

**Risk management**

129 Milestones in 2017

131 Main risks in the  
Risk Appetite Framework

Credit risk

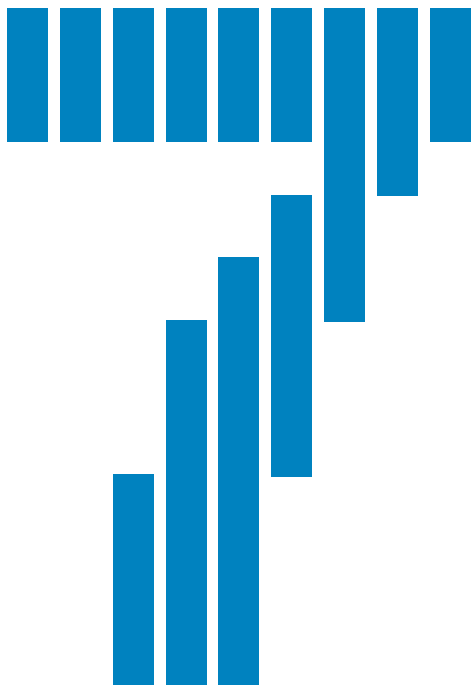
Liquidity risk

Market risk

Operational risk

Tax risk

Compliance risk



# The improvement in the Group's fundamentals is reflected in its good credit ratings.

## Milestones in 2017

In 2017, the Banco Sabadell group continued to strengthen its risk management framework by making improvements in line with best practices in the financial sector.

The Banco Sabadell Group's risk appetite framework continues to be adapted to the new Group structure

resulting from internationalisation, in order to ensure consistency and effective implementation of the risk appetite statement (RAS) in all geographies (G1).

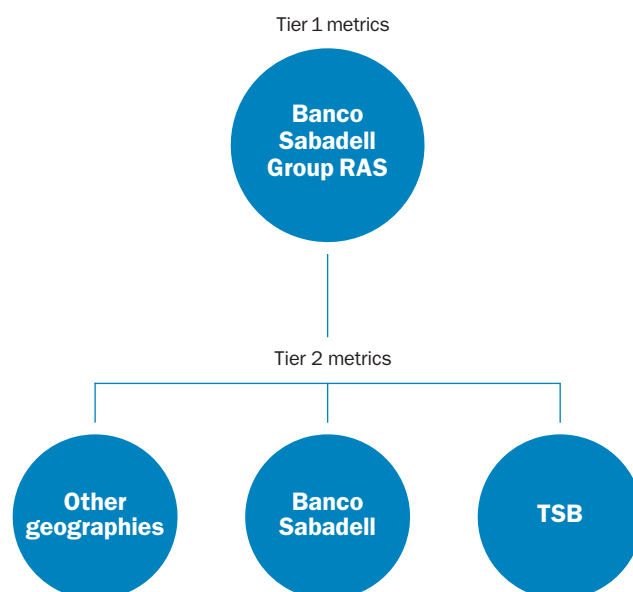
The RAS acts as a first tier in which to set overall limits and targets, while a second tier elaborates on the first-tier targets and limits applied to the various geographies.

## Strengthening the Risk Appetite Framework by giving it greater depth in terms of sectors and geographies.

During 2017, work continued to enhance the Group's risk profile and to strengthen the risk management and control environment through the development of management and control frameworks for specific portfolios, sectors and geographies. This powerful tool makes it possible to deploy the Risk Appetite Framework and guide growth in lending while seeking to optimise the risk/return ratio over the long term.

Additionally, the Group's customer risk tracking environment has been updated. The early warning system has been integrated into management approaches through a new tracking environment under which different strategies can be applied depending on the segment (individuals, shops and self-employed workers, businesses and companies).

### G1 Risk appetite metrics



# Improvement of the Group's risk profile during the year

The Group's risk profile improved during 2017 fundamentally for three reasons: international diversification, concentration and asset quality.

Regarding international diversification, international credit risk (€44,259 million at the end of 2017) represents 30% of the Group's total exposure, having multiplied six-fold since 2014. International diversification is due primarily to the acquisition of TSB, representing exposure of €35,581 million (90% in retail mortgages). Excluding the TSB acquisition, the bank has expanded by 29% internationally since 2014.

As for concentration, real estate exposure has been reduced (to one-third of its 2014 weighting) and exposure in the retail segment has increased following the acquisition of TSB in 2015. The portfolio is well diversified in terms of industries, with rising exposure to sectors with greater credit quality. In terms of individual concentration, the risk metrics relating to concentration of large exposures have also declined. Geographically, the portfolio is positioned in the most dynamic regions, in Spain and worldwide.

As for asset quality, the volume of NPAs has been curtailed sharply in recent years. Non-performing exposures have been reduced by €10,173 million since 2013. In 2017, the Group reduced the volume of NPAs by €3,463 million. All this has led to a reduction in the NPL ratio, from 6.14% to 5.14%.

The improvement in the Group's fundamentals, particularly in terms of risk, is reflected in the stable credit rating granted to the Bank's senior debt during the year, having regained an investment grade rating from all the agencies that rate it.

## Strengthening the risk management and control environment

The risk management and control environment continued to be strengthened in 2017 through the development and deployment of management and control frameworks for certain portfolios, sectors and geographies.

In each of these frameworks, the Group's appetite in the sector or portfolio in question, and the requirements to achieve it, are determined by establishing:

- Asset allocation, setting the growth objectives along each basic axis (quality, typology...).
- General principles that should guide the activity in each portfolio, sector or geography.
- Basic policies for accepting and monitoring credit.
- Risk tracking and control metrics (relating to both stock and new production).

The combination of management and control frameworks with planning and continuous management enables us to take early action with regard to portfolios in order to direct growth in a way that is profitable in the long term.

## Improved tracking environment

The Group's customer risk tracking environment was updated in 2017. The early warning system was integrated into management approaches through a new tracking environment under which different strategies can be applied depending on the segment (individuals, shops and self-employed workers, businesses and companies).

The main input for the tracking environment is the model of early alerts adapted to each segment. This allows for:

- Improved efficiency by focusing customer tracking on signs of impairment.
- Early action in response to signs of impairment; renewal of the rating for customers that have experienced impairment depends on the Basic Management Team.
- Regular oversight of customers whose situation remains unchanged and who have been evaluated by the Basic Management Team.
- Feedback using the information from the Basic Management Team as a result of actions taken.

## Improved management of the risk associated with NPAs

In compliance with the requirements set out in the European Central Bank's "Guidance to banks on non-performing loans", in 2017 the Board of Directors approved a new "Strategic Plan for Managing NPAs" and an "Operational Plan for Managing NPAs". The key points of the Strategic Plan are as follows:

- Principles for managing those assets.
- A governance and management structure that facilitates achievement of those goals.
- Quantitative objectives, with different time horizons, for reducing both non-performing and foreclosed assets.

In order to achieve those results, the ECB has established two strategic priorities with regard to managing NPAs:

- Continuous reduction of NPAs until the balances are normalised.
- Focus on managing NPAs through the specialised services of the Asset Transformation and Industrial and Real Estate Holdings Department, which was one of the first workout units in Spain.

These two strategic priorities are translated into five principles for managing NPAs:

- Early action to manage default and preventive action to avoid default.
- Segmented management of all non-performing and potentially non-performing exposures (potential default).
- Business intelligence and continuous process improvement.
- Funding capacity.
- A clear governance system based on three lines of defence.

Additionally, policies for managing NPAs have been developed in accordance with the requirements set out in the ECB document and in Annex IX of Bank of Spain Circular 4/2016. These policies are aligned with the Strategic Plan for NPAs and the Operational Plan for NPAs. The policies also cover the new risk management model implemented in July 2017.

## Main risks in the Risk Appetite Framework

### Introduction

The Banco Sabadell Group has a risk appetite framework in place to ensure the proactive control and management of all of the Group's risks. This framework includes a risk appetite statement (RAS), which establishes the amount and diversity of risks that the Group seeks and tolerates in order to achieve its business goals while maintaining a balance between risk and return.

The Banco Sabadell Group Risk Appetite Framework continues to be adapted to the Group's international structure in order to ensure consistency and effective deployment of the RAS in all geographies.

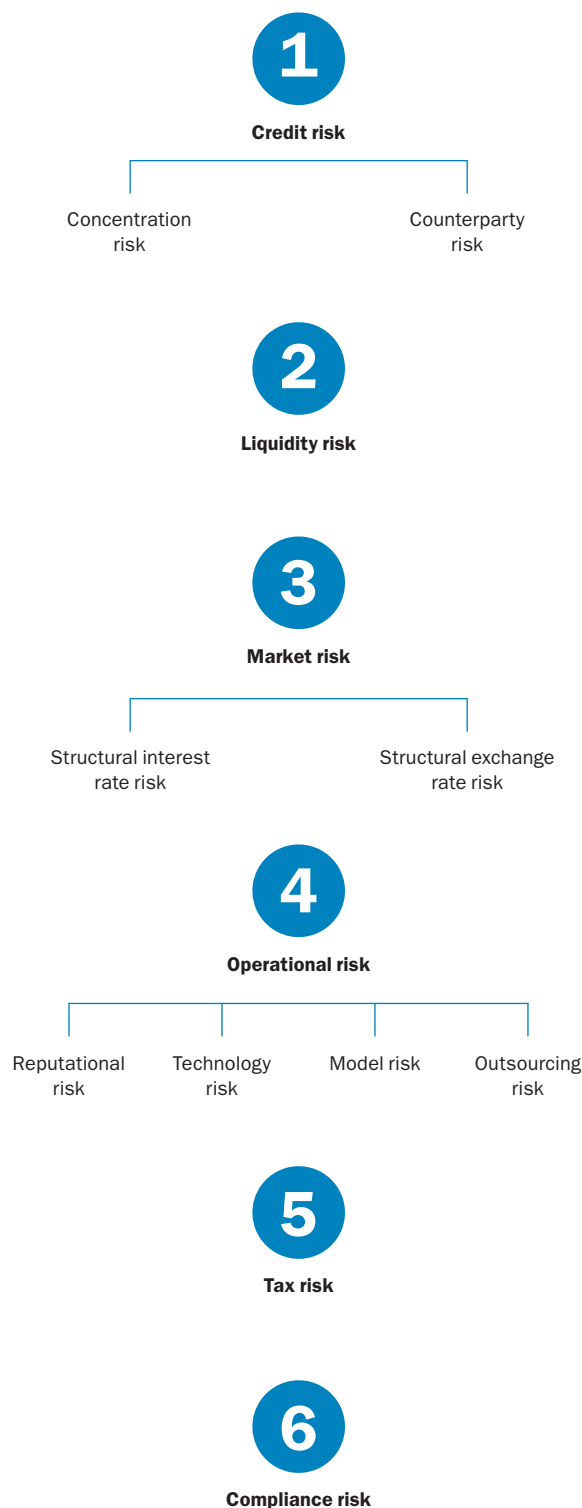
A first tier is established comprising the Group's RAS, setting overall objectives and limits, and a second tier provides details of the first-tier objectives and limits in the various geographies.

The risk appetite statement is comprised of quantitative metrics that allow objective monitoring of risk management, as well as supplementary qualitative aspects.

The risk management and control approach consists of a broad framework of advanced measurement principles, policies, procedures and methodologies integrated into an efficient decision-making structure under a governance framework for the risk function that conforms to Spanish and European law.

The principles, policies, procedures and methodologies framework is reflected in the document entitled "Banco Sabadell Group Risk Policies", which is reviewed regularly and subject to approval by the Board of Directors.

#### G2 Main risks



For each of the Group's significant risks, the document details the main persons or units involved, their functions, policies, methods and procedures, and control and monitoring mechanisms. Details are also given of the organisation of the risk function, indicating the roles and responsibilities of the departments and committees with regard to risks and risk control systems, adapted to the business units' activities, including loan and credit granting functions (G2).\*

The main financial risks facing Banco Sabadell Group companies as a consequence of their activities associated with the use of financial instruments are credit risk, liquidity risk and market risk. The most important of these for the Group's loan book is credit risk.\*\*

The main non-financial risks faced by the Group are operational risk, tax risk and compliance risk.

When managing risks, the Group considers the macroeconomic and regulatory environments.\*\*\*

## General principles of risk management

### Corporate risk culture

Banco Sabadell's risk culture is one of its distinguishing features and is well established throughout the organisation as a result of continuous development over decades.

Aspects of this strong risk culture include:

- A high level of involvement by the Board of Directors in risk management and control. The Bank has had a Risk Committee since before 1994, and its main function is to supervise management of all material risks and align them with the profile defined by the Group.
- The Banco Sabadell Group has a risk appetite framework in place, consisting, amongst others, of the risk appetite statement, which ensures the control and proactive management of risks under a reinforced corporate governance framework approved by the Board of Directors.
- The Basic Management Team as a fundamental part of risk acceptance and monitoring. Under this approach, which has been in existence for more than 20 years, the team consists of the relationship manager and the risk analyst. The process combines the viewpoints of both parties. All decisions must be discussed and resolved by agreement between them. This implicates the team in the decision, and provides a variety of viewpoints and a sound final decision.
- High degree of specialisation: specific management teams for each segment (real estate, corporate, businesses, SMEs, retail, banks and countries, etc.), allowing for a specialised management approach in each area.
- Advanced internal credit scoring models as a basic part of the decision-making process have been in place for over fifteen years (since 1999 for individuals and since 2000 for businesses). In accordance with best practices, the Group relies on these models to improve the general efficiency of the risk management process. Insofar as these models not only make it possible to sort borrowers in terms of risk but also serve as the basis for quantifying risk, they lend themselves to multiple uses in key management processes: fine-tuning delegations of powers, efficient risk tracking, overall risk management, risk-adjusted returns, and analysis of the Group's capital adequacy, among others.
- The delegation of powers to approve corporate risk transactions is based on the expected level of loss. As a general policy on empowerment, the Bank applies a system in which the various levels are delimited on the basis of expected loss, which considers the exposure to the risk of the customer's proposed credit transaction and the risk group, expected default rate and estimated loss given default.

\* For additional information, see Note 4 to the 2017 consolidated financial statements.

\*\* See the capital map in the chapter "Banco Sabadell Group financial information".

\*\*\* For information on the macroeconomic and regulatory environment, see the chapter on "Economic, business and regulatory environment".

- Credit risk is monitored rigorously through an advanced system of early warnings for businesses and individuals. Risk monitoring at customer and group level can be divided into three types: operational, systematic and comprehensive. One of the basic sources used for this monitoring is an early warning system for both businesses and individuals (implemented in 2008 and 2011, respectively) which allows credit risk to be identified in advance. These alerts are based on both internal data (e.g. number of days an instalment is past-due, overdrafts on commercial discounts, guarantees or international credit lines), and external information (e.g. customers classified as defaulters elsewhere in the financial system, and credit bureau reports).
- An advanced model for managing non-performing exposures which enhances early detection and specialised management. An end-to-end model for managing non-performing exposures which enables risk management to focus on situations that pre-date default (early warnings, refinancing, collection). This comprehensive system uses specific tools (simulators to identify the best solution in each case) and specialised managers in each segment who work exclusively to manage the risk.
- Risk-adjusted pricing. Commercial pricing policy is dynamic, adapting constantly to changing business and financial market conditions (liquidity premia, difficulty in accessing credit, interest rate volatility, etc.). Funding and risk costs are taken into consideration (expected loss and cost of capital). Risk models play a vital role in determining prices and profitability targets.
- The risk management model is fully integrated into the Bank's technology platform, with the result that policies are applied immediately in everyday processes: the policies, procedures, methodologies and models that make up Banco Sabadell's risk management approach are built into the Bank's operating platform. This means that policies are applied immediately in day-to-day operations. This proved particularly important when integrating acquisitions in recent years.
- Stress testing as a management tool. For some years, Banco Sabadell has been using an internal tool to perform stress tests, supported by in-house teams with extensive experience in its development.

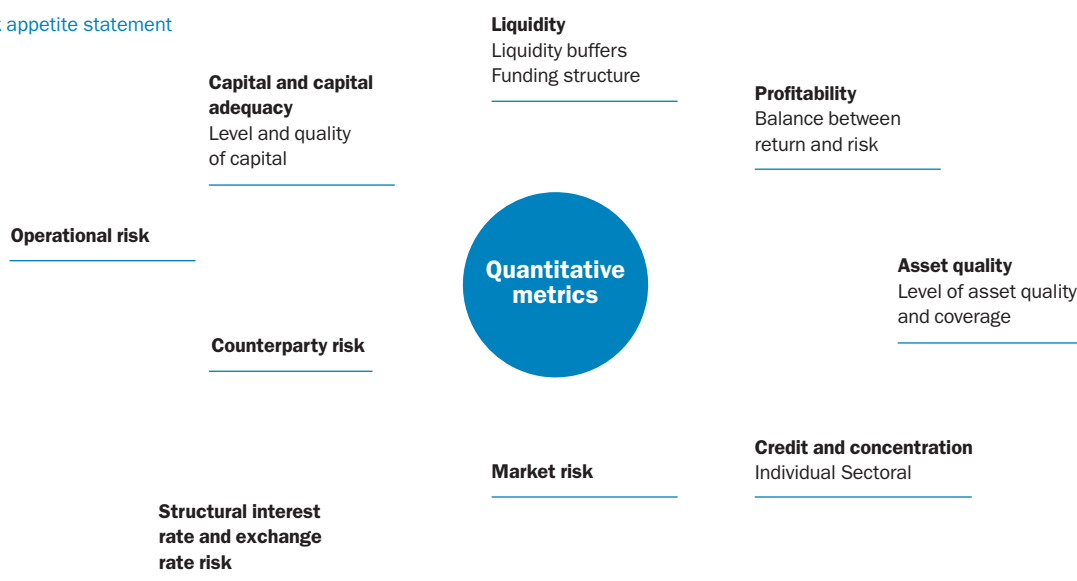
## Risk appetite framework

The risk appetite framework includes, among others, a risk appetite statement (RAS), defined as the quantity and diversity of risks that the Banco Sabadell group seeks and tolerates in order to achieve its business objectives whilst maintaining a balance between risk and return.

The Risk Appetite Statement (RAS) is composed of quantitative metrics (G3) which allow established objectives and limits to be monitored objectively, and of qualitative elements that supplement those metrics and guide the Group's risk control and management policy.

## Quantitative elements

### G3 Risk appetite statement



## Qualitative aspects

In addition to the quantitative metrics, the following qualitative metrics guide risk control and management by the Group:

- The entity's general position with regard to risk-taking aims to achieve a medium-to-low risk profile through the use of a prudent and balanced risk policy that will ensure the profitable and sustainable growth of its activity, and guarantee that it is aligned with the group's strategic objectives in order to maximise value creation while guaranteeing an adequate level of solvency.
- The Board of Directors is committed to the risk management and control processes: approval of policies, limits, management model and procedures, and the measurement, monitoring and control methodology.
- The Group maintains a risk culture that is embedded throughout the entity and has various units that specialise in the treatment of different risks. The risk function conveys this culture by introducing policies, implementing and rolling out internal models, and adapting these to the risk management procedures.
- Risk management policies and procedures should be oriented to adapting the risk profile to the risk appetite framework while maintaining and pursuing a balance between expected returns and risk.
- The Banco Sabadell Group risk management and control system is set up as an extensive framework of principles, policies, procedures and advanced assessment methodologies that are integrated into an efficient decision-making structure. The risk variable is factored into decisions in all areas and quantified using a common metric in terms of allocated capital.
- Risk management is underpinned by solid, ongoing procedures for checking that risks conform to pre-defined limits, with clearly defined responsibilities for identifying and tracking indicators and early warnings, and an advanced risk assessment methodology.
- Capital and liquidity levels must enable the bank to cover the risks it has accepted, even in adverse economic situations.
- There should be no concentration of risk such as to significantly compromise shareholders' funds.
- Market trading risk is assumed in order to handle the flow of transactions arising from customer business and to seize market opportunities while maintaining a position that is commensurate with the Bank's market share, risk appetite, capacity and profile.
- The risk function is independent and has strong senior management involvement, ensuring a strong risk culture focused on protecting capital and ensuring an adequate return on capital.
- The Group's aim in terms of tax risk is to ensure compliance with tax obligations while guaranteeing an adequate return for shareholders.
- The achievement of the business objectives must be compatible, at all times, with compliance with the law and the application of best practices.
- The institution will have sufficient human and

technological resources to monitor, control and manage all the risks that may materialise in the course of its business.

- The group's compensation systems should align the interests of employees and senior management with compliance with the risk appetite framework.

## Overall organisation of the risk function

The Group has a risk culture that is embedded in all its units, and it has units managing different risk types, so as to guarantee the independence of the risk function, combined with strong Senior Management involvement.

The Board of Directors is the body responsible for establishing the general guidelines on the organisational distribution of the risk management and control functions and for determining the main lines of strategy in this respect. It is the body responsible for approving the risk appetite framework (developed in cooperation with the managing director, the chief risk officer and the chief financial officer) and ensuring that it is aligned with the bank's short- and long-term objectives, as well as with the business plan, capital planning, risk capacity and compensation programmes.

There are four Board sub-committees to which the Board of Directors delegates its functions by making use of the powers conferred on it in the Articles of Association; the sub-committees report to the Board of Directors about the performance of their functions and any decisions they adopt (G4).

The Group's control framework is based on three lines of defence, structured around the following assignment of functions:

### First line of defence

Consists mainly of the business units and corporate centres, principally the Risk Management Department, the Finance Department and the Treasury and Capital Markets Department. The first line of defence is responsible for managing the risks inherent in the bank's activity, mainly the acceptance, monitoring and assessment of these risks and the associated processes.

They are responsible for implementing corrective actions to remedy deficiencies in their processes and controls. The essential functions attributed to this line under the control framework are:

- Maintaining effective internal controls and performing risk assessment and control procedures on a daily basis.
- Identifying, assessing, controlling and mitigating risks, following established internal policies and procedures and ensuring that activities are consistent with the bank's targets and objectives.
- Establishing proper management and supervision processes to ensure regulatory compliance and focusing on control errors, inadequate procedures and unexpected events.

Board committees related to risk management					
Risk Committee		Executive Committee		Audit and Control Committee	Remuneration Committee
Supervision of the risk profile and suitability of the RAS		Approval of transactions by delegation Approval of the asset allocation strategy		Supervision of efficacy of internal control, internal audit and risk management systems	Supervision of remuneration policy and its alignment with the Risk Appetite Framework
Main committees related to risk management					
Technical Risk Committee	Asset/Liability Committee	Credit Transactions Committee	Asset and Capital Transactions Committee	Operational Risk Committee	Institutional Coordination Committee
Risk Committee support Risk management	Balance sheet structural risk monitoring and management	Approval of credit transactions by delegation	Approval of asset transactions by delegation	Operational risk management and monitoring	Guarantee alignment of TSB and Group policies

## Second line of defence

Consists essentially of:

- The Risk Control Department, which is independent from the first line of defence and is responsible for identifying, assessing, monitoring and controlling the Group's significant risks and for providing information about such risks.
- The Compliance Department, whose goal is to minimise the possibility of regulatory breaches and ensure that any breaches that occur are diligently identified, reported and resolved and that the appropriate preventive measures are implemented.
- The Internal Validation Function, which is responsible for checking that the models work as expected and that their results are appropriate to their uses, both internal and regulatory.
- The IT Control Department is responsible for identifying risk situations associated with the use of technology, across all units in the Group, that may give rise to operational or reputational risks for the Group. It also promotes the necessary training and support to enable the Group's units to resolve risk situations within their scope of responsibility and action, and transfer, on an independent basis, any significant risks that have not been covered by the implemented controls to the Group's Operational Risk Department.

In general, the second line of defence ensures that the first line of defence is well designed and fulfils the functions assigned to it, and puts forward suggestions for continuous improvement. The essential functions attributed to this line under the control framework are:

- Proposing the risk management and control framework.

- Guiding and ensuring the application of the risk policies, defining responsibilities and objectives for their effective implementation.
- Collaborating with the management team to develop risk management processes and controls.
- Identifying changes in the organisation's underlying risk appetite.
- Verifying compliance with regulations applicable to the Group in conducting its business activities.
- Providing the technological infrastructure for risk management, measurement and control.
- Analysing and cross-checking existing and future incidents by reviewing the information.
- The internal validation function, which is responsible for checking that these models work as expected and that their results are appropriate to their uses, both internal and regulatory.
- Promoting and endeavouring to reach the highest levels of compliance with the legislation in force and principles of professional ethics within the Group.
- Guaranteeing both the operational continuity of the ordinary business and the security of the information that sustains it.

## Third line of defence

Underpinned by the Internal Audit Function:

- Engages in verification and advisory activities on an independent and objective basis, governed by a philosophy of adding value and helping the Group to fulfil its objectives.
- Assists the Group in meeting its objectives by providing a systematic, disciplined approach to evaluate the sufficiency and effectiveness of the organisation's governance processes and the risk management and internal control activities.

# Managing and monitoring the main risks

## Credit risk

Credit risk is the possibility that losses may be incurred as a result of borrowers failing to meet their obligations or through losses in value due simply to deterioration in borrower quality.

## Credit risk management framework

### Risk acceptance and monitoring

Credit risk exposure is subjected to rigorous monitoring and control through regular reviews of borrowers' creditworthiness and their ability to honour their obligations to the Group, with exposure limits for each counterparty being adjusted to levels that are deemed to be acceptable. It is also normal practice to mitigate exposure to credit risk by requiring borrowers to provide collateral or other sureties.

The Board of Directors delegates powers to the Executive Committee, which can then sub-delegate authority at each level. The implementation of authority thresholds for credit approval ensures that powers delegated at each level are linked to the expected loss calculated for each business loan or other transaction that is requested.

To optimise the business opportunities that each customer represents and to guarantee an appropriate degree of security, responsibility for accepting and monitoring risks is shared between the relationship manager and the risk analyst; effective communication between them provides a comprehensive view of each customer's individual circumstances.

The relationship manager monitors the business aspect through direct contact with customers and by handling their day-to-day banking, while the risk analyst takes a more system-based approach using specialised knowledge.

The implementation of advanced methodologies for managing risk exposures (adapted to the New Basel Capital Accord — NBCA — and industry best practices) also benefits the process in ensuring that proactive measures can be taken once a risk has been identified. Of vital importance in this process are rating tools such as credit ratings for corporate borrowers and credit scoring for retail customers, as well as early warning indicators for monitoring risk.

By analysing indicators and early warning alerts in addition to credit rating reviews, the quality of a risk can be monitored constantly in an integrated way. The establishment of efficient control procedures for outstanding risks also provides benefits in managing past-due risks as it enables a proactive policy to be implemented based on early identification of cases that may default.

Risk is tracked in all exposures in order to identify possible problematic situations and avoid a deterioration in credit quality. This tracking is generally based

on a system of early warnings at transaction/borrower level and at portfolio level, and both alert classes are fed with internal and external information in order to obtain results. Risk tracking is forward-looking, i.e. seeking to predict changes in circumstances so as to take action with an impact on the business (increase lending) and prevent risk (reduce exposure, enhance collateral, etc.).

The early warnings system allows an integrated measurement to be made of the quality of a given risk and enables it to be transferred to recovery specialists, who will determine the procedures that should be applied. Therefore, based on risks exceeding a certain limit and on the predicted default rates, groups or categories are identified for individual treatment. These warnings are managed by the relationship manager and the risk analyst.

## Managing non-performing risks

Debt refinancing and restructuring are generally the main risk management techniques during the weaker stages of the economic cycle. In the case of debtors or borrowers that have, or are expected to have, financial difficulties in meeting their payment obligations in the contractual terms, the Bank's objective is to facilitate repayment of the debt by minimising the likelihood of non-payment. A number of specific policies are in place to achieve this, including procedures for the approval, monitoring and oversight of debt refinancing and restructuring processes, principally:

- Having a sufficiently detailed compliance record for the borrower and evidence of a clear intention to repay the loan, assessing the time-frame of the financial difficulties being experienced by the customer.
- Refinancing and restructuring conditions based on a realistic payment scheme which is in line with the borrower's current and predicted payment capacity, i.e. not just postponing problems to a later date.
- If new guarantees are provided, they must be regarded as a secondary and exceptional means of recovering the debt, so as to avoid impairing the existing means. All ordinary interest accrued up to the refinancing date must be paid in any event.
- Limitations on grace periods.

The Group continually monitors compliance with current terms and conditions and with these policies.

## Internal risk models

The Banco Sabadell Group has a system made up of three lines of defence to ensure the quality and oversight of internal models, and a governance process specifically designed to manage and monitor these models and their compliance with the regulations and supervisory requirements.

The governance framework for internal credit risk and impairment models (risk management, regulatory capital and provisions) is underpinned by:

- Effective management of changes to internal models.
- Recurring monitoring of the internal model environment.
- Regular reporting, both internal and external.
- Tools for managing internal models.

One of the main bodies within the governance framework for internal credit risk and impairment models is the Models Committee, which convenes on a monthly basis and has the function of approving (depending on the materiality level) and tracking internal credit risk models.

The Banco Sabadell Group also has an advanced model for managing non-performing exposures. The purpose of managing non-performing exposures is to identify the best solution for the customer as soon as there are any signs of impairment so as to prevent customers in difficulties from reaching a situation of default by working the problem intensively and avoiding lags between phases.\*

## Real estate loan risk management

As part of its ongoing risk management and, in particular, its policy on the construction and real estate sectors, the Group has a number of specific policies for mitigating risks.

The main measures that are implemented are continuous risk monitoring and reassessment of the borrower's creditworthiness in their new circumstances. If the borrower is found to be creditworthy, the existing arrangements are continued as originally agreed, and commitments are renegotiated if they offer a better fit to the customer's new circumstances.

The policy varies as a function of the type of asset that is being financed. For completed property developments, sale support actions are carried out through the Group's distribution channels, by setting a competitive price which will attract demand and by offering finance to end buyers provided that they comply with risk requirements. For construction projects in progress, the main objective is to complete the project, provided that short- and medium-term market prospects are sufficient to absorb the resulting supply of dwellings.

In terms of financing for land and plots, the possibility of selling the future homes is also considered before financing construction.

Where the analysis and scrutiny of a borrower's position do not indicate a reasonable degree of viability, the solution may take the form of a surrender of assets in settlement of the debt ("dation in payment") and/or the purchase of assets.

Where neither approach is practicable, legal proceedings leading to foreclosure will be taken. Assets taken into possession by the Group, whether through the dation in payment, purchase, or court-ordered repossession, to ensure collection or to execute other

credit enhancements are mainly foreclosed tangible assets received from borrowers and other obligors of the Bank to settle financial assets representing a debt claim held by the bank, and they are managed actively with the primary purpose of divestment.

Based on the degree of maturity of the real estate assets, three strategic lines of action have been established:

### 1 New funding: real estate development

In 2014, a commercial unit was re-established to deal exclusively with new lending to real estate developers based on the identification of a market need and the existence of solvent new players. This unit has a new monitoring methodology that gives the Bank detailed information about all the projects that the unit considers (ranging from land/floor area to number of units, sales volume, construction budget and level of pre-sales).

In parallel, a new Real Estate Analysis Department was created to analyse all applications for finance for real estate projects from a purely real estate business standpoint, focusing on the location and the suitability of the product, as well as the current potential supply and demand, cross-checking with the figures in the business plan presented by the customer (costs, sales and deadlines are key factors). The new analysis model is accompanied by a method for tracking developments that the bank agrees to finance. Standardised reports are used to track each development's progress so as to monitor drawdowns and the fulfilment of the business plan (sales, costs and deadlines).

Under the new management model, alerts are defined for tracking by both the Analysis and Monitoring Department and the Risks Department, both of which worked on defining the alerts. In addition to the alerts for funded developments, new funding is based on the development framework, which defines the optimal allocation of new business as a function of the quality of the customer and of the development.

### 2 Managing non-performing real estate loans

There is a policy in place for managing non-performing exposures. At a general level, risk management takes account of the customer, the collateral and the loan status, ranging from the first early warning about a performing loan to the adoption of dation in payment or purchase by mutual agreement, or foreclosure and auction.

After analysing the aforementioned three dimensions, the optimal solution is adopted in order to stabilise or liquidate the position, by mutual agreement or judicial means, depending on developments with the individual customer and case. If it is not possible to stabilise the loan or have the customer settle, there are number of support options depending on the type of loan and the asset it funds. In

\* For additional quantitative information, see Schedule 6 to the consolidated financial statements "Other risk information: Refinancing and restructuring operations".

the case of finished developments or non-residential buildings, the possibility is offered of marketing them via Solvia at prices that can generate traction in the market. In the case of land for building, the possibility of additional debt with which to develop homes is offered if the Bank's internal teams identify proven demand for housing in the area; they take charge of overseeing the loan and the selling process. For other properties, the possibility of sale to third parties is considered, solutions by mutual agreement are proposed (purchase, or dation in payment, potentially accompanied, in the case of residential properties, by favourable conditions to enable the borrower to relocate or obtain social housing, depending on the circumstances); judicial proceedings are a last resort.

### 3 Managing foreclosed properties

Once the loan is converted into real estate, a management strategy is established based on the type and location in order to identify each asset's potential on the basis of potential demand. Sale is the main exit mechanism; for this purpose, the Bank, via Solvia, has developed a range of channels depending on the type of property and customer. Those channels are successful, as evidenced by the large volume of homes marketed every year, the sizeable growth in the volume of non-residential properties, zoned land and pre-zoned land that is sold after market interest has been generated in these property types, and the fact that third parties rely on Solvia to market their properties.

In the case of certain sites and plots of pre-zoned land in areas with strong demand potential and scope for considerable price appreciation, the Bank invests to optimise the outcome, taking account of projected margins under conservative development assumptions.

Due to having previously reached a high level of concentration in this risk, the Group has an RAS Tier 1 metric which establishes a maximum level of concentration for real-estate development in Spain. This metric is monitored on a monthly basis, and is reported to the Risk Technical Committee, the Risk Committee and the Board of Directors.

Moreover, the Risk Control Department, together with the Business and Risk Departments, regularly monitors the degree to which new lending conforms to the framework established for property developers, including a review of compliance and of asset allocation. The outcome is reported to the Risk Technical Committee.\*

## Credit risk management models

### Credit rating

Credit risks incurred with corporates, developers, projects with specialised funding, financial institutions and countries are rated using a rating system based on predictive factors and an internal estimate of the probability of default.

The rating model is reviewed annually based on an analysis of behaviour patterns in defaulted loans. Each internal rating score is assigned to a projected default rate, which allows consistent comparisons to be made across segments and with the ratings produced by independent rating agencies, according to a master scale (G5).

### Scoring

In general, credit risks undertaken with individual customers are rated using scoring systems based on a quantitative model of historical statistics to identify meaningful predictive factors. In geographies where scoring is used, it is divided into two types:

**Behavioural scoring:** the system automatically classifies customers based on information regarding their activity and each product. It is used primarily for: granting loans, setting limits on authorised overdrafts, targeting sales campaigns, and for tracking and segmenting in claim and/or recovery procedures.

**Reactive scoring:** this is used to evaluate applications for personal loans, mortgage loans and credit cards. Once all the transaction data has been entered, the system calculates a result based on the estimated creditworthiness and financial profile and any collateral.

If no scoring system exists, individual assessments supplemented with policies are applied (G6).

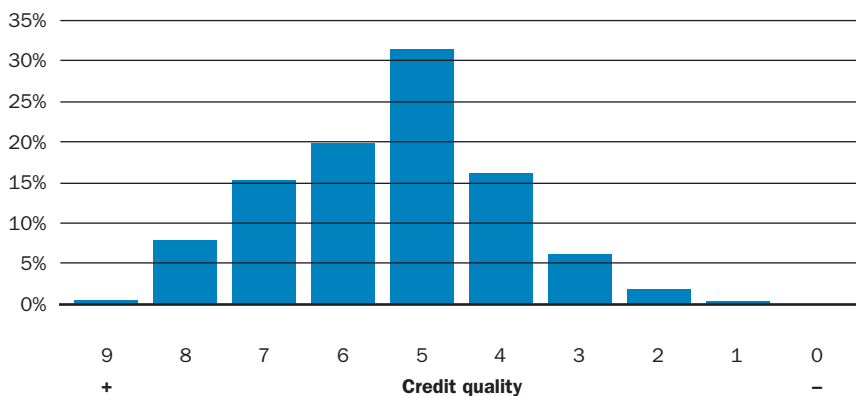
\* For additional quantitative information, see Schedule 6 to the consolidated financial statements "Credit risk: Risk concentration and exposure to construction and real estate sectors".

## Warning tools

In general, Banco Sabadell Group has a system of early warnings comprised of both individual warnings and advanced early warning models in place for both corporates and private individuals. These early warnings are based on performance indicators based on available sources of information (rating or scoring, customer files, balance sheets, CIRBE — Bank of Spain Central Credit Register, industry and operating performance, etc.). They model the risk posed by a customer on a short-term basis (predicted propensity to default) and have achieved a high level of accuracy in detecting potential cases of default. The score, which is produced automatically, is included in the monitoring process as one of the basic inputs in tracking the risk posed by individuals and companies. This alert system allows for:

- Improved efficiency by focusing on customers with the lowest score (different cut-off points for each group).
- Early action to manage any negative change in the customer's situation (change in score, severe warnings, etc.).
- Regular oversight of customers whose situation remains unchanged and who have been evaluated by the Basic Management Team.

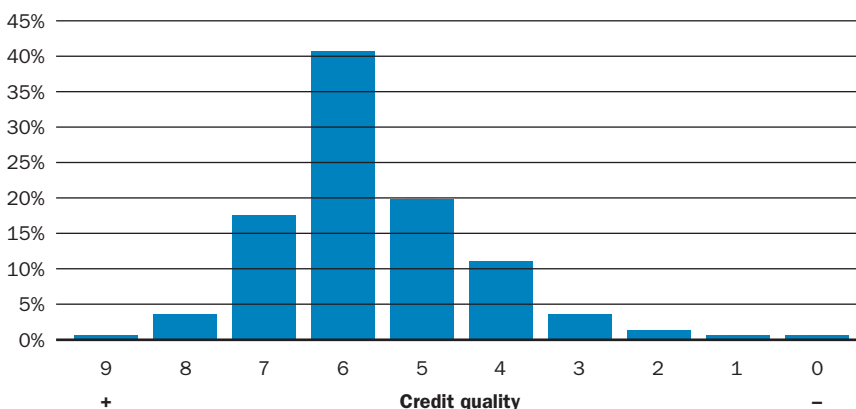
% EAD\*



**G5** Company loan rating profile

\* EAD (exposure at default)

% EAD\*



**G6** Individual customer credit score profile

\* EAD (exposure at default)

Outstanding lending increased by +4.6% (in like-for-like terms) due to strong lending to SMEs and to new mortgage production.

NPAs declined by €3.5 billion in the year, and there was considerable rotation and an improvement in the composition of foreclosed assets.

€M

	2016	2017
<b>Maximum credit risk exposure</b>		
<b>Financial assets held for trading</b>	<b>1,649.73</b>	<b>131.76</b>
Equity instruments	10.63	7.43
Debt securities	1,639.10	124.33
Loans and advances	—	—
<b>Financial assets at fair value, through profit and loss</b>	<b>34.83</b>	<b>39.53</b>
Equity instruments	34.83	39.53
Debt securities	—	—
Loans and advances	—	—
<b>Available-for-sale financial assets</b>	<b>18,895.13</b>	<b>13,380.57</b>
Equity instruments	766.61	606.70
Debt securities	18,128.53	12,773.87
<b>Loans and receivables</b>	<b>155,324.48</b>	<b>153,284.56</b>
Debt securities	930.59	575.45
Loans and advances	154,393.89	152,709.11
<b>Investments held to maturity</b>	<b>4,598.19</b>	<b>11,173.21</b>
<b>Derivatives</b>	<b>2,369.66</b>	<b>1,814.76</b>
<b>Total financial asset exposure</b>	<b>182,872.01</b>	<b>179,824.39</b>
Guarantees given	8,529.35	8,726.85
Contingent liabilities given	25,208.69	24,079.34
<b>Total commitments and guarantees given</b>	<b>33,738.04</b>	<b>32,806.19</b>
<b>Total maximum credit risk exposure</b>	<b>216,610.05</b>	<b>212,630.58</b>

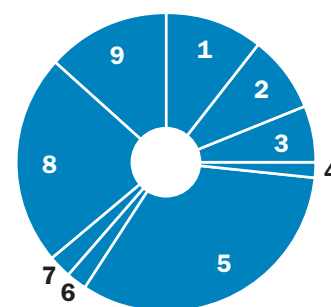
T1 Credit risk exposure

Table 1 shows the financial assets exposed to credit risk, broken down by portfolio and instrument at year-end, indicating the carrying amount, as representing the highest level of exposure to credit risk, inasmuch as it reflects the borrower's highest level of debt at the reference date.

The Group also maintains contingent risks and commitments with borrowers, materialised by the establishment of guarantees provided or commitments inherent in the credit agreements up to an availability level or limit ensuring financing for the customer when the latter needs it. Such facilities also entail the acceptance of a credit risk and are subject to the same management and monitoring systems as described above.

The collateral or other credit improvements received to ensure compliance, which are standard practice in the type of financial instruments handled by the entity, have not been deducted from the credit risk exposure value referred to above.

Diagram G7 illustrates the breakdown of credit risk among the group's various segments and portfolios.



**G7**  
Overall risk profile by customer category (distribution of credit risk exposure) %EAD (Exposure at default)

1	Large corporates	10.7
2	Midsize businesses	8.3
3	Small businesses	6.3
4	Retailers and sole proprietors	1.5
5	Mortgage loans	32.7
6	Consumer loans	2.2
7	Banks	2.3
8	Sovereign	23.0
9	Other	13.0

## Credit risk mitigation

Credit risk exposure is subjected to rigorous monitoring and control through regular reviews of borrowers' creditworthiness and their ability to honour their obligations to the Group, with exposure limits for each counterparty being adjusted to levels that are deemed to be acceptable. It is also normal practice to mitigate exposure to credit risk by requiring borrowers to provide collateral or other sureties.

Generally, these take the form of real collateral, mainly mortgages on properties used as housing, whether finished or under construction. The entity also accepts, although to a lesser degree, other types of real collateral, such as mortgages on business premises, industrial warehouses, etc., and financial assets. Another credit risk mitigation technique that is commonly used by the entity is to accept guarantees, in this case subject to the guarantor presenting a valid certificate of solvency.

Legal certainty is secured in all these mitigation techniques by signing legal agreements that are binding on all parties and can be enforced in all pertinent jurisdictions to ensure, at all times, that the guarantee can be executed. This entire process is subject to internal verification of the legal adequacy of these contracts, and legal opinions of international specialists can be obtained where these contracts are granted under foreign legislation.

Real collateral is formalised before a notary in the form of a public instrument to ensure enforceability vis-à-vis third parties. The public instruments referring to mortgage loans are also registered at the pertinent registry to ensure that they are fully valid and enforceable vis-à-vis third parties. In the case of pledges, the pledged

\* For more information, see Schedule 6 to the 2017 consolidated financial statements, which presents quantitative data on credit risk exposure, by geography.

goods are normally deposited with the Bank. Unilateral cancellation by the debtor is not permitted, and the guarantee remains in force until the debt is discharged in full.

Personal guarantees or bonds are established in favour of the Bank and, barring exceptional cases, are also formalised before a notary in the form of a public instrument in order to achieve the utmost legal certainty and be able to seek enforcement via the courts in the event of non-payment. They constitute an irrevocable debt claim against the guarantor that is payable on first demand.

In addition to risk mitigation through the establishment of formal guarantees between the debtors and the entity, as a result of the acquisition of Banco CAM, the group has an additional guarantee for a certain asset portfolio, provided by the Asset Protection Scheme (APS), retroactive from 31 July 2011 and for a period of ten years (for more details, see Note 2 to the 2017 consolidated financial statements).

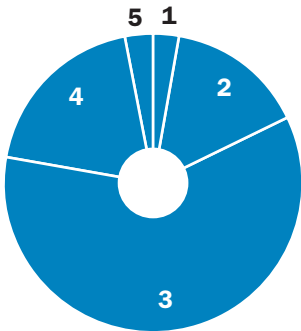
The Bank has not received significant guarantees which it is authorised to sell or pledge, irrespective of any non-payment by the owner of such guarantees, except for those intrinsic to the treasury business, which are mostly repos with maturities of no more than six months, as a result of which their fair value does not differ substantially from their carrying amount.

The main concentration of risk in relation to all these types of real collateral or credit enhancements refers to the use of the mortgages as a credit risk mitigation technique in loans to fund the construction of homes or other types of real estate. In relative terms, the exposure secured with mortgages represents 63% of total customer loans and advances.

### Credit quality of financial assets

As stated earlier, in general terms, the Group uses internal models to rate most borrowers (or transactions) giving rise to credit risk. Such models have been designed in line with best practices proposed by the NBCA. Nonetheless, not all portfolios giving rise to credit risk use internal models, partly due to the fact that a minimum level of experience of defaults is required to reasonably design such a model.

The breakdown of the total exposure, based on internal ratings, is shown in figure G8.



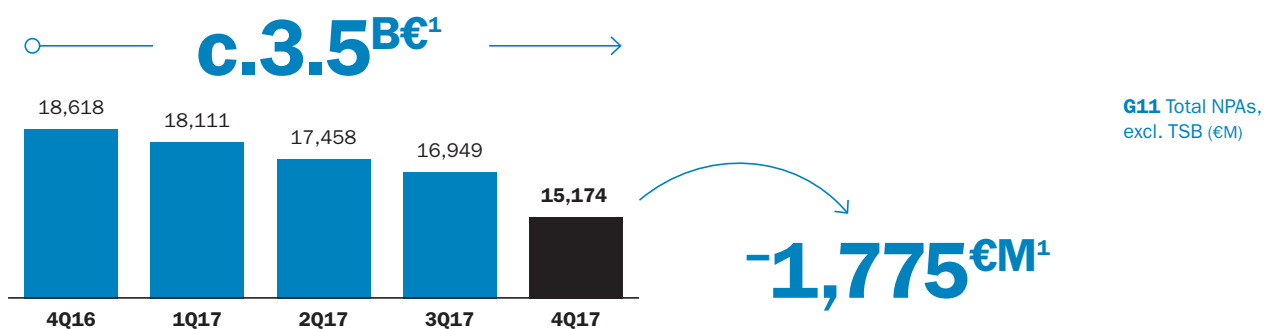
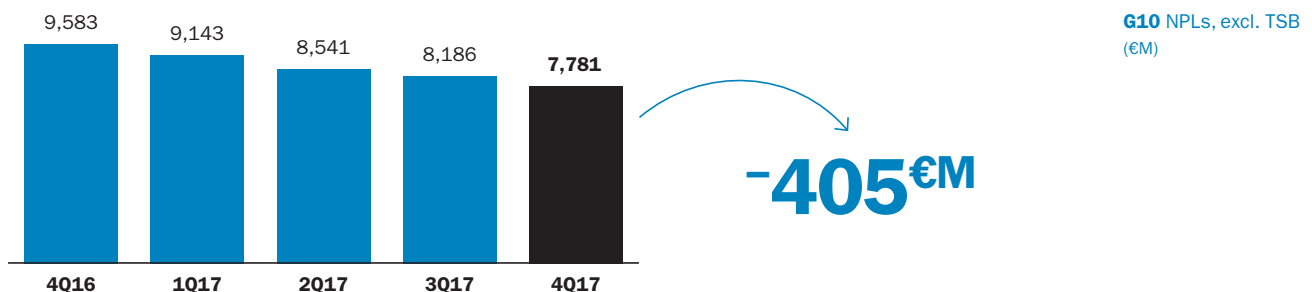
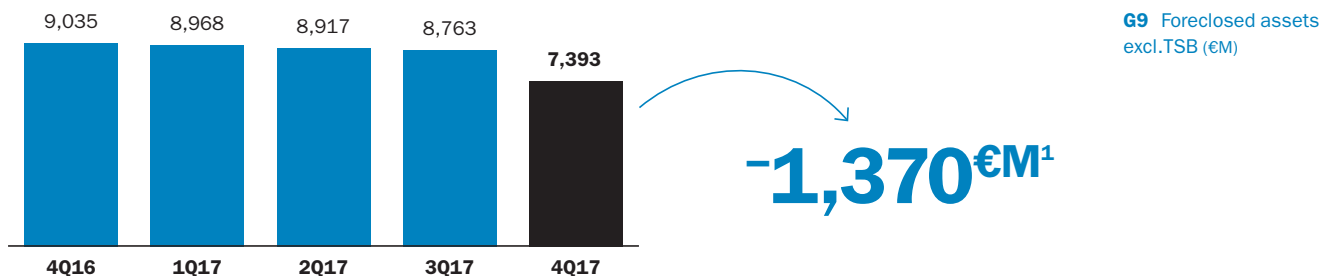
**G8**  
**Breakdown of exposure by rating (%)**

<b>1</b> AAA/AA	3.0
<b>2</b> A	15.0
<b>3</b> BBB	60.0
<b>4</b> BB	19.0
<b>5</b> B	3.0

The NPL ratio continues to decline,  
and stands at 5.1%.

The NPA coverage ratio reached 49.8% in 2017.

# Implementation of IFRS 9 in January 2018 will entail €900 million in provisions and will increase the NPA coverage rate to 54.7% in pro-forma terms.



Non-performing loan performance improved in 2017, as the balance declined by 1,770 million euro, leading to an NPL ratio of 5.14% at year-end.

Active management by the Bank resulted in a notable reduction in NPAs in 2017, far exceeding the initial objective for the year (G9, G10 & G11).

Note: Includes contingent risks. The balance of NPLs and foreclosed assets (excl. TSB) include 20% of the non-performing exposure covered by the APS, in accordance with the APS protocol.

<sup>1</sup> Includes 1,252€M of NPAs in the carve-out for the new Solvia Desarrollos Inmobiliarios business line.

## Concentration risk

Concentration risk refers to exposures that can potentially generate losses large enough to threaten the institution's financial solvency or the viability of its ordinary business activity. This type of risk is divided into two basic subtypes:

- Individual concentration risk: imperfect diversification of the portfolio's idiosyncratic risk due either to its small size or to sizeable exposure to specific customers.
- Sectoral concentration risk: imperfect diversification of systematic risk components in the portfolio, which may be sectoral, geographical, ...

Banco Sabadell has a series of specific tools and policies to ensure efficient management of concentration risk:

- Quantitative metrics from the Risk Appetite Statement and their subsequent monitoring, such as tier-one metrics.
- Individual limits for risks and customers considered to be significant, which are established by the Executive Committee.
- A structure of delegation which requires that the main customer transactions be approved by the Credit Operations Committee, or even by the Executive Committee.

## Exposure to customers or significant risks

At 31 December 2017 there were no borrowers with a risk that individually exceeded 10% of the Group's equity.

### Country risk: geographic exposure to credit risk

Country risk is that arising in the debts of a country, taken as a whole, as a result of reasons inherent in the country's sovereignty and economic situation, i.e. for circumstances other than regular credit risk. It manifests itself in a debtor's potential inability to honour their foreign currency payment obligations to external creditors due, among other reasons, to the country preventing access to the foreign currency, the inability to transfer it, or the non-enforceability of legal action against borrowers for reasons of sovereignty, war, expropriation or nationalisation.

Country risk affects not only debts contracted with a State or entities guaranteed by it but also all private debtors that belong to such State and who, for reasons outside their control and not at their volition, are generally unable to honour debts.

An exposure limit is set for each country which is applicable across the whole Banco Sabadell Group. These limits are approved by the Executive Committee and the corresponding decision-making bodies, depending on the level of delegation, and are constantly monitored to ensure that any deterioration in the political, economic or social situation in a country can be detected in good time.

The principal component of the framework for the acceptance of country risk and financial institution risk is the structure of limits on the various metrics; on this

€M

	2017				
	TOTAL	Spain	Rest of European Union	America	Rest of the world
<b>Financial institutions</b>	<b>33,301.91</b>	<b>18,525.88</b>	<b>13,118.64</b>	<b>1,121.17</b>	<b>536.21</b>
<b>Public authorities</b>	<b>32,278.17</b>	<b>17,848.22</b>	<b>13,076.48</b>	<b>1,265.61</b>	<b>87.85</b>
Central government	26,641.50	12,574.46	13,076.48	932.38	58.18
Others	5,636.67	5,273.77	—	333.22	29.68
<b>Other financial institutions</b>	<b>5,809.64</b>	<b>4,875.46</b>	<b>463.41</b>	<b>419.71</b>	<b>51.06</b>
<b>Non-financial companies and sole traders</b>	<b>60,959.37</b>	<b>50,935.26</b>	<b>3,519.95</b>	<b>5,959.93</b>	<b>544.22</b>
Construction and real estate development	6,341.80	5,688.53	17.56	548.30	87.40
Civil engineering work	1,592.29	1,567.47	14.80	7.76	2.26
Other	53,025.28	43,679.26	3,487.59	5,403.87	454.56
Large corporates	24,968.94	17,122.23	2,875.37	4,731.48	239.87
SMEs and sole proprietors	28,056.33	26,557.03	612.23	672.39	214.69
<b>Other households and NPISH</b>	<b>78,472.83</b>	<b>39,820.67</b>	<b>37,131.21</b>	<b>474.99</b>	<b>1,045.96</b>
Home loans	69,779.71	34,981.76	33,727.53	165.50	904.92
Consumer loans	6,394.65	3,540.22	2,422.64	300.97	130.81
Other	2,298.48	1,298.69	981.04	8.52	10.24
<b>TOTAL</b>	<b>210,821.91</b>	<b>132,005.49</b>	<b>67,309.70</b>	<b>9,241.41</b>	<b>2,265.32</b>

**T2** Breakdown of risk concentration by activity

basis, the various risks are monitored and senior management and the Board sub-committees establish the group's risk appetite on this basis.

The limits structure is based on two tiers: tier 1 metrics in the RAS, and Tier 2 (or "management") limits.

Additionally, a number of indicators and tools are used to manage country risk: ratings, credit default swaps, macroeconomic indicators, etc.

The distribution of risk concentration by activity and worldwide in 2017 is shown in T2.

The breakdown, by type of financial instrument, of the exposure to sovereign risk at 31 December 2017, applying the criteria required by the European Banking Authority (EBA), is shown in diagrams G12, G13 and G14.

## Counterparty risk

This heading refers to credit risk arising from activities in financial markets that are carried out via specific trades with counterparty risk. Counterparty risk arises in the event where, in a transaction involving derivatives or repos with deferred settlement or on margin, the counterparty defaults before the final settlement of the transaction cash flows.

Exposure to counterparty risk is concentrated in customers, financial institutions and clearing houses.

The risk is concentrated in counterparties with high credit quality: 69% of the exposure is with counterparties rated A or higher.

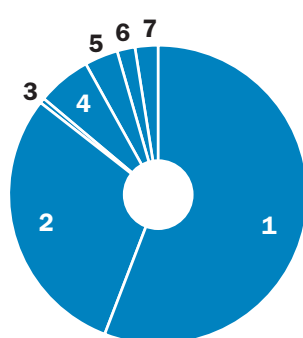
In June 2016, the European Market Infrastructure Regulation (EMIR — Regulation 648/2012) made it

obligatory for the Group to clear and settle certain over-the-counter (OTC) derivatives through Central Counterparties (CCP). Consequently, the derivatives arranged by the Group that are susceptible to being cleared through a CCP are cleared in this way. At the same time, the Group has worked to standardise OTC derivatives with a view to increasing the use of CCPs. The exposure to CCPs depends greatly on the amount of the guarantees provided.

Management considers that there is no exposure in derivatives transactions in organised markets (OM), given that the OM acts as counterparty and there is a settlement and guarantee mechanism that ensures transparency and continuity. Exposure to OMs is equivalent to the guarantees provided.

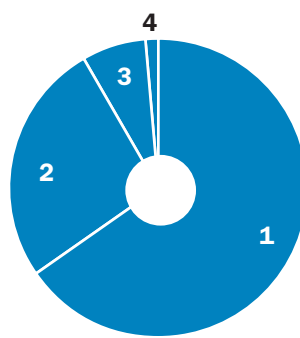
The philosophy behind counterparty risk management is aligned with the business strategy, and seeks at all times to ensure value creation while maintaining a balance between return and risk. For this purpose, criteria have been established for supervising and tracking counterparty risk deriving from activity in the financial markets so as to ensure that the Bank can carry out its business activity within the risk thresholds established by senior management.

Counterparty risk exposure is quantified on the basis of current and future exposure. Current exposure represents the cost of replacing a transaction at market value in the event that a counterparty defaults at the present time. To calculate this, it is necessary to mark the deal to market (MtM). Future exposure (add-on) represents the potential risk which an transaction may incur in a given period of time due to its characteristics and the market variables on which it depends. In the case of transactions



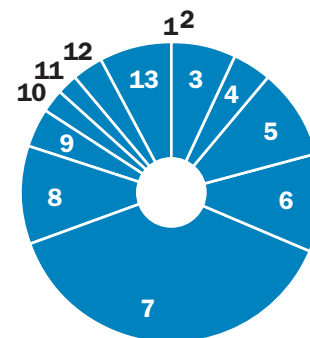
**G12 Breakdown of sovereign risk exposure (%)**

<b>1</b>	Spain	55.9
<b>2</b>	Italy	29.8
<b>3</b>	USA	0.5
<b>4</b>	United Kingdom	6.0
<b>5</b>	Portugal	3.5
<b>6</b>	Mexico	2.0
<b>7</b>	Rest of the world	2.3



**G13 Breakdown of counterparty risk (%) (by geography)**

<b>1</b>	Eurozone	65.3
<b>2</b>	Rest of Europe	26.3
<b>3</b>	USA and Canada	7.0
<b>4</b>	Rest of the world	1.4



**G14 Breakdown of counterparty risk, by rating (%)**

<b>1</b>	AAA / Aaa	0.0
<b>2</b>	AA+ / Aa1	0.0
<b>3</b>	AA / Aa2	7.2
<b>4</b>	AA- / Aa3	4.1
<b>5</b>	A+ / A1	9.6
<b>6</b>	A / A2	10.7
<b>7</b>	A- / A3	37.9
<b>8</b>	BBB+ / Baa1	10.7
<b>9</b>	BBB / Baa2	4.2
<b>10</b>	BBB- / Baa3	2.5
<b>11</b>	BB+ / Ba1	2.2
<b>12</b>	BB / Ba2	3.3
<b>13</b>	Others	7.6

under a collateral agreement, the add-on represents the possible fluctuation of MtM between the time of default and the time the position is replaced in the market. If the transaction is not carried out under a collateral agreement, the add-on represents the possible fluctuation of MtM throughout the term of the operation.

Each day at market close, all exposures are recalculated on the basis of transaction inflows and outflows, changes in market variables and the risk mitigation mechanism established by the group. In this way, exposures are monitored on a daily basis to ensure that they conform to the limits approved by senior management. This information forms part of the risk reports which are escalated to the departments and areas responsible for risk management and monitoring.

With regard to counterparty risk, the Group adopts a number of mitigation measures. The main measures are:

- Netting agreements for derivatives (ISDA and CMOF).
- Collateral agreements for derivatives (CSA and CMOF Annex III) and repos (GMRA, CME).

Netting agreements allow positive and negative MtM to be aggregated in transactions with the same counterparty in such a way that, in the event of default, a single payment or collection obligation is established in relation to all of the transactions arranged with that counterparty.

By default, the Group has netting agreements with all of the counterparties that wish to trade in derivatives.

Collateral agreements provide not just for netting but also for the regular exchange of guarantees that mitigate the exposure to a counterparty in respect of the operations covered by the agreement.

The Group requires that a collateral agreement be in place in order to trade in derivatives or repos with financial institutions. The Group's standard collateral contract is bilateral (i.e., both parties are obliged to post collateral) and provides for daily exchange of guarantees, always in cash and always denominated in euro.

## Assets pledged in financing activities

At the end of 2017 and 2016, there were certain financial assets pledged in financing operations, i.e. offered as collateral for certain liabilities. Those assets are mainly loans linked to the issuance of mortgage covered bonds, public-sector covered bonds, and long-term asset-backed securities (see Note 20 and Schedule 3 to the 2017 consolidated financial statements, for transactions in connection with the Spanish mortgage market, and Schedule 4 for details of issues). The other pledged assets are debt securities that are delivered in repos, collateral (loans or debt instruments) provided to gain access to certain types of funding from central banks and collateral of all types provided as surety for derivatives transactions.

The bank has used part of its portfolio of homogeneous loans and advances in fixed-income securities by transferring the assets to securitisation trusts created for this purpose. Under current regulations, securitised assets

cannot be derecognised unless the risk has been substantially transferred.

For further information on funding programmes in the capital market, refer to the section below on liquidity risk.

## Liquidity risk

Liquidity risk arises due to the possibility of losses being incurred as a result of the Bank being unable, albeit temporarily, to honour payment commitments due to a lack of liquid assets, or of it being unable to access the markets to refinance debts at a reasonable cost. This may be associated with factors of a systemic nature or specific to the bank itself.

In this regard, the objective of the Banco Sabadell Group is to maintain liquid assets and a funding structure that, in line with its strategic objectives and based on its risk appetite statement (RAS), enables it to honour its payment commitments normally and at a reasonable cost, under business as usual conditions or under a stress situation caused by systemic or idiosyncratic factors.

The governance structure for Banco Sabadell's liquidity management is based on the direct involvement of the Board of Directors and senior management, clear delimitation of the three lines of defence and a strict separation of functions, and a clear structure of responsibilities in committees, departments, subdirectorates-general and functional areas.

## Liquidity management

Banco Sabadell's liquidity management policy seeks to ensure that its lending can be financed at a reasonable cost and within a reasonable time so that liquidity risk is kept to a minimum. The bank's funding policy is focused on maintaining a balanced funding structure, based mainly on customer deposits, supplemented with access to wholesale markets that enables the Group to maintain a comfortable liquidity position at all times.

In order to manage its liquidity, the Group applies a structure based on Liquidity Management Units (LMUs). Each LMU is responsible for managing its own liquidity and for setting its own metrics to control liquidity risk, in coordination with the Group's corporate functions. At present, the LMUs are Banco Sabadell (including overseas branches — OFEX), Banc Sabadell d'Andorra (BSA) and TSB.

In order to achieve the objectives, the group's current liquidity risk management strategy is based on the following principles and pillars, in line with the LMUs' retail business model and the defined strategic objectives:

- Involvement of the Board of Directors and senior management in managing and controlling liquidity risk and funding.
- Clear segregation of functions between the different areas within the organisation, with a clear delimitation of the three lines of defence, to ensure independence

when measuring positions and when controlling and assessing risks.

- Decentralised liquidity management system for the more significant units but with a centralised risk oversight and management system.
- Sound identification, measurement, management, control and reporting processes with respect to the liquidity and funding risks to which the Group is exposed.
- Existence of a transfer price system to transfer funding costs.
- A balanced funding structure based primarily on customer deposits.
- A broad base of unencumbered liquid assets that can be accessed immediately to generate liquidity and which comprises the Group's first line of defence.
- Diversification of funding sources, with controlled recourse to short-term wholesale funding and without depending on any specific funding provider.
- Self-funding of significant foreign banking subsidiaries.
- Monitoring of the amount of the balance sheet being used as collateral in funding transactions (encumbrance).
- Maintenance of a second line of liquidity consisting of the capacity to issue mortgage covered bonds and public sector covered bonds.
- Availability of a Liquidity Contingency Plan.

Although ring-fencing will not officially come into force until 2019, TSB is an autonomous unit within the Group's liquidity management as it is an independent LMU. The future economic performance of the United Kingdom should not generate liquidity problems, as TSB operates independently from its parent company.

## Tools/metrics for monitoring and managing liquidity risk

The Banco Sabadell Group defines two series of metrics that enable it to measure and control liquidity risk: tier 1 metrics in the RAS, and tier 2 metrics. Liquidity risk is also monitored and controlled on a daily basis through the early warning indicators (EWI) and the Structural Treasury Report.

The Board of Directors of Banco Sabadell is responsible for defining the Group's liquidity and funding risk appetite statement (RAS) at consolidated level and for setting indicators that LMUs must include in their local RAS, independently of any other indicators they use.

The RAS is comprised of quantitative metrics that allow for objective monitoring of risk management and complementary qualitative aspects.

Aside from the metrics contained in the Risk Appetite Framework, each LMU defines a set of second-tier metrics which contribute to analysing and monitoring the funding and liquidity risk. These metrics are monitored continuously by each of the local asset and liability committees (ALCOs).

The Group has also designed and implemented a system of early warning indicators (EWIs) at the LMU level, which includes market and liquidity indicators adapted to each LMU's funding structure and business model. These metrics at LMU level complement the RAS indicators and second-tier metrics and enable local threats to the liquidity position and funding structure to be detected in advance, thereby facilitating the decision-making process and implementation of corrective actions and reducing the risk of spillover to other LMUs.

Banco Sabadell has a Liquidity Contingency Plan (LCP) that sets out the strategy for ensuring that the institution has sufficient management capacities and measures in place to minimise any negative impacts of a crisis affecting its liquidity position and to enable it to return to a business-as-usual situation. The LCP also aims to facilitate operational continuity in liquidity management, particularly in the event that the crisis has arisen due to flawed performance of one or more market infrastructures. The LCP can be triggered in response to different crisis scenarios, either in the markets or in the entity itself. In general, and in line with the impact channels considered in the entity's stress tests, these scenarios can be classed as systemic crises, idiosyncratic crises or combined crises.

The control and reporting framework for risk management limits is comprised of the following factors, among others:

- Daily monitoring of risk indicators and limits, with reporting to the various management units.
- Systematic oversight and analysis of headroom within the limits, identifying cases of breach and activating the necessary procedures to correct the situation.

## Funding strategy and liquidity trends

Funding strategy and liquidity trends in the Group's main source of funding is customer deposits (mainly demand accounts and deposits with agreed maturity captured through the branch network), supplemented by funding through the interbank and capital markets in which the entity maintains a number of short- and long-term funding programmes in order to achieve an appropriate level of diversification in terms of product, term and investor. The entity also maintains a diversified portfolio of liquid assets, mostly eligible as collateral for European Central Bank funding transactions.

## On-balance sheet customer funds

At 31 December 2017, on-balance sheet customer funds amounted to €132,096 million, compared with €133,457 million at 2016 year-end and €131,489 million at 2015 year-end (a decrease of 1.0% in December 2017 compared with December 2016, and an increase of 1.5% in December 2016 compared with December 2015). The downward trend in interest rates in the financial markets

led to a change in the composition of customer funds on the balance sheet which shifted from deposits with agreed maturity to demand accounts and off-balance sheet assets. At 31 December 2017, the balance of demand accounts totalled €98,020 million (+6.5%), to the detriment of deposits with agreed maturity, which declined by 19.8% (T3).\*

The bank's deposits are marketed through the following group companies and business units: Commercial Banking, Corporate Banking and Global Business, Private Banking and TSB.

During 2017, the rising trend in the funding gap observed in previous year was maintained. This enabled the bank to maintain its policy of partially refinancing maturities in the capital markets and, at the same time, to continue reducing the group's loan-to-deposit (LtD) ratio (from 147% at the end of 2010 to 104.3% at the end of 2017) (T4).

To calculate the loan to deposit (LtD) ratio, net customer loans (adjusted for subsidised funding) is taken as the numerator, and retail funding as the denominator.

## Capital markets

Recourse to funding in the capital markets has been declining in recent years as a consequence of, inter alia, the positive trend in the funding gap. At the end of 2017, the outstanding balance of capital market funding stood at €22,390 million, compared with €25,160 million at

the end of 2016. As of 2017 year-end, of the amount of capital market funding, €13,335 million were in the form of mortgage covered bonds, €2,037 million were commercial paper and ECP placed with wholesale investors, €1,669 million were senior debt, €2,497 million were subordinated debt and preferred securities, €2,820 million were asset-backed securities placed in the market (of which €925 million correspond to TSB), and €33 million were other medium- and long-term financial instruments (T5, G15 & G16).

The Banco Sabadell Group is an active participant in the capital markets and has a number of active funding programmes with a view to diversifying its sources of liquidity.

In terms of short-term financing, the entity maintains a commercial paper programme and a Euro Commercial Paper (ECP) programme:

— Commercial paper programme: this programme regulates issues of commercial paper aimed at institutional and retail investors. On 2 March 2017, Banco Sabadell registered its commercial paper programme for 2017 with the Spanish National Securities Market Commission (CNMV) with an issue limit of €7,000 million and scope for extension to €9,000 million. The outstanding balance of the commercial paper programme declined during the year. At 31 December 2017, the outstanding balance stood at €2,823 million (net of commercial paper acquired by group undertakings), compared with €3,676 million at 31 December 2016.

€M

	2017	3 months	6 months	12 months	>12 months	No fixed maturity
<b>Total on-balance sheet customer funds (*)</b>	<b>132,096</b>	<b>8.4%</b>	<b>4.8%</b>	<b>7.2%</b>	<b>5.4%</b>	<b>74.2%</b>
Fixed-term deposits	29,816	33.9%	19.4%	29.7%	17.1%	—
Demand accounts	98,020	—	—	—	—	100.0%
Retail issues	4,260	24.0%	12.9%	15.2%	47.8%	—

(\*) Includes customer deposits (ex-repos) and other liabilities placed via the branch network: mandatory convertible bonds, non-convertible bonds issued by Banco Sabadell, commercial paper and others.

**T3** On-balance sheet customer funds, by maturity

€M

	Excl. TSB 2016	Excl. TSB 2017	Group total 2016	Group total 2017
Gross loans and advances to customers, excluding repos	115,640	109,742	150,087	145,323
NPL and country-risk provisions	(4,835)	(3,646)	(4,921)	(3,727)
Brokered loans	(4,900)	(3,110)	(4,900)	(3,835)
<b>Adjusted net loans and advances</b>	<b>105,905</b>	<b>102,986</b>	<b>140,266</b>	<b>137,761</b>
On-balance sheet customer funds	99,123	97,686	133,457	132,096
<b>Loan to deposits ratio (%)</b>	<b>106.8</b>	<b>105.4</b>	<b>105.1</b>	<b>104.3</b>

\* For further details of off-balance sheet customer funds managed by the Group and those marketed but not managed by the Group, see note 28 to the 2017 consolidated financial statements.

**T4** Key figures and basic liquidity ratios

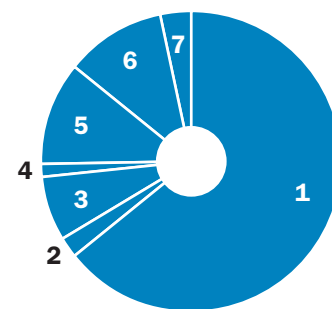
— Euro Commercial Paper (ECP) Programme, aimed at institutional investors, under which short-term securities are issued in several currencies: EUR, USD and GBP. On 18 December 2015, Banco Sabadell renewed its Euro Commercial Paper Programme for a maximum nominal amount of €3,500 million. At 31 December 2017, the outstanding balance stood at €346 million, in comparison with €246 million at the end of 2016.

Regarding medium- and long-term funding, the entity has the following programmes in place:

— Programme for the issuance of non-equity securities (“Fixed Income Programme”), registered with CNMV on 11 April 2017, for a maximum amount of €16,500 million: this programme regulates the bonds and debentures, both non-convertible and subordinated, and mortgage covered bonds, public-sector covered bonds and structured bonds issued under Spanish law through the CNMV and aimed at institutional and retail investors, both domestic and foreign. The limit available for new issues under the Banco Sabadell Programme for the issuance of non-equity securities in 2017 was €10,046 million at 31 December 2017 (€10,638.8 million under the Fixed Income Programme at 31 December 2016). During 2017, Banco Sabadell issued a total of €3,044.6 million in public issues under the existing Fixed-Income Programme.

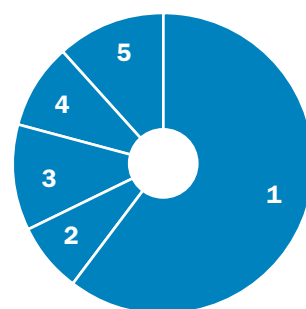
During the year, the entity tapped the market on several occasions, taking advantage of liquidity windows.

— Euro Medium Term Notes (EMTN) Programme, registered on 22 March 2017 with the Irish Stock Exchange. This programme allows senior debt (preferred and non-preferred) and subordinated bonds to be issued in any currency, with a maximum limit of €5,000 million. On 5 December 2017, Banco Sabadell issued €1,000 million in senior debt under this programme, maturing in five years and three months.



**G15 Funding structure**  
31.12.2017 (%)

1	Deposits	64.3
2	Retail issues	2.1
3	Repos	7.2
4	ICO funding	1.2
5	Wholesale market	11.1
6	ECB	10.9
7	Bank of England	3.2



**G16 Institutional issues**  
31.12.2017 (%)

1	Mortgage covered bonds	60.4
2	Senior debt	7.6
3	Subordinated and AT1	11.3
4	ECP + institutional commercial paper	9.2
5	Asset-backed securities	11.5

€M

	2018	2019	2020	2021	2022	2023	>2023 Outstanding balance	
Mortgage-backed bonds and mortgage covered bonds (*)	1,556	1,124	2,015	1,808	1,683	1,388	3,761	13,335
Senior debt (**)	644	—	—	—	25	1,000	—	1,669
Subordinated debt and preferred securities (**)	—	—	403	434	—	—	1,660	2,497
Other medium- and long-term financial instruments (**)	18	—	—	10	—	—	5	33
<b>Total</b>	<b>2,218</b>	<b>1,124</b>	<b>2,418</b>	<b>2,252</b>	<b>1,708</b>	<b>2,388</b>	<b>5,426</b>	<b>17,534</b>

(\*) Collateralised  
(\*\*) Uncollateralised

**T5 Maturity**  
of issues aimed  
at institutional  
investors,  
by product type

Also, during the year, the Bank performed two issues of contingently convertible preferred securities (Additional Tier 1). On 18 May 2017, Banco Sabadell made an inaugural issue of Additional Tier 1 securities amounting to €750 million at a fixed rate of 6.5%. Subsequently, on 23 November 2017, a second issue of Additional Tier 1 was made for an amount of €400 million at a fixed rate of 6.125%.

On 24 February 2017, the FCA (Financial Conduct Authority) approved TSB's new mortgage covered bond programme with a maximum issue limit of £5,000 million. On 7 December 2017, TSB made its inaugural issue of mortgage covered bonds by placing £500 million in the institutional market at 5 years paying a coupon of £ Libor 3m + 24pb.

With regard to asset-backed securities:

- Since 1993, the Group has been very active in this market and has taken part in various securitisation programmes, sometimes acting together with other highly solvent institutions, assigning mortgage loans, SME loans, consumer loans and debt claims deriving from finance lease contracts.
- There are currently twenty-seven outstanding issues of asset-backed securities (including those issued by Banco Guipuzcoano, Banco CAM, BMN, Banco Gallego and TSB). Although the entity retained some of the bonds as liquid assets eligible as collateral for European Central Bank funding transactions, the remainder of the bonds were placed in the market. At the end of 2017, the balance of asset-backed securities placed in the market stood at €2,820 million.
- For efficiency reasons, nine asset-backed securities were redeemed before maturity in 2017 (for more information on securitisation trusts, see Schedule 2 to the 2017 consolidated financial statements).
- On 4 December 2017, Banco Sabadell issued residential mortgage-backed securities under the name TDA Sabadell RMBS 4 for a total amount of €6,000 million, all of which were retained in the portfolio. Subsequently, on 20 December 2017, Banco Sabadell issued IM Sabadell Pyme 11, a bond backed by loans to SMEs, for an amount of €1,900 million; €150 million were placed in the market and the remainder was retained.

In general terms, the tone of the markets was positive in 2017, as reflected in the compression of credit spreads, although there were some volatility spikes due mainly to political uncertainty which triggered market tensions and occasional market closures.

In March 2016, the European Central Bank announced new economic stimulus measures through a new targeted long-term refinancing operation (TLTRO II), consisting of four auctions of liquidity at a term of four years, to be performed between June 2016 and March 2017. Banco Sabadell took part in TLTRO II, for a total of €20,500 million (€10,000 in the first auction, in June 2016, and €10,500 in the last auction, in March 2017).

In 2016, the Bank of England also implemented a series of measures to support economic growth. They include a reduction in the bank base rate and the introduction of the Term Funding Scheme (TFS) in August 2016 to incentivise lending by allowing UK banks to borrow at 4 years secured by eligible collateral. As a member of the Sterling Monetary Framework (SMF), TSB made use of the TFS in 2017, drawing a total of €6,334 million by the end of 2017.

## Liquid assets

In addition to these sources of funding, Banco Sabadell maintains a liquidity buffer in the form of liquid assets to cover any liquidity needs (T6).

With respect to 2016, Banco Sabadell's first line of liquidity expanded by €6,284 million, due mainly to the funding gap. In particular, the balance at central banks and the net interbank position increased by €14,359 million in 2017, while the available balance eligible for ECB transactions declined by €5,886 million, of which €1,476 million are related to the decline in the balance available under the Bank of Spain facility. Marketable securities that are ineligible for ECB transactions declined by €2,189 million, largely as a result of the assets of Sabadell United Bank (SUB) at 2016 year-end, which no longer appear in the 2017 figure because of the sale of that subsidiary.

As for TSB, the first line of liquidity at 31 December 2017 was mainly comprised of gilts amounting to €761 million (€1,678 million at 31 December 2016) and surplus reserves at the Bank of England (BoE) amounting to €8,286 million (€4,191 million at 31 December 2016), mostly from draws on the TFS during the year.

It should be noted that Banco Sabadell Group applies a decentralised liquidity management model. This model tends to limit the transfer of liquidity between the various subsidiaries involved in liquidity management, thereby limiting intra-group exposures beyond any restrictions imposed by local regulators on each subsidiary. As a result, the subsidiaries involved in liquidity management determine their liquidity position by considering only those assets in their possession which meet the eligibility, availability and liquidity requirements established both internally and in regulations in order to comply with the regulatory minima.

There are no significant amounts of cash and cash equivalents which are not available for use by the Group.

In addition to the first line of liquidity, the bank maintains a buffer of mortgage assets and loans to public authorities that are eligible as collateral for mortgage covered bonds and public sector covered bonds, respectively, which, at the end of 2017, added €2,666 million in terms of the capacity to issue new covered bonds that are eligible as collateral for the ECB facility. At the end of 2017, available liquidity amounted to €35,831 million in cash, corresponding to the amount of the first line of liquidity plus the bank's capacity at year-end to issue mortgage and public sector covered bonds.

## Fulfilment of regulatory ratios

As part of its liquidity management approach, the Banco Sabadell Group monitors the short-term liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), and reports the necessary information to the regulator on a monthly and quarterly basis, respectively. The measurement of liquidity based on these metrics forms part of the liquidity risk control in the LMUs as a whole.

Since 1 January 2017, the regulatory minimum LCR is 80%, a level which is comfortably surpassed by all of the entity's LMUs. At group level, throughout the year the LCR remained well above 100% on a stable basis; in particular, Banco Sabadell Spain and TSB have ample LCR levels. At 2017 year-end, the LCR ratio was 168% excl. TSB and 295% at TSB.

The NSFR is still being considered and defined, although it was due to come into force in January 2018; like the LCR, it is to be phased in gradually. The Group has nonetheless already commenced tracking this ratio as a liquidity metric at the LMU level.

Given the bank's funding structure, with a preponderance of customer deposits, and as the majority of its market funding is in the medium/long-term, this ratio is consistently over 100%.

## Market risk

This risk is defined as arising from the possibility of loss in the market value of financial asset positions due to variations in risk factors with an impact on their market prices or volatility or the correlation between them.

Those positions that generate market risk are usually held in trading activities, consisting of hedging transactions arranged by the Bank to provide services to its customers as well as discretionary proprietary positions.

It may also arise simply due to maintaining over-all balance sheet positions (also known as structural

positions) that are left open in net terms. In the latter case, the entity uses the market risk management and monitoring system to manage the structural market risk position.

The market risk acceptance, management and oversight system is based on setting limits for specifically assigned positions and the approval of each business unit's transactions; in this way, the various management units have the obligation to manage their positions within the established limits and to obtain approval for transactions from the risks area.

## Trading activity

The principal risk factors considered by Banco Sabadell in its trading activity are:

- Interest rate risk: risk associated with the possibility of fluctuations in interest rates adversely affecting the value of a financial instrument. This is reflected, for example, in interbank deposit operations, fixed-income and interest rate derivatives.
- Credit spread risk: this risk derives from the fluctuations in the credit spreads at which instruments are quoted with respect to other benchmark instruments, such as interbank interest rates. This risk occurs mainly in fixed-income instruments.
- Exchange rate risk: risk associated with the fluctuation in exchange rates with respect to the reference currency. In the case of Banco Sabadell, the reference currency is the euro. This risk occurs mainly in currency exchange transactions and currency derivatives.
- Equity risk: risk which derives from the fluctuation in the value of capital instruments (shares and indices). This risk is reflected in the market prices of the securities and their derivatives.

Commodity price changes did not have an impact in the year since the Group's exposure, both direct and to the underlying assets, is negligible.

€M

	2017
Cash (*) + Net interbank position	22,361
Available under ECB facility	5,393
Collateral provided under ECB facility (**)	26,894
Balance drawn under Bank of Spain facility (***)	21,501
Assets eligible as collateral for ECB facility not yet used	4,013
Other marketable assets ineligible for central bank facility (****)	1,398
Pro memoria: Balance drawn under Bank of England Term Funding Scheme	6,334
<b>Total available liquid assets</b>	<b>33,165</b>

**T6** Available liquid assets

(\*) Excess reserves at central banks.

(\*\*) Market value after applying ECB haircut for monetary policy transactions.

(\*\*\*) Includes TLTRO-II.

(\*\*\*\*) Market value after applying the Liquidity Coverage Ratio (LCR) haircut. Includes fixed-income securities classified as high-quality liquid assets (HQLA) for the purposes of the LCR and other marketable securities of group undertakings.

Market risk in trading activities is measured using the VaR and stressed VaR methodologies. This allows for a standardisation of risks across different types of financial market transactions.

The VaR provides an estimate of the maximum potential loss posed by a position due to an adverse but normal movement of any of the identified parameters influencing market risk. This estimate is expressed in monetary terms and refers to a specific date, a specified level of confidence and a specific time horizon. A 99% confidence level is used. Due to the low complexity of the instruments and the high liquidity of the positions, a time horizon of 1 day is used.

The methodology used to calculate VaR is historical simulation. The advantages of this methodology are that it is based on the full appreciation of the transactions under recent historic scenarios, and it is not necessary to make assumptions about the distribution of market prices. The main limitation to this methodology is its dependence on historical data, given that, if a potential event did not materialise within the range of historical data used, it will not be reflected in the VaR information.

The reliability of the VaR methodology can be checked using backtesting techniques, which serve to verify that the VaR estimates fall within the contemplated confidence level. Back testing consists of a comparison between daily VaR and daily results. If losses exceed the level of VaR, an exception occurs. In 2017, no exceptions occurred in backtesting due to the low exposure to the year's significant events, such as the increase in euro swap rates and the dollar's devaluation against the euro on 27 June, and the changes in dollar short rates in December.

Stressed VaR is calculated in the same way as VaR but with a historical window of variations in the risk factors in stressed market conditions. This stress situation is determined on the basis of current transactions, and it can vary if the risk profile of portfolios changes. The methodology used for this risk metric is historical simulation.

This is supplemented with additional measures such as sensitivities, which refer to the change produced in the value of a position or portfolio in response to a change in a specific risk factor, and also with the calculation of management results, used to monitor stop-loss limits.

Furthermore, specific simulation exercises are carried out with extreme market scenarios (stress testing), in which the impacts on portfolios of different past and theoretical scenarios are analysed.

Market risks are monitored on a daily basis, and risk levels and compliance with the limits established by the Risk Committee for each management unit (limits based on nominal, VaR and sensitivity, as applicable) are reported to the oversight bodies. This makes it possible to keep track of changes in exposure levels and measure the contribution by each risk factor.

Trading market risk incurred in terms of the 1-day VaR with 99% confidence is shown in table T7.

€M

	2017		
	Average	Maximum	Minimum
Interest rate risk	1.13	3.27	0.40
Exchange rate risk in trading position	0.17	0.41	0.05
Equities	1.17	3.40	0.30
<b>Credit spread</b>	<b>0.37</b>	<b>2.38</b>	<b>0.08</b>
<b>Aggregated VaR</b>	<b>2.84</b>	<b>5.34</b>	<b>1.35</b>

T7 VaR

# Structural risks concerning interest rates and exchange rates

## Structural interest rate risk

Structural interest rate risk (also known as Interest Rate Risk in the Banking Book, or IRRBB) is inherent to banking and is defined as the possibility of incurring losses as a result of the impact of interest rate fluctuations on the income statement (revenues and expenses) and on the entity's equity structure (current value of assets, liabilities and off-balance sheet positions that are sensitive to interest rates). The following are considered under structural interest rate risk:

- Repricing risk: related to a mismatch between maturity dates and repricing of assets, liabilities and short- and long-term off-balance sheet positions.
- Curve risk: arising from changes in the level or slope of the yield curve.
- Basis risk: arising from hedging an interest rate exposure using exposure to an interest rate that is repriced in different conditions.
- Optionality risk: arising from options, including implicit options.

The metrics developed to control and monitor the Group's structural interest rate risk are aligned with market best practices and are implemented consistently across all balance sheet management units (BMUs) and by local asset and liability committees. The effect of diversification between currencies and BMUs is taken into account when presenting overall key figures.

The Group's current interest rate risk management strategy relies particularly on the following principles and pillars, in line with the business model and the defined strategic objectives:

- Each BMU has appropriate tools and processes and robust systems in order to properly identify, measure, manage, control and report IRRBB. This enables them to obtain information from all of the identified sources of IRRBB, assess their effect on financial margins and the economic value of assets and measure the vulnerability of the Group/BMU to potential losses deriving from IRRBB under different stress scenarios.
- At corporate level, a set of limits is established for overseeing and monitoring the level of IRRBB exposure that are appropriate in the light of internal risk tolerance policies. However, each BMU has the autonomy to set any other additional limits it deems necessary, based on its specific needs and the nature of its activities.
- The existence of a transfer pricing system.
- The set of systems, processes, metrics, limits, reporting and governance covered by the IRRBB strategy must comply with regulatory requirements.

The metrics used to monitor structural interest rate risk include, on one hand, the interest rate gap (G17), which is a static measure that shows the breakdown of maturities and repricing of sensitive items on the balance sheet. For items with no contractual maturity, expected maturities estimated using the bank's past experience are considered in order to make assumptions as to stability and remuneration on the basis of the product type.

Additionally, the sensitivity of key economic figures (net interest income, economic value) to changes in the yield curve is calculated. Table T8 shows the interest rate risk levels in terms of the sensitivity of the Group's main foreign currencies at the end of 2017.

In addition to the impact on net interest income within one year, presented in table T8, the Group calculates the impact on net interest income over two years, the result of which is notably more positive for all currencies. In particular, the sensitivity of net interest income in the second year considering the group's main currencies, with a high pass-through rate (i.e. where the bulk of any increase in reference interest rates is transferred to deposits with agreed maturity and remunerated sight accounts), is 14.4%, while a medium pass-through would put it at 20% (T9).

Given the current level of market interest rates, the scenario of a decline in the points on the curve where rates are positive uses a maximum shift of 100 basis points in each term, so that the resulting interest rate is always greater than or equal to zero. No shift is applied to points on the curve where the market rate is negative.

Derivatives are arranged in the financial markets to hedge risks, mainly interest rate swaps (IRS), which qualify for hedge accounting. Two different forms of macro-hedging are used:

- Macro-hedging of interest rates on cash flows, whose purpose is to reduce the volatility of net interest income as a result of interest rate fluctuations, for a one-year time horizon.
- Fair value interest rate macro-hedges, whose purpose is to maintain the economic value of the hedged items, consisting of assets and liabilities at fixed interest rates.

## Structural exchange rate risk

This risk arises from changes in the market exchange rates between currencies, which may generate losses in financial investments or in permanent investments in overseas offices and subsidiaries which use currencies other than the euro.

The purpose of managing structural exchange rate risk is to minimise the impact of adverse movements in currency markets on the value of the portfolio and the entity's equity. The risk appetite defined in the RAS takes precedence and the established levels for the risk metrics must be complied with at all times.

Exchange rate risk is monitored regularly and reports on current risk levels and on compliance with the established limits are sent to the risk control bodies. The main metric is currency exposure (as a percentage of Tier 1), which measures the sum of the entity's net open interest (assets less liabilities) in each currency through any type of financial instrument (FX spot, forward and option transactions), measured in euro and in terms of Tier 1.

Compliance with and the effectiveness of the Group's targets and policies are monitored and reported on a monthly basis to the Risk Committee and to the Audit and Control Committee, respectively.

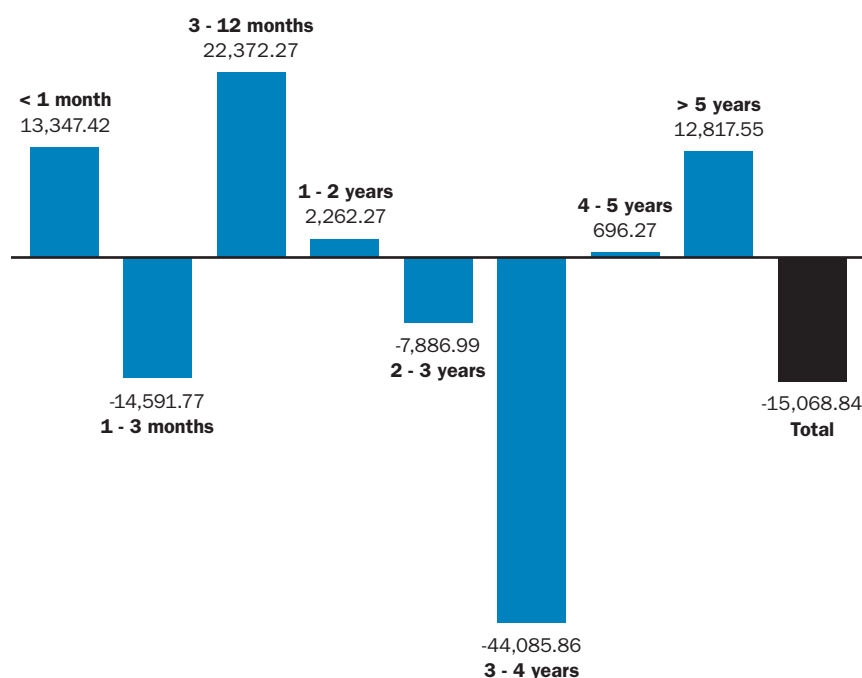
The bank's Financial Department, through the ALCO, designs and implements the strategies for hedging the structural position in foreign currency with the priority objective of minimising the impact of exchange rate fluctuations on capital ratios (CET1).

Sabadell United Bank, N.A. was effectively disposed of on 31 July 2017 (see note 2 to the 2017 consolidated financial statements), which reduced the structural position in

USD from USD 811 million at 31 December 2016 to USD 442 million (€368 million) at 31 December 2017.

With respect to permanent investments in Mexican pesos, given the uncertainty surrounding NAFTA and the heightened political risk in Mexico as the July 2018 presidential elections approach, capital hedges were adjusted from MXN 1,293 million at 31 December 2016 to MXN 7,054 million at 31 December 2017, i.e. 73% of the total investment (see note 12 to the 2017 consolidated financial statements, under "Hedging of net investments in foreign businesses").

As regards the structural position in sterling, in a context of economic weakness and internal political instability in the United Kingdom, Banco de Sabadell, S.A. continuously monitors the EUR/GBP exchange rate. The Group has adopted a hedging policy which aims to mitigate the negative effects on capital ratios, as well as on the earnings generated by its business in GBP, as a result of the evolution of the EUR/GBP exchange rate. Accordingly, the Bank has continued to hedge the expected profits



G17 Interest rate gap (€M)

%

Instantaneous parallel increase of 100bp		
Interest rate sensitivity	Impact on net interest income	Impact on economic value
EUR	4.0%	2.1%
GBP	1.2%	0.2%
USD	0.1%	(0.5%)

T8 Sensitivity to interest rate risk, by currency

%

Instantaneous parallel increase of 100bp		
Impact on net interest income in the second year	High pass-through	Average pass-through
Global	14.4%	20.0%
Of which EUR	11.0%	13.8%
Of which GBP	2.9%	5.6%

T9 2-year sensitivity

and flows from subsidiary TSB through open interest in GBP to offset fluctuations in that currency's exchange rate; that interest is recognised as a trading position.

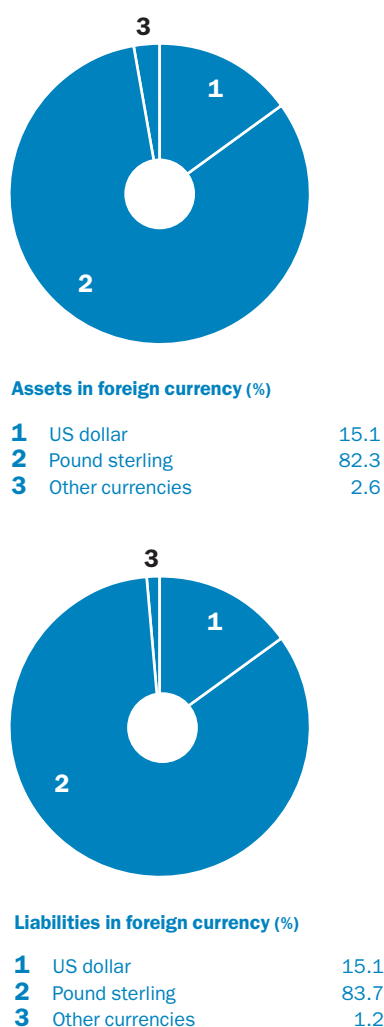
As a result, capital hedging was adjusted in 2017 from GBP 1,368 million at 31 December 2016 to GPB 1,268 million at 31 December 2017, representing 63% of the total investment (see note 12 to the 2017 consolidated financial statements).

The value in euro of the assets and liabilities denominated in foreign currencies held by the group at 31 December 2017, classified on the basis of their nature, is shown in figure G18.

The net of foreign currency assets and liabilities position includes the bank's structural position measured at historical exchange rates, amounting to €1,372 million, of which €834 million correspond to permanent shareholdings in GBP, €368 million to permanent shareholdings in USD and €131 million to stakes in MXN. Net assets and liabilities valued at the exchange rate are hedged through foreign exchange forward transactions and options, in accordance with the group's risk management policy.

At the end of 2017, the sensitivity of equity exposure to a 1% devaluation against the euro of the main currencies to which the bank is exposed amounted to €14 million, of which 61% related to the pound sterling, 27% to the US dollar, and 10% to the Mexican peso.

**G18** Value in euro of foreign currency assets and liabilities (%)



## Operational risk

Operational risk is defined as the risk of incurring losses due to inadequate or failed internal processes, people or systems or due to unexpected external events. This definition includes reputational, behavioural, technology, model and outsourcing risks.

Management of operational risk is decentralised and devolved to process managers throughout the organisation. The processes they manage are indicated in the corporate process flowchart, which facilitates the distribution of information throughout the organisation. The Group has a specialised central unit to manage operational risk whose main functions are to coordinate, supervise and promote the identification, assessment and management of risks by process managers in line with the Banco Sabadell Group's risk management approach.

Senior management and the Board of Directors are directly and effectively involved in managing this risk by approving the Risk Appetite Framework and its implementation as proposed by the Operational Risk Committee. The latter is formed of senior management members from different functional areas. Management of this risk also requires regular audits to be carried out on the application of the management framework and the reliability of the information provided, as well as internal validation tests of the operational risk model. Operational risk management is based on two lines of action:

The first is based on the analysis of processes, identification of risks associated with such processes that may result in losses, and a qualitative assessment of the risks and the associated controls, all carried out jointly by process managers and the central operational risk unit. This provides an assessment which lets the entity know its future exposure to risk in terms of expected and unexpected loss, and also allows trends to be projected and mitigating actions to be targeted appropriately.

This is complemented by the identification, monitoring and active management of the risk through the use of key risk indicators, resulting in alerts that are triggered by any increase in this exposure, the identification of the causes of such an increase, and measurement of the efficacy of the controls and of any improvements.

At the same time, business continuity plans are designed and implemented for any processes identified as being of high criticality in the event of outage. A qualitative estimate is made of the reputational impact of the identified risks if they were to materialise.

The second line of action is based on experience. It consists of compiling all losses suffered by the entity in a database, which provides information about the operational risks encountered by each line of business, as well as their causes, so that action may be taken to minimise them. Additionally, this information makes it possible to cross-check the estimates of potential losses with actual losses, in terms of both frequency and severity, iteratively improving the estimates of exposure levels (G19 & G20).

Operational risk includes management and oversight of the following main risks:

- Reputational risk: the possibility of losses arising from negative publicity related to the bank's practices and activities, potentially leading to a loss of trust in the institution, with an impact on its solvency.
- Technology risk: possibility of losses due to inability of the systems infrastructure to fully support the continuation of ordinary business activity.
- Outsourcing risk: the possibility of losses deriving from failure by suppliers to provide subcontracted services or their discontinuation, weaknesses in their systems' security, disloyal conduct on the part of their employees or a breach of applicable regulations.
- Model Risk: the possibility of losses arising from decision-making based on the use of inadequate models.

## Tax risk

Tax risk is defined as the probability of failing to comply with the objectives set out in Banco Sabadell's tax strategy from a dual perspective due to either internal or external factors:

- On one hand, the probability of failing to comply with the tax obligations that may result in a failure to pay taxes that are due or the occurrence of any other event that impairs attainment of the Bank's goals.
- On the other hand, the probability of paying taxes not actually due under tax obligations, thus impairing the position of shareholders or other stakeholders.

Banco Sabadell's tax risk policies aim to set out principles and guidelines in order to ensure that any tax risks that may affect the group's tax strategy and objectives are systematically identified, measured and managed so as to comply with the new requirements of the Spanish Capital Companies Act and meet the demands of the Banco Sabadell Group's stakeholders.

Banco Sabadell aims to meet its tax obligations at all times while conforming to the current legal framework in matters relating to taxation.

Banco Sabadell's tax strategy also reflects its commitment to promoting responsible taxation, promoting safety and developing transparency schemes in order to strengthen trust among stakeholders.

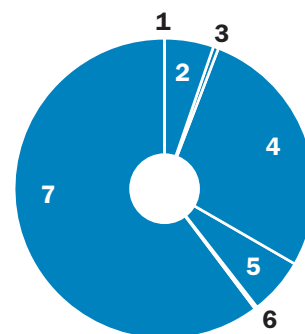
The tax strategy is aligned with the Group's business strategy, and tax issues are managed efficiently in line with the principles of prudence and minimisation of tax risk.

The Board of Directors of Banco Sabadell, under the mandate set out in the Spanish Capital Companies Act for the improvement of corporate governance, is responsible for the following on a non-delegable basis:

- Setting the company's tax strategy.
- Approving investments and operations of all types which are considered strategic or to have a particular tax risk due to their amounts or specific characteristics, except when such approval corresponds to the General Meeting.

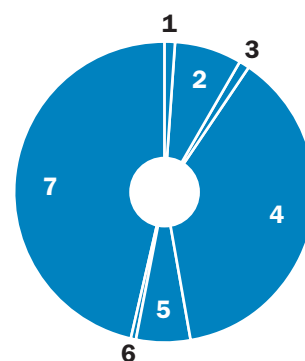
- Approving the creation and acquisition of holdings in special purpose entities or entities domiciled in countries or territories classified as tax havens.
- Approving any similar transaction which, due to its complexity, might undermine the transparency of the company and its Group.

The functions of the Board of Directors of Banco Sabadell include the obligation to approve the corporate tax policy and ensure compliance by implementing an appropriate control and oversight system as part of the Group's general risk management and control framework.



**G19**  
Breakdown of operational risk events by amount (last 12 months) (%)

1	Internal fraud	0.2
2	External fraud	5.2
3	Staff relations and job security	0.5
4	Customers, products and business practices	27.6
5	Property damage	6.1
6	Business disruption/ systems failure	0.3
7	Process execution, delivery and management	60.1



**G20**  
Breakdown of operational risk events by amount (last 5 years) (%)

1	Internal fraud	1.3
2	External fraud	7.3
3	Staff relations and job security	1.1
4	Customers, products and business practices	37.7
5	Property damage	5.9
6	Business disruption/ systems failure	0.4
7	Process execution, delivery and management	46.3

## Compliance risk

Compliance risk is defined as the risk of incurring legal or administrative penalties, significant financial losses or an impairment of reputation due to a breach of laws, regulations, internal rules or codes of conduct applicable to the banking industry.

An essential aspect of the Banco Sabadell Group's policy, and one of the foundations of its organisational culture, is meticulous compliance with all legal provisions. Achievement of the business objectives must be compatible, at all times, with compliance with the law and the application of best practices.

To this end, the Group has a Compliance Department whose purpose is to promote and endeavour to reach the highest levels of compliance with the legislation in force and principles of professional ethics within the Group so as to minimise the possibility of non-compliance and ensure that any instances of non-compliance are identified, reported and diligently resolved, and that the appropriate preventive measures are adopted if not already in place.

The compliance model centralises responsibility for establishing policies, procedures and controls and execution of oversight programmes in the parent undertaking. Execution of specific programmes is decentralised to the overseas subsidiaries and branches, while retaining functional responsibility.

It is a flexible risk-focused model which can be adapted to the Group's strategy at all times and leverages synergies, maintaining an overall approach to those aspects that are general in scope and/or which require major technological developments, but also adapting to the specific features and legislation affecting each business or country.

The main challenge is to standardise the levels of compliance oversight across the Group and establish minimum standards for mandatory compliance, regardless of the activity or country.

This model is comprised of two main pillars:

- 1** A central unit providing services to the entire Group in pursuit of comprehensive management of compliance risk. Its main activity is the analysis, distribution and oversight of the implementation of any new regulations with an impact on the Group, as well as risk-focused oversight of compliance with pre-existing regulations.

It is also directly responsible for the implementation of a number of processes that are classified as of high risk as they require direct and comprehensive control: prevention of money laundering and terrorist financing; oversight of market abuse; oversight of compliance with the Internal Code of Conduct and the implementation and monitoring of measures for investor protection (MiFID).

- 2** A network of compliance officers in each overseas subsidiary and branch (functionally dependent on the central compliance unit and hierarchically dependent on the head of the overseas subsidiary/branch), who execute their own oversight programmes and report periodically to the central unit, ensuring compliance with the internal rules and the legislation in force in all countries and activities in which the Group operates.

To ensure its efficiency, this model is implemented and enhanced using six catalysts (technology, training, procedures, communication channels, oversight and monitoring programmes, and product and rule approval processes).