency diversity, and by the “windows” offered by euro markets, to maintain high levels of fund raising even in unfavourable scenarios.

The Group captured EUR 43,000 million in medium and long term issues of fixed income and securitisations in 2012. The chart below sets out their distribution by instruments and geographic areas.

**MEDIUM AND LONG TERM ISSUES AND SECURITISATIONS PLACED IN THE MARKET**

**January-December 2012**

<table>
<thead>
<tr>
<th>Distribution by instruments</th>
<th>Geographic distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior debt</strong> 54%</td>
<td><strong>US 1%</strong></td>
</tr>
<tr>
<td><strong>Securitisations 28%</strong></td>
<td><strong>LatAm 20%</strong></td>
</tr>
<tr>
<td><strong>Covered bonds 18%</strong></td>
<td><strong>Euro zone 42%</strong></td>
</tr>
<tr>
<td><strong>EU 1%</strong></td>
<td><strong>UK 37%</strong></td>
</tr>
</tbody>
</table>

Note: Other collateralized financing is included in securitisations.

Issues were made in 10 currencies, involving 13 issuers in 10 countries, with an average maturity of around 4.3 years.

Medium and long term issues (senior debt and covered bonds) raised EUR 31,000 million. Two points are worth mentioning:

- The parent bank’s issuance capacity (almost EUR 16,000 million with Banesto) in a scenario as adverse as that in 2012, which underscored Santander’s financial strength for international investors.

- The jump made by Latin American units both in quantitative (more than EUR 8,000 million issued) and qualitative terms: the four main countries (Brazil, Mexico, Chile and Argentina) made issues. Furthermore, Mexico and Chile made benchmark issues in the region (10-year senior debt in dollars with a high quality international demand).

In securitisations, the Group’s subsidiaries placed in the market close to EUR 12,000 million of securitisation bonds and medium and long term structured funding collateralised by securitisation bonds or covered bonds.

Along with the UK market which took 84% of the Group’s placements, also noteworthy was the securitisation activity of Santander Consumer Finance backed by investors’ appetite for its assets. This demand enabled two new units of Santander Consumer to access new wholesale markets (Finland and Sweden). In both cases, the Group made the first securitisation of loans for auto finance.

**Regulatory ratios**

Lastly, and in relation to regulatory ratios, the Basel Committee in 2013 approved the definitive implementation of the liquidity coverage ratio (LCR), both as regards defining the eligible assets to include in the liquidity buffer, as well as the period for their gradual introduction. Implementation will begin on 1 January 2015, with 60% coverage which will be gradually raised by 10 points a year to 100% in 2019.

At the end of 2012, Grupo Santander comfortably met the full requirements of the new LCR ratio as regards its complete application.

**2. Increase in the liquidity reserve**

This is the second main aspect which reflects the improvement in the Group’s liquidity position during 2012.

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 maturity terms and prices.

As a result, this reserve includes deposits in central banks and cash, unencumbered sovereign debt, undrawn credit lines granted by central banks, as well as other assets eligible as collateral and other undrawn credit lines in official institutions (FHLB, etc.), all of which reinforce the solid liquidity position of the Group and its subsidiaries.

At the end of 2012, Grupo Santander’s liquidity reserve amounted to more than EUR 217,000 million (over 20% of the total Group’s external financing). The structure of this volume by type of asset, according to the effective value (net of haircuts), was as follows:

**LIQUIDITY RESERVE AT 31/12/2012**

<table>
<thead>
<tr>
<th>Effective value (net of haircuts) in million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and holdings at central banks</td>
</tr>
<tr>
<td>Uncumbered sovereign debt</td>
</tr>
<tr>
<td>Undrawn credit lines granted by central banks</td>
</tr>
<tr>
<td>Assets eligible as collateral and undrawn credit lines</td>
</tr>
<tr>
<td><strong>Liquidity reserve</strong></td>
</tr>
</tbody>
</table>

Note: The reserve excludes other assets of high liquidity such as listed fixed income and equity portfolios.

In 2012, the Group was particularly active in generating eligible assets linked in general to development of business with customers. This enabled both the maturities of existing assets as well as cuts in credit ratings and in the value of guarantees to be offset when obtaining liquidity from central banks.

At the same time, the extraordinary liquidity measures put into effect by central banks have increased the discounting capacity of the banking sector as a whole. In the case of Grupo Santander, and backed by the quality of its assets, this capacity rose from around EUR 100,000 million in 2010 and 2011 to around EUR 133,000 million at the end of 2012.
Encumbered assets-funding
Lastly, it is worth mentioning the moderate weight of secured funding in the Group's liquidity position, either in raising medium and long term wholesale funds, or in the central bank funding via discounts of eligible assets, as well as by capturing customer deposits via fixed income repos.

- As regards wholesale funding, of note are issues of covered bonds (mortgage and public sector), as well as the placement of securitisations and other secured funding (structured, FHLB lines). At the end of 2012, the Group had placed in the market more than EUR 67,000 million of covered bonds in nominal value (EUR 3,500 million public sector and the rest mortgage-backed), as well as EUR 57,000 million of securitisations and other collateralised funding.

- With respect to the generation of eligible assets, the various subsidiaries issue central bank eligible covered bonds and securitisations that they retain in portfolio to be used as collateral in the financing facilities of central banks with whom they operate. The Group also has loans eligible for direct discounting in central banks, part of which are pledged in various facilities. At the end of 2012, the Group had obtained EUR 49,000 million of financing through central bank discounting. Most of these funds are deposited back in central banks, increasing the liquidity reserve, and so they barely contributed to net financing.

- Lastly, around EUR 48,000 million of the total customer deposits relate to repos, secured by fixed income portfolios. The rest of repos related to market activities did not contribute to financing the Group's commercial activity so that they are netting off the fixed-income portfolios in the balance sheet for liquidity management purposes.

At the end of 2012, the Group had in net terms EUR 174,000 million of financing of its activity (18% of its net liabilities, i.e. of the liquidity balance sheet) collateralised via the aforementioned items.

7.4. Funding outlook for 2013
Grupo Santander began 2013 with a comfortable liquidity position and lower issuance needs in the medium and long term due to the deleveraging process, which allowed the Group to return EUR 24,000 million, borrowed in 2011, to the ECB at the end of January 2013, as already commented upon on page 232.

It does not have any relevant concentration of maturities in the coming years and, furthermore, the various dynamics of the business areas and markets make it unnecessary to cover all the maturities. This will lead the Group to develop differentiated strategies in each of them.

In Spain and Portugal, as in 2012, the units are expected to generate sufficient liquidity in commercial businesses to cover medium and long term maturities, whose total volume will not be very different to the maturities in 2012. Of note among the rest of European units is the ongoing Santander Consumer Finance strategy of securitisations to achieve its self-financing in the short term.

In the UK, part of the liquidity surplus accumulated in 2012 was used to finance the growth of the unit and part of the maturities of issues while reinforcing and optimising its deposits base. Deposits in the US will continue to accompany lending growth.

In Latin America, where activity is more dynamic, the emphasis will be maintained on growth in deposits in order to finance commercial activities, while strengthening issuance in wholesale markets opened to the Group's large units.

In any case, while the current uncertainty persists, Santander will continue its conservative issuance policy in order to strengthen its solid position.

The issues made by the parent bank in Spain in January 2013 are a good example of this strategy. Taking advantage of the reduced tensions in markets and the lower risk premium of Spanish sovereign debt, Banco Santander made two issues of senior debt and covered bonds and captured EUR 3,000 million at a maturity term well above the previous year (7 and 5 years, respectively, compared to an average of 4.3 years in 2012) and significantly lower costs (in the case of the senior debt, 20% less than the average cost in 2012 despite more than doubling the average maturity of the previous year).
8. OPERATIONAL RISK

8.1 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. They are, in general, purely operational events, which makes them different from market or credit risks, although they also include external risks, such as natural disasters.

The objective in control and management of operational risk is to identify, measure/evaluate, control/mitigate and monitor 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 opted, from the beginning, to use the standard method for calculating regulatory capital by operational risk, envisaged in the BIS II rules. The Group is weighing up the best moment to adopt the focus of advanced models (AMs), bearing in mind that a) the short-term priority in management of operational risk centres on its mitigation; and b) most of the regulatory requirements established for being able to adopt the AMs must be incorporated into the standard model (already achieved in the case of Grupo Santander’s operational risk management model).

The report on Prudential Significance/Pillar III in section 11 includes information on calculating the equity requirements by operational risk.

8.2 Corporate governance and organisational model

The organisational model for controlling and managing risks is in line with the Basel guidelines and establishes three levels of control:

• **First level**: control functions conducted by the Group’s units. It seeks to ensure that business and the institution as a whole does not incur this type of risks.

• **Second level**: functions carried out by the corporate areas. It establishes rules and controls compliance by the first layer of control.

• **Third level**: integral control functions by the risks division-integral control area and internal validation of risk (CIVIR).

This model is constantly reviewed by the internal auditing division.

In the technology and operations division, the corporate area of technological and operational risk (CATOR) defines the policies and methodology, as well as managing and controlling the technological and operational risks.

The Group believes it is convenient for the first and second layer of control functions to be developed within this division, where operational risk is managed more directly and which has the most appropriate resources and staff to identify, measure, assess and mitigate this risk. All of this is conducted within a recurring supervision of the Group’s organs of control, in accordance with its strong risk management culture.

All local areas are responsible for the implementation, integration and local adjustment of the policies and guidelines established by the corporate area, carried out by the operational risk executives in each of the units.

This operation risk management structure is based on the knowledge and experience of the executives of the Group’s various areas. Particular importance is given to the role of local executives.

The two committees for managing and controlling technological and operational risk (TOR) are:

• **Corporate Committee of TOR**, which comprises executives from the various divisions related to management and control of this risk: its objectives are to supply a broad view of operational risk in the Group and establish effective measures and corporate criteria in the spheres of management, measurement, monitoring and mitigation of this risk.

• **Corporate Committee of CATOR**: it meets twice a month. This committee monitors CATOR’s projects and the Group’s risk exposure. Local executives and those from integral control of risks also form part of the committee.
The Group monitors and controls technological and operational risk through its governance bodies. The board, the executive committee and the Group’s management committee regularly include treatment of relevant aspects in management and mitigation of operational risk.

The Group, through approval in the risk committee, also establishes every year operational risk limits. A risk appetite is set which must be situated in low and medium-low profiles, which are defined on the basis of the level of the various ratios. Limits are set by country and for the Group on the basis of the gross loss/gross income ratio.

Lastly, the corporate governance structure was increased in 2012, by incorporating:

- Monthly committees between CATOR and CIVIR. The contents of this committee are diverse, although focused on aspects such as organisation and governance, review of the tools and management methodologies of TOR and of the evolution of exposure to this risk.

- Committee of Local Information Security Officers (LISOs), which guarantees implementation of the corporate model of security in each country/unit and identifies and drives the measures for continuous improvement in the Group’s security.

- Monthly committee of review and continuous monitoring of issues related to management of TOR in the sphere of production and management of infrastructure, fostering global actions to mitigate risk. It is held with executives of the Group’s technology areas.

8.3 Risk management model

The Group’s operational risk management incorporates the following elements:

- Identify the operational risk inherent in all activities, products, processes and banking systems.

- Measure and assess the operational risk objectively, continuously and in line with the regulatory standards (Basel II, Bank of Spain) and the banking industry, establishing risk tolerance levels.

- 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 systems that enable operational risk exposures to be watched over and controlled and integrated into the Group’s daily management, taking advantage of existing technology and seeking the maximum computerisation of applications.

- Define and document operational risk management policies, and introduce methodologies for managing this risk in accordance with regulations and best practices.

Grupo Santander’s operational risk management model contributes the following advantages:

- Integral and effective management of operational risk (identification, measurement/assessment, control/mitigation and information).

- Better knowledge of existing and potential operational risks and assigning 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.

**Implementing the model: global initiatives and results**

The main functions, activities and global initiatives adopted seek to ensure effective management of operational and technological risk are:

- Define and implement the framework for corporate management of technological and operational risk management.
- Designate coordinators and create operational risk departments.
- Training and interchange of experiences: communication 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 on activities carried out by third parties in order to meet potential critical situations.
- Supply adequate information on this type of risk.

The corporate function enhances management of technological risk (TR), strengthening the following aspects among others:

- The security of the information systems.
- The 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).

Almost all the Group’s units are incorporated into 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.

In general, all the Group’s units continue to improve all aspects related to operational risk management. This can be seen in the annual review by the internal auditing unit.

**8.4. Measurement model and risk assessment**

A series of quantitative and qualitative corporate techniques/tools have 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 with tools that register and quantify the level of losses associated with TOR events. These include:

- 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.
- Accounting conciliation processes have been established that 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 Group participates in international consortiums, such as the Operational Risk Exchange (ORX).
- Capital calculation by the standard method (see the corresponding section in the report on Prudential Relevance Report/Pillar II).

The tools defined for quantitative analysis seek to assess aspects (coverage/exposure) linked to risk profile. These tools are mainly:

- A 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 materialized before.
- Corporate system of operational risk indicators, in continuous evolution and 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.

The Group’s units in 2012 continued to make progress in exercises of risk self-evaluation. This evolution focused on the bases of risks to be evaluated, with a substantial enriching, as well as on incorporating to the methodology the estimated inherent and residual loss and the qualitative VaR according to the map of processes and risks. The
experts from the various business and support areas assessed the risks associated with their processes and activities, estimating the average frequency of occurrence of the materialisation of risks as well as the average severity. The exercise also incorporated evaluating the greatest risk, the environment of control and linkage to compliance and reputational risk.

8.5. Evolution of the main metrics

As regards the databases of events, and consolidating the total information received, the evolution of net losses by Basel risk category in the last three years is set out below:

<table>
<thead>
<tr>
<th>DISTRIBUTION OF NET LOSSES BY OPERATIONAL RISK CATEGORY</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>I - Internal fraud</td>
<td>1.2%</td>
</tr>
<tr>
<td>II - External fraud</td>
<td>0.2%</td>
</tr>
<tr>
<td>III - Employment, health and security practices at work</td>
<td>25.6%</td>
</tr>
<tr>
<td>IV - Practices with clients, products and business</td>
<td>0.2%</td>
</tr>
<tr>
<td>V - Damage in physical assets</td>
<td></td>
</tr>
<tr>
<td>VI - Interruption of business and failures in systems</td>
<td></td>
</tr>
<tr>
<td>VII - Execution, delivery and management of processes</td>
<td></td>
</tr>
</tbody>
</table>

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. Of note was the contribution of payment protection insurance for clients in the UK. It should be pointed out that the complaints raised with 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 increased in 2012, in accordance with the planning by the unit.

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**

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Internal fraud</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>II - External fraud</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>III - Employment, health and security practices at work</td>
<td>29.9%</td>
<td>28.0%</td>
<td>40.3%</td>
</tr>
<tr>
<td>IV - Practices with clients, products and business</td>
<td>28.0%</td>
<td>28.0%</td>
<td>40.3%</td>
</tr>
<tr>
<td>V - Damage to physical assets</td>
<td>1.1%</td>
<td>0.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td>VI - Interruption of business and failures in systems</td>
<td>0.7%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>VII - Execution, delivery and management of processes</td>
<td>40.3%</td>
<td>40.3%</td>
<td>40.3%</td>
</tr>
</tbody>
</table>

**8.6 Mitigation measures**

The Group has a stock of mitigation measures (more than 900 active ones, of which more than 400 started in 2012), established in response to the main risk sources. They 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 risk.

The percentage of measures on the basis of the source and management tool, which identified the risk necessary to mitigate, was as follows:

- Preventative policy*: 28%
- Key risk indicators: 19%
- Regulatory/Auditing: 4%
- Self-evaluation: 5%
- Database of events: 44%
- Key risk indicators: 19%

* The preventative policy concept includes measures from the corporate and local committees, the business continuity plan, training for employees and continuous improvement in the controls established.

The measures referred to are turned into action plans which are distributed in the following spheres:

- **Processes**: 41%
- **Technology**: 31%
- **Training and communications**: 8%
- **Organisation**: 5%
- **Others/Various**: 14%
- **Risk transfer**: 1%

The main mitigation measures centred on improving the security of customers in their usual operations, as well as continued improvements in processes and technology. Regarding the reduction of fraud, the main specific measures were:

- **Electronic fraud**: Measures were established at the corporate and local levels, such as:
  - Improvements in the tracking of customer operations conducted by electronic banking, mobile phones and telephone banking (teams with specialised staff and intelligence software). These expert systems of scoring enable anomalies to be detected in the movements of customers and to warn them of suspicious operations.
  - Increased security in confirming customers’ operations using strong procedures for the signature of operations.
These measures are locally implemented in the Group’s various countries such as the OTP-SMS passwords or physical devices that generate access codes (physical token).

- Strengthening mechanisms to identify operations. Validation processes for activating telematics.

- Technical measures for detecting and warning of the theft of customers’ credentials (phishing).

**Fraud in the use of cards:**

- Migration to card technologies with chip (EMV).

- Improvements in ATM security, including mechanisms to detect the falsification of cards (anti-skimming). These mechanisms are specifically orientated to prevent the cloning of cards or the capturing of PINs.

The Group finished installing a new corporate system (SANSIRO) that supports all operational risk management tools and facilitates functions and information needs and reporting at both the local and corporate levels. The main features are:

- It has the following modules: registry of events, map of risks and evaluation, indicators and reporting systems.

- An application tool for all the Group’s institutions.

- All operational risk management processes are automated.

- In 2013, we will continue to invest in the platform and add elements that contribute to continuous improvement, incorporating the continuous evolution of methodologies related to management and control of this risk.

The different areas that cover this platform are:

**Addressing operational risk management**

- Identification of operational risks
- Association with processes, business lines and organisation
- Administration of static data

**Risk evaluation**

- Map of risks and controls
- Frequency estimates and severity
- Workflow of questionnaires
- Analysis of scenarios: specific model

**Mitigation**

- Identification of mitigation plans
- Monitoring mitigation plans
- Evaluation of mitigation plans implemented

**Module of losses**

- Registry of losses and recoveries
- Individual registration, massive or interphase
- Workflow of capturing and filters of quality
- Management of multi-impact events

**Module of indicators**

- Registry of indicators, considering OR, TR and control indicators
- Individual capturing, massive or by interphase
- Application of normalisation methodology and aggregation of the Group
- Tracking of indicators and setting of alert thresholds

In addition, a corporate methodology of operational risk scenarios is being developed in 2013, following various pilot experiences in 2012 such as that developed in the UK unit and the participation in the exercise led by the ORX consortium.
8.7. 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 of this activity, thereby enhancing the very demanding and conservative risk and operating principles that Grupo Santander already regularly applied.

Regardless of the monitoring of all aspects related to operational control, attention in all the Group’s units to the following aspects is reinforced:

- Review of the valuation models and in general the valuation of portfolios.
- Processes to capture and independently validate prices.
- Adequate confirmation of operations with counterparties.
- Review of cancellations/modifications of operations.
- Review and monitoring of the effectiveness of guarantees, collateral and risk mitigants.

Corporate information

The corporate area of technology and operational risk control has an integral management information system for operational risk, which consolidates every quarter the information available in each country/unit in the sphere of operational risk, so that it has a global view 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 points is also drawn up:

- Operational risk management model in Grupo Santander.
- Human resources and perimeter of activity.
- Analysis of the database of errors and incidents.
- Operational risk cost and accounting conciliation.
- Self-assessment questionnaire.
- Indicators.
- Mitigating/active management measures.
- Business continuity and contingency plans.
- Regulatory framework: BIS II.
- Insurance.

This information is the basis for complying with the reporting needs to the 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. The area responsible for operational risk has been closely cooperating with the Group’s insurance area since 2004 in all those activities that entail improvements in both areas. For example:

- Cooperation in the exposure of the Group’s operational risk control and management model to insurance and reinsurance companies.
- Analysis and monitoring of recommendations and suggestions to improve operational risks made by insurance companies, via prior audits conducted by specialised companies, as well as their subsequent implementation.
- Exchange of information generated in both areas in order to strengthen the quality of the databases of errors and the perimeter of coverage of the insurance policies for the various operational risks.
- 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.
9. COMPLIANCE AND REPUTATIONAL RISK

9.1 Definitions and objective

The compliance risk is the risk of receiving economic or other sanctions, or other types of disciplinary measures by supervisory bodies for not complying with laws, regulations, rules, standards of self-regulation or codes of conduct applicable to the activity developed.

The reputational risk is that linked to the perception of the Group by its various stakeholders, both internal and external, of its activity, and which could have an adverse impact on results, capital or business development expectations. This risk relates to juridical, economic-financial, ethical, social and environmental aspects, among others.

The Group’s objective in the sphere of compliance risk is: (i) to minimise the probability that irregularities occur; (ii) that the irregularities 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.

9.2. 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 and reputational risk, the board is the owner 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.

The delegated risks committee proposes to the board the Group’s risk policy. Furthermore, as the organ responsible for global risk management, it assesses the reputational risk of its sphere of action and decisions.

The audit and compliance committee is entrusted with, among others, the functions of supervising compliance with legal requirements, watching over the effectiveness of internal control systems and risk management, supervising compliance with the Group’s code of conduct in the securities markets, with the manuals and procedures for the prevention of money-laundering and, in general, with the bank’s rules of governance and compliance, and make

the necessary proposals for their improvement, as well as review compliance with the actions and measures resulting from reports or actions of the administrative authorities responsible for supervision and control.

The compliance function reports constantly to the board and mainly via the audit and compliance committee, The head of the Group’s compliance informed this committee at the 11 meetings it held in 2012 and also once at a meeting of the delegated risks committee, without detriment to attending other sessions of this committee when submitting to it operations which might have an impact from the standpoint of reputational risk.

The last stage of governance consists of corporate committees of compliance with rules, of analysis and resolving and marketing (the latter two specialised in their respective matters: prevention of money laundering and marketing of products and services), with a global scope (every country, every business) and which are replicated at the local level.

From the risks division, the area of integral control and internal validation of risks (CIVIR) in the exercise of its functions of supporting the risks committee supervises the control framework applied for risk and reputational compliance, facilitating, in turn, information to the Group’s organs of control.

The organisational model revolves around the corporate area of compliance and reputational risk, integrated into the division of the general secretariat, which is entrusted with managing the Group’s compliance and reputational risks. Within the area, led by the head of the Group’s compliance, is the corporate office of reputational risk and the central department of prevention of money laundering and financing of terrorism. This structure is replicated at the local level and also in global businesses, having established the opportune functional reports for the corporate area.
9.3. Risk management model

The main responsibility of compliance and reputational risk management is shared between the compliance area and the different business and support units, which conduct the activities that give rise to risk. The responsibility for developing policies and implementing the corresponding controls lies with the compliance area, which is also responsible for advising senior management on these matters and fostering a culture of compliance, all of this in a framework of an annual programme whose effectiveness is regularly evaluated.

The area directly manages some of these basic 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.

One of the functions of internal auditing is to carry out the tests and reviews required to ensure that the rules and procedures established in the Group are fulfilled.

The area of integral control and internal validation of risk supervises the correct execution of the risk management model. Internal auditing, within its functions, conducts the necessary tests and reviews in order to check compliance with the rules and procedures established in the Group.

Governance and organization

The corporate office of compliance is responsible, under the supervision of the audit and compliance committee and the committee for compliance with rules, for supervising the effective implementation and monitoring of the general code of conduct.

The rule compliance committee, chaired by the Group’s secretary general, has powers in all matters inherent in the compliance function, without detriment to those assigned to the two existing specialised organs in the area (the corporate marketing committee for the marketing of products and services and the analysis and resolution committee for prevention of money laundering and financing of terrorism). It is made up of representatives of internal auditing, the general secretariat, financial management, human resources and the most directly affected business units.

This committee held five meetings in 2012.

The Group’s compliance management has the following functions as regards management of compliance and reputational risks:

1. Implement the Group’s general code of conduct and other codes and manuals for sectors.

2. Supervise the training activity of the compliance programme conducted by the human resources area.

3. Direct the investigations into the possible committing of acts of non-compliance. Help can be sought from internal auditing and the sanctions that might arise be proposed to the committee.

4. Cooperate with internal auditing in the regular reviews carried out on compliance with the general code and with the codes and manuals of sectors, without detriment to the regular reviews which, on matters of rule compliance, are conducted by compliance management directly.

21 The following form part of the codes and manuals of sectors: the Manual for the Prevention of Money-laundering and Financing of Terrorism, the Code of Conduct in the Securities Markets, 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 Management of Foreclosed Properties, the Manual of Conduct in the Management of Purchases, etc, as well as the notes and circulars that develop specific points of these codes and manuals.
5. Receive and handle the accusations made by employees or third parties via the relevant channel.

6. Advise on resolving doubts that arise from implementing codes and manuals.

7. Draw up an annual report on implementing the compliance programme for the audit and compliance committee.

8. Regularly inform the general secretary, the audit and compliance committee and the board on implementation of the compliance policy and the 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 audit and compliance committee.

The Group’s compliance management also manages the prevention of penal risks model, which came into effect with the entry into force of organic law 5/2010, which introduced penal responsibility for institutions that commit crimes on their own behalf and for their benefit by administrators or representatives and by employees as a result of the lack of control. This model was fully installed into Grupo Santander in Spain during 2012, including the design and implementation of a risks map with its corresponding controls, the drawing up of a prevention manual and a protocol to be applied in the event of a penal procedure beginning, as well as various training aspects and staff awareness of the penal risk.

As regards the codes and manuals of the sectors, the focus of the compliance programme is on the following operational spheres, among others:

- Prevention of money laundering and financing of terrorism.
- Marketing of products and services.
- Conduct in the securities markets.
- Relations with regulators and supervisors.
- Drawing up and disseminating the Group’s institutional information.

Prevention of money laundering and financing of terrorism

Policies

As a socially responsible organisation, it is a strategic objective for Grupo Santander to have an advanced and effective system for the prevention of money laundering and the financing of terrorism, constantly adapted to the latest international regulations and with the capacity to tackle the appearance of new techniques by criminal organisations.

The function of the prevention of money laundering and of financing of terrorism revolves around policies that set minimum standards that Grupo Santander’s units must observe, and is formulated in accordance with the principles contained in the 40 recommendations of the Group of International Financial Action and the obligations and assumptions of directive 2005/60/EC of the European Parliament and of the Council, of October 26, 2005, on the prevention of using the financial system to launder money and finance terrorism.

The corporate policy and rules that develop it have to be complied with in 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 regarding the prevention of money laundering and the financing of terrorism.

Governance and organisation

The organisation of the function of the prevention of money-laundering and of the financing of terrorism rests on three areas: the analysis and resolution committee (ARC), the central department for the prevention of money-laundering (CDPML) and prevention executives at various levels.

The analysis and resolution committee is a collegiate body of corporate scope chaired by the Group’s general secretary and comprising representatives of internal auditing, the general secretariat, human resources and the business units most directly affected. The ARC held four meetings in 2012.

The CDPML establishes, coordinates and supervises the systems and procedures for the prevention of money laundering and of the financing of terrorism in all the Group’s units.

There are also prevention executives at four different levels: area, unit, branch and account. In each case their mission is to support the CDPML from a position of proximity to clients and operations.

At the consolidated level, a total of 714 people (three-quarters of them full time) work in prevention activities and tend to 182 units in 38 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 directly presented to the branches of the account or customer.
relation managers. The tools are complemented by others of centralised use which are operated by teams of analysis from prevention 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 Wolfsberg 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 21.1 million operations in 2012 (24.8 million in 2011) both by the commercial networks as well as money laundering prevention teams, of which more than one million were by the units in Spain.

The CDPML and the local departments of prevention conduct annual reviews of all the Group’s units throughout the world. In 2012, 162 units were reviewed (172 in 2011), 26 of them in Spain and the rest abroad, and reports were issued, where for every case identified the corresponding recommendations and measures to be taken to improve and strengthen systems were registered. In 2012, 242 measures to be adopted were established (268 in 2011), which are being monitored until their full and effective implementation.

Training courses were given in 2012 for the prevention of money laundering to a total of 105,664 employees (119,976 in 2011) and for 146,911 hours.

Lastly, many units are submitted to regular reviews by external auditors. Deloitte carried out in 2012 a review of the monitoring of measures in the 2011 report on the global system of prevention of money laundering in the parent bank and in the rest of the units in Spain. This review also took into consideration aspects of coordination and global supervision of the rest of the Group’s units in the world. The report issued on 18 April, 2012 did not find any evidence of material weakening of the system, limiting itself to formulating an eventual recommendation of the rectification suggested.

**Main Indicators of Activity**

<table>
<thead>
<tr>
<th>2012</th>
<th>Subsidiaries reviewed</th>
<th>Cases investigated</th>
<th>Communications to authorities</th>
<th>Employees trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>162</td>
<td>65,727</td>
<td>19,219</td>
<td>105,664</td>
</tr>
</tbody>
</table>

* By the CDPML and local money laundering prevention units.

**Marketing of products and services**

**Policies**
At Grupo Santander management of the reputational 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 reputational risk management derived from the marketing of products and services.

These corporate policies aim to set a single corporate framework for all countries, businesses and institutions: (i) strengthening organisational structures; (ii) ensuring that the decision-making committees oversee not only the approval of products or services, but also the monitoring of them during their whole life and (iii) set the guidelines for defining uniform criteria and procedures for the whole Group for the marketing of products and services, covering all phases (admission, pre-sale, sale and post-sale).

The developments and specific adjustment of these policies to the local reality and to local regulatory requirements is carried out through local internal rules in the Group’s various units, following authorisation by the corporate area of compliance and reputational risk.

**Governance and organisation**

The corporate and local marketing committees, the global consultative committee, the corporate committee of monitoring and the corporate and local branches comprise the organisational structure for handling the risk that could arise from an inappropriate marketing of products and services.

The corporate committee of marketing (CCM) is the Group’s maximum decision-making body for approving products and services and is chaired by the Group’s secretary general. It is made up of representatives of the divisions of risks, financial management, technology and operations, the general secretariat, general audit and control, internal auditing, retail banking, global wholesale banking, private banking, asset management and insurance.

The CCM analyses, in particular, the adequacy of the product or service to the framework where it is going to be marketed. Special attention is paid 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 is adjusted to 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.

• 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) are established, which channel toward the CCM proposals to approve new products - after a favourable opinion has been issued as initially they do not have powers delegated in them – and approve products that are not new and marketing campaigns of them.

The marketing committees, in the respective approval processes, take a risk-focused stance from the double perspective of bank/client.

The global consultative committee (GCC) is the advisory body of the corporate marketing committee and consists of representatives of the areas that provide a view of regulatory and market risk. The GCC, which meets around every three months, can recommend a review of products that are affected by changes in markets, deterioration of solvency (country, sectors or companies) or by changes in the Group’s view of the markets in the medium- and long-term.

The corporate monitoring committee (CMC) is the Group’s decision-making body for the monitoring of products and services. It is chaired by the secretary general and has representatives from internal auditing, legal advice, compliance, customer attention and the business areas affected (permanent representation of the retail network). It meets every week to raise and resolve specific issues related to the marketing of products and services at the local level as well as by the Group’s units abroad.

The corporate office of reputational risk management (CORRM) provides the governance bodies with the information needed for: (i) adequate analysis of risk in approvals, from the standpoint of the bank and the impact 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 guidelines.

**Main actions**
During 2012, the committee met 14 times (19 times during 2011, and 21 times during 2010) and analysed 140 new products/services. The corporate office of reputational risk was presented with 61 products/services considered not new for approval and resolved 171 consultations from areas and countries. The products approved by the corporate office of reputational risk management were successive issues of products that had been previously approved by the CCM or the LCM, after being given this power. The GCC held three meetings in 2012 (3 in 2011, and 3 in 2010).

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 CORRM, which prepares integrated reports on all the Group’s monitoring for the CMC.

The CMC held 44 meetings in 2012 (42 in 2011 and 46 in 2010) at which incidents were resolved and information analysed on the monitoring of products and services, at both the local level as well as the Group’s units abroad.

Both the audit and compliance committee and the rule compliance committee were informed during 2012 of the control and monitoring framework of the markets in financial instruments directive (MiFID), as well as various aspects related with the directive.
Code of conduct in the securities markets

Policy
This is set by the code of conduct in the 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 the 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 transactions.
5. Control own account transactions of the relevant personnel.
6. Manage failures to comply.
7. Resolve doubts on the CCSM.
8. Register and resolve, in the sphere of its responsibilities, 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 abuse of the market and, where appropriate, report them to the supervisory authorities.

Main actions
The compliance management of the parent bank together with the compliance executives of the subsidiaries ensure that the obligations contained in the CCSM are observed by around 8,500 Group employees throughout the world.

The market abuse investigation unit continued to review many transactions that gave rise to the opportune communications to the National Securities Market Commission. Training actions were also taken, in accordance with the training plan approved by the rule compliance committee.

Relations 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 requirements of the regulators. The audit and compliance committee is informed of the main issues at each of its meetings.

Banco Santander made public in Spain 107 relevant facts in 2012, which are available on the Group’s web site and that of the National Securities Market Commission.

Other actions
Compliance management continued to carry out other activities in 2012 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 cooperated in new corporate projects such as the Group’s adjustment to the US laws FATCA and Dodd-Frank.

The losses incurred by the Group derived from compliance and reputational risk are included in the database of events managed by the Group’s corporate area of technological and operational risk.
10. CAPITAL

10.1. Adjusting to the new regulatory framework

Grupo Santander participated during 2012 in the impact studies promoted by the Basel Committee and the European Banking Authority (EBA), and coordinated at the local level by the Bank of Spain, to gauge the new rules known as Basel III, the implementation of which means the establishment of new capital and liquidity standards with stricter criteria and homogeneous at the international level.

The new regulatory framework raised by Basel III will increase significantly the capital requirements, both from a quantitative standpoint (gradual rise in the basic minimum capital and Tier 1 capital requirements as well as qualitative (greater quality of the capital required). Santander currently has solid capital ratios, as befits its business model and risk profile which, together with the Group’s considerable capacity to generate capital organically and the gradual schedule of implementation for the new requirements (until 2019), put it in a good position to comply with Basel III. The analysis of the impact of the future new regulations does not show significant effects on the Group’s solvency ratios. The date of entry in force of the new Basel III rules in Europe is subject to completing the European legislative process and the corresponding transfer to national law, but is expected to come into force in 2014.

As regards credit risk, Grupo Santander has proposed to adopt, over the next few years, 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 of 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 in Europe via the capital directive. However, in other jurisdictions, the same process is subject to the collaboration 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.

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, continuing the plan of gradual implementation for the rest of units presented to the Bank of Spain.

In operational risk, the Group believes that development of the internal model should be largely based on the accumulated experience of management of the entity via the corporate guidelines and criteria established after assuming control and which are very much hallmarks of Santander. The Group currently uses the standard focus for calculating regulatory capital and is considering the possibility of adopting the advanced management approach (AMA) once it has gathered sufficient information on the basis of its own management model.

As regards Pillar II, Grupo Santander uses an economic capital approach to quantify its global risk profile and its solvency position within the process of self-evaluation conducted at the consolidated level (ICAAP). This process, which is supplemented by the qualitative description of the risk management and internal control systems, is revised by the internal audit and internal validation teams, and subject to a corporate governance framework that culminates with its approval by the board. Furthermore, the board establishes every year the strategic elements regarding risk appetite and solvency objectives. The economic capital model considers risks not included in Pillar 1 (concentration, interest rate risk, business risk, pensions risk, goodwill risk and business risks, risk of other intangible assets and risk of deferred tax assets). The Group’s diversification compensates the additional capital required for these risks.

Grupo Santander, in accordance with the capital requirements set out in the European Directive and the regulations of the Bank of Spain, publishes every year the Report with Prudential Relevance. This report clearly shows the transparency...
requirements requested regarding Pillar III. Grupo Santander regards the requirements of providing the market with information as vital for complementing the minimum capital requirements demanded by Pillar 1, and the supervisory exam process conducted via Pillar II. It is incorporating to its Pillar III report the recommendations of the Committee of European Banking Supervisors (CEBS) in order to become an international benchmark in matters of transparency to the market, as is already the case in its Annual Report.

As well as the process of implementing the advanced models in various of the Group's units, Santander is carrying out an ambitious training process on Basel at all level. This is reaching a large number of employees in all areas and divisions, with a particular impact on those most affected by the changes resulting from adopting the new international standards in matters of capital.

10.2. Economic capital

The concept of economic capital has traditionally been contrasted with that of regulatory capital, as this is the one required for the regulation of solvency. The Basel capital framework clearly brings both concepts together. While Pillar 1 determines the minimum regulatory capital requirements, Pillar II quantifies, via economic capital, the Group's global solvency position.

The Group's model of economic capital enables the consolidated risk profile taking into account all the significant risks of activity (not just those contemplated in Pillar 1) to be quantified, as well as the consubstantial diversification effect on a multinational and multi-business group such as Santander. In addition, our model includes a definition of capital different to the regulatory one and which, in our view, allows for a better separation between the capital available for stress situations and the risks that must be assessed. This model serves as the Group's base for preparing its self-assessment of capital report in accordance with Bank of Spain regulations under the Basel II Pillar 2 framework.

The internal definition of available capital, unlike the base of regulatory capital, does not deduct certain assets from the balance sheet (such as goodwill and others) to which the regulator does not accord value from a prudential standpoint, as in our model a risk and a capital requirement are also calculated for these assets.

In the case of goodwill, for example, even though a hypothetical stress situation could leave at zero the value of the goodwill corresponding to an investment in some of the Group's subsidiaries, it is highly unlikely that this situation would occur at the same time in all the countries in which the Group operates. The Group would retain, even in a stress situation, part of the value of these assets, which justifies that the capital needed is less than the book value of this goodwill and which, for management purposes, is not deducted from the capital base. This situation is possible due to the features of the Santander model, based on subsidiaries autonomous in capital and very diversified geographically.

The concept of diversification is fundamental for measuring and understanding adequately the risk profile of a global activity group such as Santander. The fact that the Group's business is developed in various countries via a structure of differentiated legal entities, with a variety of customer segments and products, and also incurring different types of risk, makes the Group's results less vulnerable to adverse situations in some of the markets, portfolios, clients or particular risks. Economic cycles, despite the high current degree of globalization of economies, are not the same and nor do they have the same intensity in different countries. Consequently, those groups with a global presence have a greater degree of stability in their results and a greater capacity of resistance to eventual crisis in markets or in specific portfolios, which means a lower risk profile. In other words, the risk and economic capital associated with the Group as a whole is less than the risk and capital of the sum of the parts considered separately.

Lastly, within the framework of the model for measurement and aggregation of economic capital, the risk of concentration for wholesale portfolios (large companies, banks and sovereigns) is also considered, both in its dimension of exposure as well as concentration by sectors and countries. The existence of concentration in a country or a product in retail portfolios is captured by applying an appropriate model of correlations.

Economic capital is a key tool for the internal management and development of the Group's strategy, 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-evaluation process, including all the risks of activity, beyond those contemplated in the regulatory focus, and taking into account essential elements, not captured by the regulatory capital, such as concentration of portfolios or diversification between risks and countries. For this, the business evolution and the 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 the most adverse scenarios.

The metrics of economic capital also enable return-risk objectives to be assessed, even for compensation purposes, setting prices of operations on the basis of the risk, evaluating the economic viability of projects, units or business lines, with the overriding objective of maximising the generation of shareholder value.

Global risk profile analysis
The Group’s risk profile at 31 December 2012, measured in terms of economic capital, is distributed by types of risk and the main business units, is reflected below:

<table>
<thead>
<tr>
<th>DISTRIBUTION BY TYPES OF RISK</th>
<th>Million euros</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic capital model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit</td>
<td>27,541</td>
<td>43%</td>
</tr>
<tr>
<td>Market</td>
<td>4,219</td>
<td>7%</td>
</tr>
<tr>
<td>Non-trading equity</td>
<td>2,113</td>
<td>3%</td>
</tr>
<tr>
<td>Structural FX</td>
<td>1,715</td>
<td>3%</td>
</tr>
<tr>
<td>Trading</td>
<td>390</td>
<td>1%</td>
</tr>
<tr>
<td>Operational</td>
<td>3,631</td>
<td>6%</td>
</tr>
<tr>
<td>Material assets</td>
<td>858</td>
<td>1%</td>
</tr>
<tr>
<td>Sub-total Pillar I risks</td>
<td>36,248</td>
<td>56%</td>
</tr>
<tr>
<td>Goodwill</td>
<td>13,937</td>
<td>22%</td>
</tr>
<tr>
<td>Interest (ALM)</td>
<td>4,968</td>
<td>8%</td>
</tr>
<tr>
<td>Business</td>
<td>3,261</td>
<td>5%</td>
</tr>
<tr>
<td>Others</td>
<td>5,970</td>
<td>9%</td>
</tr>
<tr>
<td>Sub-total Pillar II risks</td>
<td>28,136</td>
<td>44%</td>
</tr>
<tr>
<td>Total economic capital</td>
<td>64,384</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BY GEOGRAPHIC AREAS</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main segments</td>
<td></td>
</tr>
<tr>
<td>Continental Europe</td>
<td>27%</td>
</tr>
<tr>
<td>UK</td>
<td>9%</td>
</tr>
<tr>
<td>Brazil</td>
<td>15%</td>
</tr>
<tr>
<td>Rest of Latin America</td>
<td>8%</td>
</tr>
<tr>
<td>US</td>
<td>7%</td>
</tr>
<tr>
<td>Sub-total operating areas</td>
<td>66%</td>
</tr>
<tr>
<td>Corporate centre</td>
<td>34%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

The distribution of economic capital among the main business units reflects the diversification of the Group’s activity and risk. The weight of the corporate centre is mainly due to the risk of goodwill.

Continental Europe accounts for 27% of the Group's capital, Latin America including Brazil 23%, the UK 9%, and the US 7%, while the corporate centre, which as well as the risk from goodwill also assumes that from the exposure to structural exchange rate risk (derived from stakes in subsidiaries abroad denominated in non-euro currencies) and most of the equity stakes, accounts for 34%.
At 31 December 2012, the Group’s total economic capital requirements amounted to EUR 64,384 million, while available capital was more than EUR 80,940 million (corresponding to the amount of capital and reserves plus adjustments, without deducting the value of goodwill).

The benefit of diversification envisaged in the economic capital model, including both the intra-risks (assimilated to geographic) as well as inter-risks, amounted to around 25% at the end of 2012.

**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, including them in their remuneration plans.
- 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:

\[
\text{Value creation} = \text{profit} - (\text{average EC x cost of capital})
\]

The profit obtained is used 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 2012 applied to the Group’s various units was 11.237%.

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 2012 in value creation varied, declining in Europe and increasing in the Americas. The Group’s results, and thus the RORAC figures and value creation, are conditioned by the weakness of the economic cycle in various Group units in Europe and, particularly, in Spain.

The creation of value and the RORAC for the Group’s main business areas are shown below:

<table>
<thead>
<tr>
<th>RORAC AND BUSINESSES VALUE CREATION</th>
<th>Million euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main segments</td>
<td>RORAC</td>
</tr>
<tr>
<td>Continental Europe</td>
<td>14.2%</td>
</tr>
<tr>
<td>UK</td>
<td>16.6%</td>
</tr>
<tr>
<td>Latin America</td>
<td>33.4%</td>
</tr>
<tr>
<td>US</td>
<td>19.6%</td>
</tr>
<tr>
<td>Total business units</td>
<td>21.9%</td>
</tr>
</tbody>
</table>

These figures do not include the losses of the corporate activities area, in which are recorded the extraordinary provisions set aside in 2012, as well as the results of equity stakes, the liquidity buffers and the coverage, among others. The return on risk-adjusted capital (RORAC) of the corporate centre is -15.5%, and the Group’s RORAC is 9.6%, a final result that is EUR 1,078 million below the cost of capital.

These figures are clearly determined by the phase of the cycle that some of the Group’s units are undergoing, resulting in particular, in higher loan-loss provisions and a final result below the cost of capital used. In order to exclude from these results the impact of the current phase of the cycle, the expected average credit loss of the cycle is considered, instead of the current level of loan-loss provisions. If so, the Group’s RORAC would improve to 12.8%, above the cost of capital of 11.34%, with a value creation of EUR 1,033 million, which better reflects the recurrent capacity of the Group’s businesses to generate value.