Main risks in the risk appetite framework

G2 Main risks

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 RAS is comprised of quantitative metrics that allow for objective monitoring of risk management and complementary 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 structure 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 at least once per year. The Board of Directors is responsible for its approval. The document was last updated in January 2017.

For each significant risk of the Group, details are given of the main persons or units involved, their functions, policies, methods and procedures, as well as control and monitoring mechanisms. Details are also given of 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. The most significant aspects in 2016 are described below.***



 $^{^{\}ast}$ For additional information, see Note 4 to the 2016 consolidated annual accounts.

^{**} 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".

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 organization as a result of continuous development over decades. Among the aspects that characterise this strong risk culture are:

- A high level of involvement of the Board of Directors in risk management and control. Since 1994, the Bank has had a Risk Control Committee whose primary function is to supervise the management of all significant risks and to bring them into line with the profile defined by the Group.
- A Basic Management Team as a key player in 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. All of the foregoing requires a high degree of involvement by the team in the decision-making process, and also contributes depth and solidity to the decisions.
- High degree of specialisation: specific management teams are created in each segment (real estate, corporate, businesses, SMEs, retail, banks and countries, etc.), which allows for a specialised management approach in each area.
- Advanced internal models for credit ratings 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.
- Credit risk is rigorously monitored through an advanced system of early warnings for businesses and individuals. The risk monitoring at customer and group level can be divided into three types: operational, systematic and comprehensive monitoring. 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 warnings are based on internal information such as the number of days past-due, overdrafts in commercial credit lines, bank guarantees and international credit, as well as external information, such as customers classed as defaulters in the rest of the financial system or in information available from credit bureaux.

- An advanced model for managing non-performing exposures which enhances early detection and specialized 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 everyday processes. 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.

Since 2014, the Banco Sabadell group has had 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.

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 RAS (G3) is composed of quantitative metrics which allow for objective monitoring to be carried out of the achievement of objectives and of established limits, and of qualitative elements that supplement these measures 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 main qualitative metrics guide the Group's risk control and management:

- The Bank'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 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 starting up 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 predefined 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 risk concentration levels that might 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.
- Achievement of the business objectives must be compatible, at all times, with compliance with the law and the application of the 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 for 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 director of risk 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 sub-committees within the Board of Directors which are involved in risk management and control. The Bank also has several other Committees which take part in this function (G4).

The Group also establishes its control framework 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

 Board committe	es related	to risk m	anagement						G4 Board of Directors Approval of the RAS and risk
Risk Committee		Executi	ve Committee		Audit and Contro Committee	I	Remune Commit	eration tee	management policies
Risk profile super and oversight fun	rvision Inctions	Transac basis of Approva strategy	tion approval on the f delegations al of asset allocation y		Supervision of ef of internal contro internal audit and management sys	ficacy I, I risk items	Supervi remune its align Risk Ap	sion of ration policy and ment with the petite Framework	
Main committee management	es related t	o risk							
Risk Technical Committee	Asset an Liability Committ	d ee	Credit Transactions Committee	As Tra Co	set and Capital ansactions ommittee	Operationa Risk Committee	al e	Institutional Coordination Committee	
Risk Committee support Risk management	Balance s structural monitoring managem	heet risk g and ent	Approval of credit transactions on the basis of delegations	Ap tra on de	proval of asset ansactions the basis of legations	Operationa risk manageme and monito	al ent pring	Guarantee alignment of TSB and Group policies	

controls. The 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.

Second line of defence, consisting mainly of:

- The risk control function, which is independent from the first line of defence and is responsible for assessing, monitoring and controlling the Group's significant risks and for providing information about such risks.
- 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.
- The Regulatory Compliance, Corporate Social Responsibility and Corporate Governance 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 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, 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 framework.
- Guiding and ensuring the application of the risk policies, defining responsibilities and objectives for their effective implementation.
- 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.
- Identifying changes in the organisation's underlying risk appetite.

 Collaborating with the management team to develop risk management processes and controls.

Third line of defence:

- The Internal Audit Department 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.
- It provides assistance to 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

Definition

Credit risk arises from the possibility of losses arising from defaults on payment obligations by borrowers, as well as losses of value due to impairment of the borrowers' credit rating.

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 meet 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 surety to the bank.

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 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 their specialised knowledge. The implementation of advanced methodologies for managing risk exposures (adapted to the New Basel Capital Accord - NBCA - and industry best practice) 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 retails customers, as well as early warning indicators for monitoring risk.

By analysing indicators and early warning alerts and reviewing credit ratings, the quality of a risk can be monitored continuously 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.

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 to achieve this are in place, 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, these 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.

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 avoid classifying customers in difficulties as being in 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 compromise solutions are agreed upon 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 their 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.

All 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 lending 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 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:

^{*} For additional quantitative information, see the section of Note 4 dealing with "Credit risk: refinancing and restructuring operations".

1 Marketing

Various mechanisms are available for the sale of finished products (homes, commercial premises, industrial buildings, parking lots, etc.) through various distribution channels and commercial agents, based on type, status, location and state of conservation. The real estate website www.solvia.es is a fundamental factor in this strategy.

2 Mobilisation

Given the great difficulty of selling plots of building land and unfinished projects, the mobilisation strategy for these assets was adapted to generate liquidity in the case of zoned building land, and a number of asset mobilisation mechanisms have been designed:

- Programme for working with real estate developers: providing building land in areas of high housing demand so that developers can develop and sell properties.
- Investors program: development of third-party real estate projects with the participation of investors.
- Protected housing programme: development of government-sponsored housing for rent and subsequent sale of the rented developments.

3 Zoning management:

For plots of land not yet zoned for construction, it is important to undertake the necessary processes to achieve a zoning status that allows for building, which is an important mechanism for value enhancement and is vital for any subsequent development and sale.

In the case of new lending for construction and real estate development, a series of criteria have been established as a function of the specific type of business, mainly of the different stages of project maturity and the market situation. Additionally, there is a monitoring process for this type of specialised risk, managed by business and risk experts, which covers the established alerts and the customer's behaviour in the various stages of the loan process, so that the funds are released in parallel with progress made on the building.

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

* For additional quantitative information, see the section of Note 4 dealing with "Credit

framework established for property developers, including a review of compliance and of asset allocation. The outcome is reported to the Risk Technical Committee.*

Risk management models

Credit rating

Credit risks incurred with corporates, developers, specialised funding projects, 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 historic 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



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, it is replaced with individual assessments supplemented with policies (G6).

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 indicators obtained from 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



G6 Individual customer loan portfolio credit score profile

* EAD (exposure at default)





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 when monitoring 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.

Credit risk exposure

Performing loans are expanding at Group level and excl. TSB in an increasingly competitive environment.

The volume of problematic assets was reduced faster than projected in the business plan.

	_		
		2016	
Credit risk exposure	Business in Spain	Business in other countries	Total
Cash and cash balances at central banks	6,698.32	4,989.93	11,688.25
Derivatives	1,642.55	191.94	1,834.49
Debt securities	21.16	4.12	0.03
Central banks	_	_	_
General government	19,450.97	3,426.32	22.88
Credit institutions	612.73	319.36	0.93
Other sectors	1,099.86	379.17	1.48
Of which: Non performing loans	9.03	_	0.01
Loans and advances	106.93	47.46	0.15
Central banks	_	66.23	0.07
General government	9,630.50	125.38	9.76
Credit institutions	3,434.76	797.69	4.23
Other sectors	93,864.14	46,475.19	140.34
Of which: Non performing loans	9,411.04	230.85	9.64
Derivatives – Hedge accounting	413.32	121.84	0.54
Guarantees given	8,314.59	214.76	8.53
Contingent liabilities given	17,762.58	7,446.10	25.21
Total	162,924.34	64,553.90	227,478.24

€ million

T1

Financial assets exposed to credit risk, broken down by portfolio, type of counterparty and instrument, and the areas in which the risk arose, were as shown below at year-end, indicating the carrying amount as representing the highest level of exposure to the credit risk incurred, inasmuch as they reflect the highest level of debt of the borrower at the reference date (T1).

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.

Figure G7 shows the distribution of credit risk across the different segments and portfolios of the Group.

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 to the Bank.

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 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 repaid 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 claim 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 Bank, as a result of the acquisition of Banco CAM, the Group has an additional guarantee for a certain asset portfolio, provided by the APS, retroactive from 31 July 2011, and for a period of ten years (for more details, see Note 2 of the 2016 consolidated annual accounts).

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 three months, as a result of which their fair value does not differ substantially from their carrying amount. The fair value of the assets sold with a repurchase agreement is shown in the "Financial liabilities held for trading", under short securities positions.

Assets transferred under this mechanism amounted to €855,145 thousand and are included under repos, on the basis of their nature, in Notes 19 and 20 to the 2016 consolidated annual accounts.

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 exposures of loans to fund the construction of homes or other types of real estate. In relative terms, the exposure secured with mortgages represents 66.1% of total customer loans and advances.

In the case of market transactions, in line with general trends, the Banco Sabadell Group also has netting rights and agreements with all financial counterparties with which it arranges derivative instruments and some collateral agreements (CSA), in order to mitigate the exposure to credit risk and avoid excessive concentration.

The guarantees deposited at Banco Sabadell as collateral at the end of 2016 amounted to €131 million (€218 million at the end of 2015).

^{*} For more information, see Note 11 "Loans and advances" in the 2016 consolidated annual accounts and the "Banco Sabadell Groupfinancial information" chapter of the Annual Report.

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. Therefore, in order to best describe the quality of the portfolio from an overall perspective, the following chart uses the Bank of Spain's rating system to analyse the Group's credit risk exposure and to estimate the requirements for hedging impairment of debt instrument portfolios (G8).

The breakdown of the total exposure, based on internal ratings, is shown in figure G9.



G7

Overall risk profile by customercategory (distribution of credit risk
exposure) %EAD (exposure at default)1Large corporates10.22Midsize businesses10.63Small businesses6.14Retailers and sole1.6

	proprietors	
5	Mortgage loans	34.3
6	Consumer loans	2.0
7	Banks	2.7
8	Sovereigns	18.7
9	Other	13.9



G8

Credit quality of financial assets (%)

15 (%)
28
24
13
32
2
1



G9

Breakdown of exposure by rating (%)

AAA/AA	5
Α	14
BBB	55
BB	20
В	5
Rest	1
	AAA/AA A BBB BB B Rest

The NPL ratio continues to decline, and stands at 6.1%.

The balance of doubtful and problematic assets continues to decline at a good pace.

Pro-active selling of real estate has proved to be a successful strategy.



During 2016, an improvement was observed in the volume of doubtful assets, which declined by €2,814 million in 2016, while the NPL ratio reached 6.14% at the end of the year (G10). *

Active management actions by the Bank has achieved a notable reduction in problematic assets since 2013, far exceeding the goals of the business plan (G11 and G12).

^{*} For more information, see Note 11 "Loans and advances" in the 2016 consolidated annual accounts and the "Banco Sabadell Groupfinancial information" chapter of the Annual Report.





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 the systemic components of portfolio risk, which can be sector-based, geographical, etc.

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 tierone 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 relevant customer transactions be approved by the Credit Operations Committee, or even by the Executive Committee.

For information about exposure to construction and real estate development, see Note 4 in the 2016 consolidated financial statements (section 4.4.1.7.4).

Exposure to customers or significant risks

At 31 December 2016 there were no borrowers with a risk that individually exceeded 10% of the Group's equity.

A total of 32% of performing loans are located outside Spain.

Country risk: geographic exposure to credit risk

Country risk is that applicable to 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 the 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, 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.

There are no significant restrictions (e.g. statutory, contractual or regulatory) on the ability to access or use assets and settle liabilities of the Group provided that the entity complies with regulatory requirements established in each country, and there are no other restrictions of the type envisaged in IFRS 12.

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 basis, the various risks are monitored and Senior Management and the delegated bodies 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, CDS, macroeconomic indicators, etc.

The breakdown, by type of financial instrument, of the exposure to sovereign risk, applying the criteria required by the European Banking Authority (EBA), at 31 December 2016, is shown in Graphic G14.

€ million

			2016		
	TOTAL	Spain	Rest of European Union	America	Rest of the world
Credit institutions	18,269.73	8,058.20	8,463.92	1,208.78	538.84
Public authorities	32,794.94	19,758.60	9,533.96	3,425.63	76.76
Central government	25,016.11	14,395.30	9,403.08	1,179.13	38.61
Rest	7,778.83	5,363.31	130.88	2,246.50	38.15
Other financial institutions	3,761.10	2,700.96	525.92	481.11	53.11
Non-financial companies and sole traders	64,159.25	51,874.70	3,429.71	8,211.14	643.70
Construction and real estate development	7,647.18	7,008.31	87.63	505.74	45.50
Civil engineering work	1,879.04	1,820.93	23.81	22.71	11.59
Other	54,633.03	43,045.46	3,318.27	7,682.69	586.61
Large corporates	24,658.63	16,496.53	2,424.41	5,408.74	328.94
SMEs and sole proprietors	29,974.40	26,548.93	893.86	2,273.95	257.67
Other households and NPISH	78,609.08	39,866.07	36,253.46	1,614.78	874.78
Home loans	67,015.35	31,112.37	33,598.90	1,579.75	724.34
Consumer loans	7,515.54	5,764.95	1,603.14	17.10	130.35
Other	4,078.19	2,988.75	1,051.41	17.93	20.10
TOTAL	197,594.10	122,258.53	58,206.96	14,941.43	2,187.19

T2 Breakdown of risk concentration by activity worldwide



Counterparty risk

This heading refers to credit risk arising from activities in financial markets that are carried out with counterparty risk (derivatives and repos), trades in money markets and fixed-income trades. The exposure resulting from operations in the financial markets is managed and tracked comprehensively.

The exposure resulting from operations in the financial markets under management criteria is mainly concentrated in financial institutions (FI) and Central Counterparties (CCP).

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.

Remainder

13

The Banco Sabadell Group has a system for evaluating and managing those risks that enables it to monitor and oversee compliance with the approved limits on a daily basis. Graphics G15 and G16 show the breakdown of counterparty risk by geographical region and credit rating.

As the table shows, the risk is concentrated among counterparties with a high credit rating: 65% of the counterparty risk is with counterparties rated A or higher.

In June 2016, EMIR (Regulation 648/2012) made it obligatory for the Group to clear and settle certain OTC derivatives through Central Counterparties (CCP). Consequently, the derivatives arranged by the Group that are

1.7

susceptible to being cleared through a CCP are being 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 is equivalent to 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. As in the case of CCPs, the exposure 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.

Exposure is quantified on the basis of Marking to Market (MtM) plus Add-on. MtM represents current exposure, and is defined as the cost of replacing a transaction at market value in the event that a counterparty defaults. The add-on represents the potential future risk, which an operation may attain in a given period of time due to the transactions' characteristics and the market variables on which it depends. In the case of transactions under a collateral agreement, the add-on represents the possible fluctuation of MtM between the time of default and the time the position is unwound 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 transactions 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 three different mitigation measures. The main measures are:

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

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 operations 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 2016 and 2015, there are 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 bonds or long-term securitisation bonds (see Note 21 and Schedules III and IV of the 2016 consolidated financial statements). 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

Definition

Liquidity risk arises due to the possibility of losses being incurred as a result of the Bank's being unable, albeit temporarily, to honour payment commitments due to a lack of liquid assets, or of its 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.

The Group is exposed to daily demands on its available cash resources to meet contractual obligations related to financial instruments with which it trades, such as maturing deposits, drawdowns of credit facilities, settlements of derivatives, etc. Experience shows, however, that only a minimum amount is ever actually required and this can be predicted with a high degree of confidence.

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), allows 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 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.

Senior Management is involved in managing and controlling liquidity risk through the Board of Directors, as the entity's highest governing body, and also directly through three Board sub-committees:

- Executive Committee.
- Risk Committee.
- Audit and Control Committee.

These governing bodies receive regular information from all departments associated with liquidity risk management and control, through the various committees, departments and subdirectors-general.

Liquidity management

Liquidity management at Banco Sabadell seeks to ensure funding for its commercial activity at an appropriate cost and term while minimising liquidity risk. 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 allows 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 (LMU). 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 (includes OFEX), Sabadell United Bank (SUB), 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 the 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.
- Oversight of the degree of encumbrance of the balance sheet.
- 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 enter into effect 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 controlling risk management

The Banco Sabadell Group defines two series of metrics that enable it to measure and control liquidity risk: 1) first-tier RAS metrics; and2) second-tier 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 objective monitoring of risk management, as well as supplementary qualitative aspects.

The Board of Directors of the LMUs are responsible for approving local RAS which must consider the corporate guidelines and the respective local requirements. Aside from the metrics included 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 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 LMUs 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 management units.

These warnings are categorised into different levels of severity on the basis of which the Group must consider taking different corrective measures and actions in order to return to a BaU situation. The early warning system is linked to the Liquidity Contingency Plan (LCP).

Banco Sabadell has an 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 allow 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 risk control and reporting framework for risk management limits is comprised of:

- Supervision of Group-wide liquidity risks, independently calculating the risk management metrics within risk systems.
- Definition of risk measurement methodologies and verification that control and measurement systems are working properly.
- 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.
- Establishment and creation of the necessary reporting framework for optimum monitoring and control of risk management limits.

Additionally, the risk control and reporting framework for RAS indicators is comprised of:

- Development and regular updates of a scorecard to show the evolution of the main metrics, ensuring that they conform to the framework and established limits.
- Systematic oversight and analysis of changes to all material risks.
- Reporting and proposing actions (triggering protocols, changes to guidelines, etc.) based on the analysis of risk trends.

Funding strategy and liquidity trends in 2016

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 shortand long-term funding programmes in order to achieve an appropriate level of diversification by type 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 2016, on-balance sheet customer funds amounted to \notin 133,457 million, compared with \notin 131,489 million at 2015 year-end and \notin 94,461 million at 2014 year-end (an increase of 1.5% in December 2016 compared with December 2015, and of 39.2% in December 2015 compared with December 2014 as a result of the acquisition of TSB in June 2015). In 2016, balances continued to move from deposits with agreed maturities to demand accounts and mutual funds as a result of the downward trend in interest rates. At 31 December 2016, the balance of demand accounts totalled \notin 92,011 million (+8.8%), to the detriment of deposits with agreed maturity, which declined by 13.3% (T3).*

The bank markets deposits through the following Group units/companies (Commercial Banking, Corporate Banking and Global Businesses, Private Banking, SUB and TSB). Details of the volumes of these business units are set out in the section on Business results of the Directors' Report.

During 2016, the funding gap stabilised, maintaining the positive trend observed in recent years though at a more moderate pace. This enabled the bank to maintain its policy of partially refinancing maturities in the capital markets and, at the same time, with the Group's guidance for reduction of the loan-to-deposit (LtD) ratio (from 147% at the end of 2010 to 105.1% at the end of 2016). The ratio was enhanced during the year by the addition of TSB in June 2016, whose funding structure is exposed mainly to customer deposits. 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 market

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 2016, the outstanding balance of capital market funding stood at &25,160 million, compared with &27,436 million at the end of 2015. By product type, as of 2016 year-end, of the amount of capital market funding, &13,607 million were in the form of mortgage covered bonds, &2,612 million

^{*} Off-balance sheet customer funds managed by the Group and those marketed but not managed by the Group are shown in Note 31 to the 2016 consolidated financial statements.

were commercial paper and ECP placed with wholesale investors, €1,741 million were senior debt (of which €1,059 million were government guaranteed bonds connected with the acquisition of Banco CAM), €1,514 million were subordinated debt and preference shares, €5,653 million were securitisation bonds placed in the market (of which €3,433 million correspond to TSB), and €33 million were other medium- and long-term financial instruments (T4).

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 program regulates issues of commercial paper aimed at institutional and retail investors. On 3 March 2016, Banco Sabadell registered its commercial paper programme for 2016 with the Spanish National Securities Market Commission (CNMV) with an issue limit of €7,000 million with scope for extension to €9,000 million. The outstanding balance of the commercial paper programme has remained stable, with a slight reduction in the outstanding balance placed with institutional investors, and a slight increase in the balance placed with non-qualified investors. At 31 December, the outstanding balance stood at €3,676 million (net of commercial paper acquired by Group companies),

compared with €3,661 million at 31 December 2015.

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 2016, the outstanding balance stood at €246 million, in comparison to €275,9 million at the end of 2015.

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

- Programme for the issuance of non-equity securities registered with CNMV ("Fixed Income Programme"): this programme regulates the bonds and debentures, both non-convertible and subordinated, and mort-gage covered bonds, public sector covered bonds and structured bonds issued under Spanish law through the CNMV and aimed at both domestic and foreign investors. The limit available for new issues under the Banco Sabadell Programme for the issuance of non-equity securities for 2016 at 31 December 2016, was €10,638.8 million (at 31 December 2015, the outstanding balance under the 2015 Fixed Income Programme was €6,145.8 million).
- During 2016, Banco Sabadell issued a total of €7,658.5 million under the existing Fixed-Income Programme. During the year, the entity tapped the

T3 On-balance

sheet customer

T4 Maturity of issues aimed at institutional investors, by product

type

funds, by maturity:

€ million

€ million

	2016	3 months	6 months	12 months >	12 months	No fixed maturity
Total on-balance sheet customer funds (*)	133,457	10.3%	6.8%	7.9%	5.9%	68.9 %
Deposits with agreed maturity	37,214	34.7%	21.3%	26.7%	17.3%	
Demand accounts	92,011	_	_	_	_	100.0%
Retail issues	4,232	21.4%	28.0%	15.7%	34.9%	

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

	2017	2018	2019	2020	2021	2022	>2023	Outstanding balance
Mortgage bonds and mortgage covered bonds*	2,022	1,560	1,124	2,165	2,108	1,119	3,508	13,607
Government-guaranteed bonds (GGB)*	1,059	_	_	_	_	_	_	1,059
Senior debt**	57	600	_	_	_	25	_	682
Subordinated debt and preference shares**	66	_	_	425	490	_	533	1,514
Other medium- and long-term financial instruments**	_	18	_	_	10	_	5	33
Total	3,204	2,178	1,124	2,590	2,608	1,144	4,047	16,895

(*) Collateralised

(**) Uncollateralised

market on several occasions, taking advantage of liquidity windows. Specifically, Banco Sabadell made two public issues of mortgage covered bonds in May (eight years) and October (seven years) for a total of €1,000 million each; a €100 million tap of an existing mortgage covered bond in March; three issues of 8-year mortgage covered bonds amounting to a combined €850 million, which were subscribed fully entirely by the European Investment Bank (EIB); eight issues of senior bonds at terms of between 1 and 3.25 years for a total amount of €2,488 million, and eleven issues of structured bonds for a total of €220.6 million at terms between 1 and 5 years. In the current market environment, the entity would have the capacity to issue in different formats and terms.

Euro Medium Term Notes (EMTN) Programme, registered on 31 March 2016 with the Irish Stock Exchange. This programme allows senior debt and subordinated bonds to be issued in any currency, with a maximum limit of €5,000 million. On 6 May 2016, Banco Sabadell issued €500 million in 10-year subordinated debt million under this new EMTN programme.

Banco Sabadell's primary market activity has not been affected by the outcome of the June 2016 Brexit referendum to decide on the UK's membership in the European Union. As an example, in October 2016 the Bank issued a 7-year mortgage covered bond in the market for the amount of €1,000 million, achieving a historically low cost.

TSB has continued to establish itself as a benchmark issuer, and it would appear that the market also views it as such. In this regard, although TSB continues to have access to wholesale markets, it is not expected to issue significant amounts due to its ready access to retail markets and the implementation of the Term Funding Scheme (TFS) by Bank of England in August. The TFS is a programme to incentivise lending by allowing UK banks to borrow at 4 years from the date of drawdown in exchange for eligible collateral.

 Asset securitisation: 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, granting mortgage loans, loans to small and medium-sized enterprises, consumer loans and debt claims deriving from finance lease contracts.

There are currently 34 outstanding asset securitisation operations (including those performed by Banco Guipuzcoano, Banco CAM, BMN, Banco Gallego and TSB); although part of the bonds issued were withheld by the issuer entity as liquid assets eligible for financing operations with the European Central Bank, the rest of the bonds were placed in capital markets. At the end of 2016, the balance of securitisation bonds placed in the market stood at €5,653 million.

For efficiency reasons, three securitisation operations with relatively small outstanding balances were redeemed before maturity in 2016 (see further details on securitisation funds in Schedule II to the notes to financial statements).

On 28 July 2016, Banco Sabadell issued a IM Sabadell Pyme 10, a bond backed by loans to SMEs, for an amount of €1,750 million; the bonds were retained in their entirety.

During the first half of 2016, TSB launched a new mortgage-backed bond, Duncan Funding 2016-1 PLC, for an amount equivalent to €3,934 million, of which €664 million have been placed in the market.

In general terms, the tone of the markets was positive in 2016, although there were several episodes of volatility caused by political and regulatory uncertainty, which led to tensions and even the closure of markets during relatively prolonged periods. In the overall system, a large portion of maturities in the market were not refinanced; this, together with the ECB's economic stimulation measures in the last quarter of 2014 and the beginning of 2016, resulted in an excess of liquidity.

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 €10,000 million, by amortising early €11,000 million from the TLTRO I auctions announced by the ECB in June 2014. The Bank also took part in the Covered Bond Purchase Programme (CBPP3) implemented by the European Central Bank.

In August, Bank of England also implemented a series of measures to support economic growth. That package includes a reduction of the Bank Base Rate and the introduction of the Term Funding Scheme (TFS). As a member of the Sterling Monetary Framework (SMF), TSB plans to resort regularly to the TFS to obtain low-cost funding. There were no amounts drawn under the TFS at 2016 year-end.

The excess liquidity in the market together with a low interest rate environment reduced prices of repo funding compared to other alternatives. At 31 December 2016, the net nominal amount of repo funding stood at €7,927 million.

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 (T5).

With respect to 2015, Banco Sabadell's first line of liquidity has grown by €4,634 million, due to the funding gap, changes in the real estate portfolio and the creation of own collateral.

As for TSB, the first line of liquidity at 31 December 2016 was mainly comprised of gilts amounting to ϵ 1,678 million (ϵ 1,718 million at 31 December 2015) and surplus reserves at the Bank of England (BoE) amounting to ϵ 4,191 million (ϵ 3,383 million at 31 December 2015).

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. Thus, 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 2016, added €4,924 million in terms of the capacity to issue new covered bonds that are eligible as collateral for the ECB facility. At the end of 2016, available liquidity amounted to €31,805 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, less the average haircut applicable to covered bonds by the ECB.

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 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 set of the LMUs.

Since 1 January 2016, the regulatory minimum LCR is 70%, a level which is comfortably surpassed by all of the entity's LMUs; in particular, TSB and Banco Sabadell

Spain stand out due to their very high LCRs. At Group level, the bank's LCR was consistently above 100% throughout the year.

The NSFR is still under consideration and the final definition has yet to be adopted. The scheduled date for its implementation is January 2018, and, as with the LCR, it will be phased in. The bank has nonetheless already commenced monitoring 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, volatility or 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 overall balance sheet positions (also known as structural positions) that in net terms are left open. In the latter case, the entity uses the market risk management and monitoring system to manage the structural market risk position. Other market risks of a structural nature, arising from such factors as interest rates, are addressed in the relevant sections.

The market risk acceptance, management and oversight system is based on setting limits for specifically assigned positions and the approval of transactions of each business unit; 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 department.

Т5

	2016
Cash (*) + Net interbank position	8,002
Available under ECB facility	6,869
Collateral provided under ECB facility (**)	18,687
Balance drawn under Bank of Spain facility (***)	11,818
Assets eligible as collateral for ECB facility not yet used	8,423
Other marketable assets ineligible for central bank facility (****)	3,587
Total available liquid assets	26.881

(*) Excess reserves at central banks.

€ million

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

(***) Of which, in 2016, €10,000 relate to the ECB's 4-year Targeted Longer-Term Refinancing Operation (TLTRO II) on 29 June 2016. In 2015, €11,000 million related to the Bank of Spain TLTRO on 17 December 2014.

(****) 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.

Main risks in the Risk Appetite Framework / Liquidity risk

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.

Changes in commodities prices did not have an impact in the year, given that the Group's exposure is marginal, both direct and in underlying assets.

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 2016 no exceptions occurred in backtesting due to the low exposure to the year's significant events, such as the Brexit referendum (24 June).

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 operations, and it can vary if the risk profile of portfolios changes. The methodology used for this risk metric is the 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 of different past and theoretical scenarios on portfolios 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 in 2016 is shown in table T6.

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.

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 types are considered under structural interest rate risk:

- Repricing risk: related to a mismatch between maturity dates and repricing of assets, liabilities and shortand long-term off-balance sheet positions.
- Curve risk: arising from changes in the level or gradient 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 the 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 on IRRBB. This allows 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 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 T7 shows the interest rate risk levels in terms of the sensitivity of the Group's main foreign currencies at the end of 2016.

In addition to the impact on net interest income within one year, presented in the previous table, the Group calculated the impact on net interest income over two years, the result of which is notably more positive for all currencies.

Given the current level of market interest rates, the scenario of a decline in interest rates 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.

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

- Interest rate macro hedging of 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 a fixed interest rate.

Balance sheet items recognised at amortised cost do not present any valuation adjustments associated with interest rate fluctuations. In the case of financial assets classified as available for sale that are measured at fair value, the change in risk premiums had a greater impact than the decline in interest rates during the year.

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 on the value of the portfolio and the entity's equity of adverse movements in currency markets. 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 on a daily basis and reports on current risk levels and on compliance with the limits assigned by the Risk Committee 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 position (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

T6

€.	million	

		2016	
	Mean	High	Low
Interest rate risk	0.90	2.86	0.45
Exchange rate risk in trading position	0.20	0.55	0.04
Equity risk	0.69	1.62	0.30
Credit spread	0.99	3.58	0.32
Aggregated VaR	2.78	7.90	1.23

monthly basis to the Risk Committee and to the Audit and Control Committee, respectively.

The 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 negative impact on capital ratios (CET1) of exchange rate fluctuations.

In 2016, in a context of persisting uncertainty about the negotiations in the wake of the Brexit referendum, Banco Sabadell continued to monitor the EUR/GBP exchange rate. During this period, 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.

During 2016, capital hedging increased, from 768 million pounds sterling in 2015 to the current 1,368 million pounds sterling, which represents 73% of the total investment.

This currency hedge is monitored continuously based on market movements.

The value in euro of the assets and liabilities denominated in foreign currencies held by the group at 31 December 2015, classified on the basis of their nature, is shown in figure G18. The net position of foreign currency assets and liabilities includes the bank's structural position measured at a historical exchange rate, amounting to €1,685 million, of which €597 million correspond to permanent shareholdings in GBP, €769 million to permanent shareholdings in USD and €279 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 2016, the sensitivity of equity exposure to a 1% devaluation in the exchange rates against the euro of the main currencies to which the bank is exposed amounted to €17 million, of which 35% related to the pound sterling, 46% to the US dollar, 17% to the Mexican peso and the rest to other currencies.

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 reputation risk (which, in turn, includes behavioural risk), technology, model and outsourcing risks.

T7

0/
70

 Instantaneous parallel increase of 100bp				
 Interest rate sensitivity	Impact on net interest income	Impact on economic value		
EUR	0.1	1.3		
 GBP	1.9	(2.2)		
USD	0.2	(0.3)		



Risk management

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 specialized 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. The management of this risk also requires regular audits to be carried out on the application of the risk 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 the 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.

A database is available containing historical records of actual losses resulting from operational risk dating back to 2002. It is constantly being updated as information is received on losses and recoveries, whether resulting from the bank's own efforts or from insurance (G19 and 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.

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 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 Sabadell 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 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 Group's tax strategy is aligned with its 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, which responsibility is non-delegable:

- 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 Annual 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.

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

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. The 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).



G19

events by amount (last 12 months) (%)				
Internal fraud	0.2			
External fraud	5.2			
Staff relations and job	0.5			
security				
Customers, products	27.6			
and business practices				
Material damage	6.1			
Business disruption	0.3			
and system failures				
	ents by amount (last 12 mo Internal fraud External fraud Staff relations and job security Customers, products and business practices Material damage Business disruption and system failures			

7 Process execution, 60.1 delivery and management



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	1.1
	security	
4	Customers, products	37.7
	and business practices	
5	Material damage	5.9
6	Business disruption	0.4
	and system failures	
7	Process execution,	46.3
	delivery and management	