# 2016 RISK REPORT PILLAR 3 2015



BUILDING TEAM SPIRIT TOGETHER

Abbreviations used: Millions of euros: EUR m Billions of euros: EUR bn.

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A cross-reference table between disclosures included in the Risk report and CRD and CRD4 requirements is included in chapter 12, p.151.

# 1. KEY FIGURES

The Risk Report provides in-depth information on capital management and how the Societe Generale Group manages its risk.

In addition, this report aims to meet the requirements of its various stakeholders, including regulators (compliance with part eight of the CRR), investors and analysts.

### **REGULATORY CAPITAL RATIOS(1)**



### **REGULATORY CAPITAL<sup>(1)</sup> (IN EUR BN)**





### LCR RATIO<sup>(1)</sup>



In accordance with provisions of article R 511-16-1 of the French Monetary and Financial Code, return on assets (i.e. Net Income divided by the total balance sheet per consolidated accounts) for Societe Generale stood at 0.33% in 2015 and 0.23% in 2014. On a prudential basis (fully loaded) the ratio was 0.33% in 2015 and 0.22% in 2014, calculated by dividing the Group Net Income reflected in Table 7 by the Total Balance Sheet for prudential purposes reflected in Table.



#### **DISTRIBUTION OF RWA BY RISK TYPE**

#### GEOGRAPHIC BREAKDOWN OF GROUP CREDIT RISK EXPOSURE (EAD)



Credit risk exposure (EAD) at end-2015: EUR 781 bn

### DISTRIBUTION OF RWA BY PILLAR



#### DISTRIBUTION OF MARKET RISKS (RWA) BY RISK TYPE



Market risk RWA at end-2015: EUR 19.3 bn

EAD ADDITIONAL INDICATORS	31.12.2015	31.12.2014
Total Group exposure (EAD <sup>(3)</sup> ) in EUR bn	781	722
Percentage of Group EAD to industrialised countries	87%	86%
Percentage of Corporate EAD to investment grade counterparties	64%	64%
Cost of risk in basis points (bp) <sup>(4)</sup>	52	61
Gross doubtful loans ratio (doubtful loans/gross book outstandings)	5.3%	6.0%
Gross doubtful loans coverage ratio (overall provisions/doubtful loans)	64%	63%
Average annual VaR (in EUR m)	21	24
Group global sensitivity to structural interest rate risk (in % of Group regulatory capital)	< 1.5%	< 1.5%
Phased-in Basel 3 Common Equity Tier 1 ratio	11.4%	10.9%

#### (1) Disclosed ratios are fully loaded, calculated according to CRR/CRD4 rules published on 26th June 2013, including the Danish compromise for Insurance.

(2) Fully loaded ratio calculated according to CRR rules published in October 2014 (Delegated Act). Leverage Ratio calculated based on previous rules for 2013.

(3) EAD are presented according to the Capital Requirement Directive as transcripted in French Law.

(4) Calculated by dividing the annual provision and impairment charge by the average end-of-period outstanding amounts of the four quarter closed before current quarter.

# IN BRIEF

This section describes Societe Generale's approach and strategy for managing its risks.

It describes how the risk management functions are organised, how they ensure their independence from the business divisions and how they promote a risk culture throughout the Group.

# 2. GOVERNANCE AND RISK MANAGEMENT ORGANISATION

# 2.1. INTRODUCTION

Implementing a high-performance and efficient risk management structure is a critical undertaking for Societe Generale, in all businesses, markets and regions in which it operates, as are maintaining a balance between strong risk culture and promoting innovation. The Group's risk management, supervised at the highest level is compliant with the regulations in force ((see Board of Directors' mission page 76 in Registration Document), in particular articles 258 to 266 of the decree of November 3rd, 2014 related to internal control of companies in the banking sector, payment services and investment services subject to control of the ACPR (Autorité de Contrôle Prudentiel et de Resolution) and the European regulation CRR/CRD4.



(1) Permanent and periodic controls, p. 124 of the Registration Document and following.

- See p. 127 of the Registration Document.
- Legal and tax risks, p. 142 of this Risk report ; compliance and reputational risks, (3)p. 137 of this Risk report;
- corporate social responsibility, p. 209 of the Registration Document.
- Structural risks, p. 121 of this Risk report; liquidity risk, p. 127 of this Risk report; equity portfolio, p. 127. of this Risk report.
- (5) Credit risk, p. 45 of this Risk report; market risk, p. 103 of this Risk report; operational risks, p. 113 of this Risk report. Group Compliance Committee, p. 123 of the Registration Document. New Product Committee, p. 124 of the Registration Document.
- (6)
- (8) See p. 232 of the Registration Document and following, particularly p. 234 (training), p. 239 (high-potential employees) and p. 242 (remuneration).

Specifically, the main objectives of the Group's risk management strategy are:

- to contribute to the development of the Group's various businesses by optimising its overall risk-adjusted profitability in accordance with its risk appetite;
- to guarantee the Group's sustainability as a going concern, through the implementation of an efficient system for risk analysis, measurement and monitoring;
- to make risk management a differentiating factor and a competitive strength acknowledged by all.

This can take the form of:

# 2.2. TYPES OF RISKS

Given the diversity and evolution of the Group's activities, risk management involves the following main categories:

Credit and counterparty risk (including country risk): risk of losses arising from the inability of the Group's customers, issuers or other counterparties to meet their financial commitments. Credit risk includes counterparty risk linked to market transactions (replacement risk) and securitisation activities. In addition, credit risk may be further amplified by concentration risk, which arises from a large exposure to a given risk, to one or more counterparties, or to one or more homogeneous groups of counterparties;

Country risk arises when an exposure (loan, security, guarantee or derivative) becomes liable to negative impact from changing political, economic, social and financial conditions in the country of exposure.

- Market risk: risk of a loss of value on financial instruments arising from changes in market parameters, the volatility of these parameters and correlations between them. These parameters include but are not limited to exchange rates, interest rates, and the price of securities (equity, bonds), commodities, derivatives and other assets, including real estate assets.
- Structural interest and exchange rate risk: risk of losses of interest margin or value of the fixed rate structural position arising from variations in interest or exchange rates. Structural interest and exchange rate risk arises from commercial activities and from transactions entered into by the Corporate Centre.
- Liquidity risk: risk of the Group not being able to meet its cash or collateral requirements as they arise and at a reasonable cost.
- Operational risks (including accounting and environmental risks): risk of losses arising from inadequacies or failures in internal procedures, systems or staff, or from external events, including low-probability events that entail a high risk of loss.

- clear principles for governing, managing and organising risks;
- determining and formally defining the Group's risk appetite;
- effective risk management tools;
- a risk culture that is cultivated and established at each level of the Group.

These various items are currently under focus, with a series of initiatives established as part of the ERM (Enterprise Risk Management) programme, which aims to improve the consistency and effectiveness of the Group's risk management system by fully integrating risk prevention and control in the day-to-day management of the bank's businesses.

- Non-compliance risk (including legal and tax risks): risk of legal, administrative or disciplinary sanction, or of material financial losses, arising from failure to comply with the provisions governing the Group's activities.
- Reputational risk: risk arising from a negative perception on the part of customers, counterparties, shareholders, investors or regulators that could negatively impact the Group's ability to maintain or engage in business relationships and to sustain access to sources of financing.
- Strategic risk: risks inherent in the choice of a given business strategy or resulting from the Group's inability to execute its strategy.
- Business risk: risk of losses if costs exceed revenues.
- Risk related to insurance activities: through its insurance subsidiaries, the Group is also exposed to a variety of risks linked to the insurance business. In addition to balance sheet management risks (interest rate, valuation, counterparty and exchange rate risk), these risks include premium pricing risk, mortality risk and structural risk of life and non-life insurance activities, including pandemics, accidents and catastrophes (such as earthquakes, hurricanes, industrial disasters, terrorist attacks and military conflicts).

The Group is also exposed to the following risks:

- Risk related to the investment portfolio: risk of unfavourable changes in the value of the Group's investment portfolio;
- Risk related to specialised finance activities: through its Specialised Financial Services activities, mainly in its operational vehicle leasing subsidiary, the Group is exposed to residual value risk (when the net resale value of an asset at the end of the lease is less than estimated).

# 2.3. THE GROUP'S RISK APPETITE

Societe Generale defines risk appetite as the level of risk, by type and by business, that the Group is prepared to incur given its strategic targets. Risk appetite is defined using both quantitative and qualitative criteria.

The Risk Division and the Finance Division, in coordination with the business lines, have jointly carried out measures as part of the Group Risk Appetite approach, consisting in formally defining a three-year overview including:

- targets for certain key Group indicators (financial solidity, profitability, solvency, leverage and liquidity);
- risk/return ratios for the different Group businesses; and
- the Group's risk profile, by risk type (credit, market, operational and structural).

The Risk Appetite approach takes into account earnings sensitivities to business cycles and credit, market and operational events under both a core budgetary macroeconomic *scenario* and a macroeconomic *scenario* of severe but plausible stress.

The Risk Appetite definition is one of the strategic oversight tools available to the Group governing bodies. It underpins the budgeting process and draws on the global stress test system (described below), which is also used to ensure capital adequacy under stressed economic scenarios.

Governing bodies discuss it at different key moments:

- during approval of the risk appetite targets by the Board of Directors, after presentation to the Board's Risk Committee in the middle of the year with a view to incorporation in the budget;
- during the finalisation of the budget process, the Board of Directors, based on the Executive Committee's recommendations and after examination by the Board of Directors' Risk Committee, approves the trajectory in relation to various Group key indicators and their adequacy given the established risk appetite targets.

Furthermore, the positioning of businesses in terms of risk/return ratio as well as the Group's risk profile by type of risk are analysed and approved by the Board of Directors' Risk Committee.

The Group's risk appetite strategy is implemented by General Management in collaboration with the Executive Committee and applied by corporate and operating divisions through an appropriate operational steering system for risks, covering:

- governance (decision-making, management and supervisory bodies);
- management (identification of risk areas, authorisation and risktaking processes, risk management policies through the use of limits and guidelines, resource management); and
- supervision (budgetary monitoring, reporting, leading risk indicators, permanent controls and internal audits).

Essential indicators for determining Risk Appetite and their adaptations are regularly supervised over the year in order to detect any events that may result in unfavourable developments on the Group's risk profile. Such events may give rise to remedial action, up to the deployment of the recovery plan in the most severe cases.

# **Risk Appetite Statement**

Societe Generale has a balanced universal banking model with a strong foothold in Europe and a global presence in certain areas of expertise. This is reflected in:

- a well-balanced capital allocation between the Group's businesses (Retail Banking, International Financial Services, Investment Banking and Investor Solutions), with Retail Banking activities holding a predominant place. Global Markets receive a limited capital allocation;
- a geographically balanced model with a high percentage of revenues generated in mature countries. The Group develops a diversified portfolio of businesses dedicated to individual customers in Europe and Africa. For business, corporate and investor customers, the Group pursues activities across the world in which it has recognised expertise.

The Group's growth strategy focuses on its existing areas of expertise, its quality customer base and the search for synergies within the Group.

Societe Generale strives for sustainable profitability consistent with its cost of capital and a universal banking model. To this end, the Group:

- seeks to contain the volatility of its results;
- calibrates its capital and liquidity ratios to ensure a significant safety margin relative to the minimum regulatory requirements;
- maintains a rating in line with its principal peers, providing access to financing that is compatible with the growth of its activities;
- monitors the stability and diversification of its funding sources;
- ensures sufficient resilience in scenarios of liquidity shortages;
- tightly controls its structural interest-rate and foreign-exchange risks.

Societe Generale aims to maintain a quality credit portfolio with a high proportion of Investment Grade securities and a diversified customer base of individuals, professionals, businesses and financial institutions:

- for the same types of products, applied credit standards are identical, regardless of whether they will be redistributed or not;
- any commitment implying a credit risk is based on indepth knowledge of the customer and its business, and an understanding of the purpose and nature of the transaction, as well as the sources of income that will allow the loan to be reimbursed.

Counterparty ratings, based on internal models that comply with Basel principles and parameters, are one of the key criteria underpinning the credit policy.

As a general rule, collateral is not the principal criterion of the lending decision.

Risks of individual concentration are strictly managed.

With the exception of small loan transactions, the Group prefers to share its operations' credit risk through syndication, while maintaining a final portion as a sign of commitment to its customers and to continue monitoring originated exposures over time.

- concentration by sector and by type of counterparty or business is monitored periodically, in particular through stress tests, and may result in the setting of limits;
- lastly, the loan approval process for individual customers in Retail Banking is based on decisions and recommendations drawn from analytical and business intelligence tools used within the Group and designed with the aid of statistical models.

Global Markets, focusing on the needs of the Group's customers, are subject to strict controls:

- market risk is controlled in the form of a global stress test limit applied to all activities, rounded out by a range of more specific limits, such as Value at Risk (VaR) and Stressed Value at Risk (SVaR) limits, limits on long-term positions or nominal limits;
- the Group's appetite for market risk, characterised by a Revenue/ Consumption of limits ratio in stress tests, is stable overall;
- market risk limits are determined in particular according to the manoeuvrability of positions (nature and complexity of the product, maturity, size of SG's position relative to the market and participation effect), and according to the risk/reward performance of the transaction or the activity and the market conditions;
- these limits are rounded out by alert thresholds to avoid any risk of breaches.

Societe Generale aims to contain operational risk losses to a maximum of 1% of recurrent revenues.

The Group's activities strictly comply with provisions relating to banking and financial activities, be they legislative or regulatory in nature, professional or ethical rules, or internal rules, at the national and international levels. In particular:

- the Group ensures that compliance rules are rigorously respected, especially in the area of anti-money laundering and counterterrorism financing, embargo directives and international financial sanctions, the fight against corruption and its tax code of conduct commitments;
- the Group monitors the loyalty of the behaviour of its employees with regard to customers and all its stakeholders, as well as the integrity of its banking and financial practices.

Societe Generale considers its reputation to be an asset of great value that must be protected to ensure the Group's sustainable development. The prevention and detection of the risk of harm to its reputation are integrated within all the Group's operating practices:

- the protection of the Group's reputation notably involves making its employees aware of the values of responsibility, ethical behaviour and commitment;
- lastly, in a spirit of social and environmental responsibility, the Group has pledged to comply with a body of business conduct principles formalised in a collection of internal instructions applicable to the entire Group.

# 2.4. RISK MAPPING FRAMEWORK AND STRESS TESTS

## Group risk mapping framework

This procedure aims at identifying and estimating the main risks of potential loss expected for the year to come, in all risk categories: credit risks, market risks, operational and structural risks. These risks are placed on a grid relating impact and probability of occurrence for each of them. A loss level is assigned to each scenario, combining statistical approaches using historical data, and independent expert analyses. These scenarios are categorised on a scale representing three distinct levels of stress: base case, stress and extreme stress. It may relate to isolated losses that are material because of their extent (for example, the default of a major counterparty), or to events involving many counterparties (for example, contagion affecting a sector of activity or several sectors, within a country or specific region).

The risk map is presented annually to the members of the Board of Directors' Risk Committee and to the members of the Board of Directors.

## **Stress tests**

Stress tests or crisis simulations are used to measure the potential impact of a downturn in activity on the behaviour of a portfolio, activity or entity. At Societe Generale, they are used to help identify, measure and manage risk, and to assess the Group's capital adequacy with regard to risks. Accordingly, they are an important indicator of the Group's resilience, activities and portfolios, and a core component in the definition of its risk appetite. The Group's stress test framework covers credit risk, market risk, operational risk, liquidity risk and structural interest rate and exchange rate risks. Stress tests are based on extreme but plausible hypothetical economic scenarios defined by Group's activities, taking into account the potential countermeasures and systematically combining quantitative methods with an expert judgement (risk, finance or business lines).

As such, the stress test framework in place includes:

- an annual global stress test which is integrated into the budget process as part of preparing the Group Risk Appetite and Internal Capital Adequacy Assessment Process (ICAAP) for the European Central Bank and the French Prudential Supervision and Resolution Authority. It is used in particular to check the Group's compliance with the prudential ratios.
- It covers all of the Group's activities and is based on two global three-year horizon macroeconomic scenarios: a core budgetary macroeconomic scenario and a macroeconomic scenario of severe but plausible stress. For each case, (core and stressed), potential losses relating to credit, market and operational risks are estimated over three years;

specific credit stress tests (on portfolios, countries, activities, etc.), both recurrent or on request, which complement the global analysis with a more granular approach and allow the identification, measurement and operational management of risk.

Credit risk is modelled based on the historical relationship between portfolio performance and relevant economic variables (gross domestic product, unemployment, exchange rates, property prices, etc.). In line with the regulatory Pillar, stress tests systematically take into account the potential impact of the Group's main counterparties' performance against a stressed market backdrop:

- specific market stress tests which estimate the loss resulting from an extreme change in market parameters (indexes, credit spreads, etc.). This stress test risk assessment is applied to all the Bank's market activities. It is based on a set of historical (three) and hypothetical (15) scenarios, which apply shocks to all substantial risk factors, including exotic parameters (see 4.6 "Market risks" section in this report);
- operational risk stress tests which use scenario analyses and the modelling of losses to calibrate the Group's capital in terms of operational risk, and which are used to appreciate the exposure to operational loss linked to the severity of economic scenarios, including exposure to rare and extreme losses not covered by the historical period;
- stress tests to analyse the Group's structural fixed-rate position value and interest rate margin sensitivity to structural interest rate risk. The Group measures these sensitivities to different interest rate yield curve configurations (steepening and flattening);
- liquidity stress tests to ensure that the time period during which the Group may continue to operate is respected in a stressed market environment.

Along with the internal stress test exercises, the Group is part of a selection of European banks that participate in the large-scale international stress tests supervised by the European Banking Authority and European Central Bank.

# 2.5. RISK PLAYERS AND MANAGEMENT

The implementation of a high-performance and efficient risk management system in all businesses, markets and regions in which the bank operates is a critical undertaking for Societe Generale Group, as well as the balance between strong risk culture and the development of its activities.

# The Enterprise Risk Management Programme (ERM)

The ERM programme is closely monitored at the highest level of the bank: it is supervised by General Management, with the participation of members of the Executive Committee, and is the subject of regular reporting to the Board of Directors' Risk Committee. The first phase of the ERM programme was carried out between 2011 and 2015. It has improved the consistency and effectiveness of the Group's risk management system by fully integrating risk prevention and management within the day-to-day management of the bank's businesses

## Players involved in risk management

Two main bodies govern Group risk management: the Board of Directors and General Management.

The Board of Directors, and more specifically its Risk Committee, approves the Group Risk Appetite exercise and regularly conducts a thorough analysis of the risk management, prevention and assessment system.

A risk dashboard is submitted to it. In particular, the Board of Directors ensures the adequacy of the Group's risk management infrastructure, monitors changes in the cost of risk and approves the risk limits for market risks. Presentations on the main aspects of, and notable changes to, the Group's risk management strategy are made to the Board of Directors by the General Management at least once a year (more often if circumstances require it).

### ROLE OF THE BOARD OF DIRECTORS' RISK COMMITTEE

The Risk Committee advises the Board of Directors on the overall strategy and the appetite to all kinds of risks, both current and future, and helps the Board when it verifies that this strategy is implemented. In particular, it is responsible for:

- reviewing the risk control procedures and is consulted about setting overall risk limits;
- reviewing on a regular basis the strategies, policies, procedures and systems used to detect, manage and monitor the liquidity risk and submitting its conclusions to the Board of Directors;
- formulating an opinion on the Group's global provisioning policy, as well as on specific provisions relating to large sums;
- reviewing the policies in place and the reports prepared to comply with the banking regulations on internal control;
- reviewing the policy concerning risk management and the monitoring of off-balance sheet commitments, especially in light of the memoranda drafted to this end by the Finance Division, the Risk Division and the Statutory Auditors;

- reviewing, as part of its mission, whether the prices for the products and services mentioned in books II and III of the French Monetary and Financial Code and offered to clients are compatible with the Company's risk strategy. When these prices do not correctly reflect the risks, it informs the Board of Directors accordingly and gives its opinion on the action plan to remedy the situation;
- without prejudice to the Compensation Committee's missions, reviewing whether the incentives provided by the compensation policy and practices are compatible with the Company's situation with regard to the risks it is exposed to, its share capital, its liquidity and the probability and timing of expected benefits.

It is provided with all information on the Company's risk situation. It may use the services of the Chief Risk Officer or outside experts. It may interview, under the conditions it determines, in addition to the people listed in Article 9 of the Internal Rules of the Board of Directors, the Statutory Auditors and the managers in charge of drawing up financial statements, internal control, risk management, compliance control and periodic internal audits.

The committee met 10 times in 2015.

### ROLE OF THE BOARD OF DIRECTORS' AUDIT AND INTERNAL CONTROL COMMITTEE

This Committee's mission is to monitor issues concerning the production and control of accounting and financial information, and to monitor the efficiency of the internal control and risk assessment, monitoring and management systems.

In particular, it is responsible for:

- monitoring the process of preparing financial information, in particular examining the quality and reliability of the systems in place and making suggestions for their improvement, and verifying that corrective actions have been implemented if faults are found in the procedure;
- analysing the draft financial statements to be submitted to the Board, in order in particular to verify the clarity of the information provided and to offer an assessment of the relevance and consistency of the accounting methods used to draw up parent company and consolidated financial statements;
- ensuring the independence of Statutory Auditors, in particular by reviewing the breakdown of the fees paid by the Group to them as well as to the network to which they may belong and through prior approval of all assignments that do not fall within the framework of a statutory audit of accounts, but which may be the consequence of, or a supplement to, the same, all other assignments being prohibited;
- implementing the procedure for selecting the Statutory Auditors and submitting an opinion to the Board of Directors concerning the appointment or renewal of such as well as their remuneration;
- examining the work programme of the Statutory Auditors and more generally ensuring the supervision of account monitoring by the Statutory Auditors;
- Chaired by the General Management, the specilised committees of the Group Executive Committee responsible for central oversight of internal control and risk management are:
- the Risk Committee, which met 17 times in 2015, discusses Group's risk strategy, in particular the management of the different risks (credit, country, market and operational risks) as well as the structure and implementation of the risk monitoring system. The Group also has a Large Exposures Committee, which focuses on reviewing large individual exposures;
- the Finance Committee, which, as part of the Group's financial policy oversight, validates the structural risk monitoring and control system and reviews the Group's structural risks evolution through reports consolidated by the Finance Division;
- the Group Internal Control Coordination Committee, which manages the consistency and effectiveness of the internal control mechanism as a whole;
- the Compliance Committee, established in 2015, meets quarterly in order to define the main orientations of the Group in terms of compliance;
- the Company's Strategic Architecture Committee (CSAE) defines the company's architecture of data, reference systems, operational processes and information systems. It ensures the consistency between Group projects and the defined Group architecture.

- offering an assessment of the quality of internal control, in particular the consistency of risk assessment, monitoring and management systems, and proposing additional actions where appropriate. To this end, the Committee is responsible primarily for:
  - regularly reviewing the internal control and risk control of the business segments, divisions and main subsidiaries,
  - reviewing the Group's internal audit programme and the Annual Report on Internal Control drawn up in accordance with banking regulations, as well as formulating an opinion on the organisation and operation of the internal control departments,
  - reviewing the follow-up letters sent by the French Prudential and Resolution Supervisory Authority and formulating an opinion on the draft responses to these letters.

It gives the Board of Directors its opinion on the section of the Registration Document dealing with these issues and produces an Annual Activity Report, submitted to the Board for its approval, which is then inserted in the Registration Document.

Aside from the persons referred to in Article 9 of the Internal Rules of the Board of Directors, the Committee may interview, under conditions it shall establish, the Statutory Auditors and the managers in charge of drawing up financial statements, internal control, risk management, compliance control and internal audits. The Statutory Auditors shall be invited to the meetings of the Audit and Internal Control Committee unless the Committee decides otherwise.

The committee met 10 times in 2015.

Under the authority of the general management, the group's corporate divisions, which are independent from the core businesses, contribute to the management and internal control of risks. They are the second line of defense, the first one being ensured by businesses.

The Corporate Divisions provide the Group's Executive Committee with all the information needed to assume its role of managing the Group's strategy, under the authority of the Chief Executive Officer.

With the exception of the Core Businesses Finance Departments, all the Corporate Divisions report directly to the Group's General Management or to the Group Corporate Secretary (who in turn reports directly to the General Management), also responsible for compliance within the Group.

The main responsibilities of the Risk Division are to contribute to the development of the Group's activities and profitability by defining the Group's Risk Appetite (broken down by business) under the aegis of the General Management and in collaboration with the Finance Department and Core Businesses, and to establish a risk management and monitoring system. In exercising its functions, the Risk Division reconciles independence from and close cooperation with the Core Businesses, which are primarily responsible for the transactions that they initiate.

Accordingly, the Risk Division:

- oversees hierarchically or functionally the Group's Risk function. To this end, the Head of Risk Management is responsible for the Group's Risk function as defined by the Order of 3 November 2014 relating to the internal control of companies in banking, payment services, and investment services,
- is co-responsible, with the Finance Division, for setting the Group's risk appetite which is then submitted to the executive body and to the Boards of Directors for their approval,
- identifies all Group risks,
- implements a governance and monitoring system for these risks, including cross-business risks, and regularly reports on their nature and extent to the General Management, the Board of Directors and the supervisory authorities,
- contributes to the definition of risk policies, taking into account the aims of core businesses and the relevant risk issues,
- defines and validates risk analysis, assessment and approval methods and procedures,
- validates transactions and limits proposed by business managers,
- defines and validates the risk monitoring information system, and ensures its suitability for the needs of businesses.
- The Group Finance Division, in addition to its financial management responsibilities, also carries out extensive accounting and finance controls. As such:
  - the Mutualised Accounting Activities Department is responsible for accounting, regulatory and tax production for entities under its responsibility (o/w Societe Generale); it is also responsible for coordinating the continuous improvement and management process set up for entities in its perimeter.
  - the missions of the ALM Department, Balance Sheet and Global Treasury Management Department and Strategic Financial Management Department are detailed in the Structural and liquidity risks section, page 122 of this report.

The Finance Departments of Core Businesses, which report hierarchically to the Core Businesses' managers and functionally to the Group Finance Division, ensure that the accounts are prepared correctly at the local level and control the quality of the information in the consolidated financial reports submitted to the Group.

Starting on 1<sup>st</sup> January, 2016, they will report hierarchically to the Group Finance Division and functionally to the managers of the Core Businesses.

- The Group Compliance Division reports to the Corporate Secretary, who is also Head of Compliance, and ensures that the Group's banking and investment activities are compliant with all laws, rules and ethical principles applicable to them. It also ensures the prevention of reputational risk.
- The Group Legal Department reports to the Corporate Secretary and monitors the security and legal compliance of the Group's activities, relying if necessary on the legal departments of the Group's subsidiaries and branches.
- The Group Tax Department reports to the Corporate Secretary and monitors compliance with all applicable tax laws in France and abroad.
- The Group Human Resources Division monitors, amongst others, the implementation of compensation policies.
- The Group Corporate Resources Division is specifically responsible for information system security.
- The **Group Internal Audit Division** is in charge of internal audits, under the authority of the Head of Group Internal Audit.

In performing their missions, the Risk Division, Compliance Division and Information System Security department rely on functions in businesses, formed by representatives who report to them directly or functionally. According to the latest voluntary census (at the end of December 2015), employees in full time-equivalent (FTE):

- working in the Group Risk function represented about 5,100 FTE (including 812 FTE within the Group Risk Division).
- working in the Compliance function were about 1,421 FTE.
- working in the Information System Security function were about 290 FTE.

# 2.6. RISK FACTORS

1. The global economy and financial markets continue to display high levels of uncertainty, which may materially and adversely affect the Group's business, financial situation and results of operations.

As part of a global financial institution, the Group's businesses are sensitive to changes in financial markets and economic conditions generally in Europe, the United States and elsewhere around the world. The Group could be confronted with a significant deterioration in market and economic conditions resulting from, in particular, crises affecting capital or credit markets, liquidity constraints, regional or global recessions, sharp fluctuations in commodity prices (including oil), currency exchange rates or interest rates, inflation or deflation, sovereign debt rating downgrades, restructurings or defaults, or adverse geopolitical events (including acts of terrorism and military conflicts). Such occurrences, which may develop quickly and may not be hedged, could affect the operating environment for financial institutions for short or extended periods and have a material adverse effect on the Group's financial situation, results of operations or cost of risk.

Financial markets have in recent years experienced significant disruptions as a result of concerns regarding the sovereign debt of various Eurozone countries, uncertainty relating to the pace of US monetary policy tightening as well as fears related to a slowdown of the Chinese economy. Since the end of 2014, the marked decrease in oil prices has lead to new concerns especially with respect to oil-producing countries. Moreover, the prolonged period of weak demand and very low inflation in the Eurozone fosters the risk of deflation, which might adversely affect banks through low interest rates, with a particular impact on interest rate margins for retail banks.

The Group is exposed to the risk of substantial losses if sovereign states, financial institutions or other credit counterparties become insolvent or are no longer able to fulfil their obligations to the Group. A resumption of tensions in the Eurozone may trigger a significant decline in the Group's asset quality and an increase in its loan losses in the affected countries. The Group's inability to recover the value of its assets in accordance with the estimated percentages of recoverability based on past historical trends (which could prove inaccurate) could further adversely affect its performance. In the event of a pronounced macroeconomic downturn, it may also become necessary for the Group to invest resources to support the recapitalisation of its businesses and/or subsidiaries in the Eurozone or in countries closely connected to the Eurozone such as those in Central and Eastern Europe. The Group's activities and/or subsidiaries in certain countries could become subject to emergency legal measures or restrictions imposed by local or national authorities, which could adversely affect its business, financial situation and results of operations.

### 2. A number of exceptional measures taken by governments, central banks and regulators could be completed or terminated, and measures at the European level face implementation risks.

In response to the financial crisis, governments, central banks and regulators implemented measures intended to support financial institutions and sovereign states and thereby stabilise financial markets. Central banks took measures to facilitate financial institutions' access to liquidity, in particular by lowering interest rates to historic lows for a prolonged period.

Various central banks decided to substantially increase the amount and duration of liquidity provided to banks, loosen collateral requirements and, in some cases, implement "non-conventional" measures to inject substantial liquidity into the financial system, including direct market purchases of government bonds, corporate commercial paper and mortgage-backed securities. These central banks may decide, acting alone or in concert, to modify their monetary policies or to tighten their policies regarding access to liquidity, which could substantially and abruptly decrease the flow of liquidity in the financial system. For example, in October 2014, the United States Federal Reserve (the "Fed") terminated its asset purchase under its third quantitative easing programme. On 16<sup>th</sup> December 2015, the Fed began raising interest rates, ending seven years of a zero interest rate policy. However it announced its intention to maintain the size of its balance sheet and continue to roll over maturing Treasury bonds and refinance other assets acquired under its quantitative easing programme. The market is now focusing on the pace of interest rate rises as a function of the American economic recovery.

Such changes, or concerns about their potential impact, could increase volatility in the financial markets and push interest rates significantly higher. Given the uncertainty of the nascent economic recovery, such changes could have an adverse effect on financial institutions and, hence, on the Group's business, financial situation and results of operations.

Steps taken in 2014 to support the Eurozone, including exceptional monetary policy measures, the 2014 launch of a Single Supervisory Mechanism under the supervision of the European Central Bank (ECB) and the successful 2014 completion of the Asset Quality Review (AQR) process and stress tests covering all major European banks, have contributed to a tangible easing of financial stability tensions. In June and September 2014 and December 2015, the ECB further eased monetary conditions by announcing additional interest rate cuts (including negative interest rates for deposit facilities). It also launched Targeted Longer-term Refinancing Operations (TLTRO) and two new asset purchase programmes, namely the ABS purchase programme (ABSPP) and the third covered bond purchase programme (CBPP3). In response to continued low inflation and an economic environment that continued to be weak, on 22 January 2015, the ECB announced an expanded asset repurchase programme consisting of up to EUR 60 billion per month in public and private debt repurchases, starting in March 2015 and lasting until at least March 2017. In spite of these measures, a resurgence of financial tension in Eurozone markets cannot be ruled out, which could result in national policies restricting cross-border flows of liquidity.

# 3. The Group's results may be affected by regional market exposures.

The Group's performance is significantly affected by economic, financial and political conditions in the principal markets in which it operates, such as France and other European Union countries. In France, the Group's principal market, weak growth and an unfavourable trend in the real estate market have had, and could continue to have, a material adverse impact on its business, resulting in decreased demand for loans, higher rates of non-performing loans and decreased asset values. In the other European Union countries, economic stagnation or a deteriorating economic environment could result in increased loan losses or higher levels of provisioning.

The Group is involved in commercial banking and investment banking operations in emerging markets, in particular in Russia and other Central and Eastern European countries as well as in North Africa. Capital markets and securities trading activities in emerging markets may be more volatile than those in developed markets and more vulnerable to certain risks, such as political instability and currency volatility. It is likely that these markets will continue to be characterised by higher levels of uncertainty and therefore risk. Unfavourable economic or political changes affecting these markets could have a material effect on the business, results and financial position of the Group.

This is also true in Russia given the ongoing Ukraine crisis. Since March 2014, the United States, the European Union and other countries and international organisations have imposed several rounds of sanctions against Russian individuals and corporates. These sanctions, combined with the substantial decline in world oil prices, have adversely impacted the value of the rouble, financing conditions and economic activity in Russia. There is a risk of further adverse developments in the event of increased geopolitical tensions and/or additional sanctions by Western countries and/or by the Russian Federation.

Unfavourable developments in the political or economic conditions affecting the markets in which the Group operates or is considering operating may adversely affect its business, results of operations or financial situation.

# 4. The Group operates in highly competitive industries, including in its home market.

The Group is subject to intense competition in the global and local markets in which it operates. On a global level, it competes with its peers principally in its core businesses (French Retail Banking, International Retail Banking and Financial Services, Global Banking and Investor Solutions, and Corporate Divisions). In local markets, including France, the Group faces substantial competition from locally-established banks, financial institutions, businesses providing financial and other services and, in some instances, governmental agencies. This competition exists in all of the Group's lines of business.

In France, the presence of large domestic competitors in the banking and financial services sector, as well as emerging market participants such as online retail banking and financial services providers, has resulted in intense competition for virtually all of the

Group's products and services. The French market is a mature market and one in which the Group holds significant market share in most of its lines of business. Its financial situation and results of operations may be adversely affected if it is unable to maintain or increase its market share in key lines of business. The Group also faces competition from local participants in other geographic markets in which it has a significant presence. In addition, certain sectors of the financial services industry have become more concentrated, as institutions involved in a broad range of financial services have been acquired by or merged into other firms, or have declared bankruptcy. Such changes could result in the Group's remaining competitors benefiting from greater capital resources or other advantages, such as the ability to offer a broader range of products and services or greater geographic diversity. As a result of these factors, and Societe Generale competitors' efforts to increase market share by reducing prices, the Group has experienced pricing pressures in the past, and may continue to experience them in the future.

Competition on a global level, as well as on a local level in France and in other key markets, could have a material adverse effect on the Group's business, results of operations and financial situation.

# 5. Reputational damage could harm the Group's competitive position.

The financial services industry is highly competitive and the Group's reputation for financial strength and integrity is critical to its ability to foster loyalty and develop its relationships with customers and counterparties (supervisors, suppliers, etc.). Its reputation could be harmed by events attributable to it, flaws in its control measures, non-compliance with its commitments or strategic decisions (business activities, appetite for risk, etc.), as well as by events and actions of others outside its control. Independent of the merit of information being disseminated, negative comments concerning the Group could have adverse effects on its business and its competitive position.

The Group's reputation could be adversely affected by a weakness in its internal control measures (operational risk, regulatory risk, credit risk, etc.) or following misconduct by employees such as with respect to clients (non-compliance with consumer protection rules) or by issues affecting market integrity (market abuse and conflicts of interest). The Group's reputation could also be affected by external fraud. Similarly, reputational issues could also result from a lack of transparency, communication errors or a restatement of, or corrections to, its financial results. The impact of these events can vary depending on the context and whether they become the focus of extensive media reports. Reputational damage could translate into a loss of business or investor confidence or a loss of clients (and prospects) that could have a material adverse effect on the Group's results of operations and financial position or on its ability to attract and retain employees.

# 6. The Group depends on access to financing and other sources of liquidity, which may be restricted for reasons beyond its control.

The ability to access short-term and long-term funding is essential to the Group's businesses. Societe Generale funds itself on an unsecured basis, by accepting deposits, by issuing long-term debt, promissory notes and commercial paper and by obtaining bank loans or lines of credit. The Group also seeks to finance many of its assets on a secured basis, including by entering into repurchase agreements. If the Group is unable to access secured or unsecured debt markets on terms it considers acceptable or if it experiences unforeseen outflows of cash or collateral, including material decreases in customer deposits, the Group's liquidity could be impaired. In particular, if the Group does not continue to successfully attract customer deposits (because, for example, competitors raise the interest rates that they are willing to pay to depositors, and accordingly, customers move their deposits elsewhere), the Group may be forced to turn to more expensive funding sources, which would reduce the Group's net interest margin and results.

The Group's liquidity could be adversely affected by factors the Group cannot control, such as general market disruptions, operational difficulties affecting third parties, negative views about the financial services industry in general, or the Group's shortterm or long-term financial prospects in particular, as well as changes in credit ratings or even market perceptions of the Group or other financial institutions.

The Group's credit ratings can have a significant impact on the Group's access to funding and also on certain trading revenues. In connection with certain OTC trading agreements and certain other securities agreements, the Group may, for example, be required to provide additional collateral to certain counterparties in the event of a credit ratings downgrade. The ratings agencies continue to monitor certain issuer-specific factors, including governance, the level and quality of earnings, capital adequacy, funding and liquidity, risk appetite and management, asset quality, strategic direction, business mix and liability structure. Additionally, the rating agencies look at the regulatory and legislative environment, as well as the macro-economic environment in which the bank operates. A deterioration in any of the factors above may lead to a ratings downgrade of the Group or of other actors in the European banking industry.

Lenders have the right to accelerate some of the Group's debts upon the occurrence of certain events, including the Group's failure to provide the necessary collateral following a downgrade of its credit rating below a certain threshold, and other events of default set out in the terms of such indebtedness. If the relevant lenders declare all amounts outstanding due and payable due to a default, the Group may be unable to find sufficient alternative financing on acceptable terms, or at all, and the Group's assets might not be sufficient to repay its outstanding indebtedness in full. Moreover, the Group's ability to access the capital markets and the cost of its long-term unsecured funding is directly related to its credit spreads in both the bond and credit derivatives markets, which are also outside of its control. Liquidity constraints may have a material adverse effect on the Group's business, financial situation, results of operations and ability to meet its obligations to its counterparties.

# 7. The protracted decline of financial markets or reduced liquidity in such markets may make it harder to sell assets and could lead to material losses.

In a number of the Group's businesses, a protracted market decline, particularly in asset prices, can reduce the level of activity in the financial markets or reduce market liquidity. These developments can lead to material losses if the Group is not able to close out deteriorating positions in a timely way or adjust the hedge of its positions. This is especially true for the assets the Group holds for which the markets are relatively illiquid by nature. Assets that are not traded in regulated markets or other public trading markets, such as derivatives contracts between banks, are valued based on the Group's internal models rather than publicly-quoted prices. Monitoring the deterioration of prices of assets like these is difficult and could lead to losses that the Group did not anticipate.

# 8. The volatility of the financial markets may cause the Group to suffer significant losses on its trading and investment activities.

Market volatility could adversely affect the Group's trading and investment positions in the debt, currency, commodity and equity markets, as well as its positions in private equity, property and other investments. Severe market disruptions and extreme market volatility have occurred in recent years and may occur again in the future, which could result in significant losses for the Group's capital markets activities. Such losses may extend to a broad range of trading and hedging products, including swaps, forward and future contracts, options and structured products.

Market volatility makes it difficult to predict trends and implement effective trading strategies; it also increases risk of losses from net long positions when prices decline and, conversely, from net short positions when prices rise. Such losses, if significant, could adversely affect the Group's results of operations and financial situation.

# 9. Changes in interest rates may adversely affect the Group's banking and asset management businesses.

The Group's performance is influenced by changes and fluctuations in interest rates in Europe and in the other markets in which it operates. Interest rate sensitivity refers to the relationship between changes in market interest rates and changes in net interest margins and balance sheet values. Any mismatch between interest owed by the Group and interest due to it (in the absence of adequate hedging) could have adverse material effects on the Group's business, financial situation and results of operations.

# 10. Fluctuations in exchange rates could adversely affect the Group's results of operations.

The Group's main operating currency is the euro. However, a significant portion of the Group's business is carried out in currencies other than the euro, such as the US dollar, the British pound sterling, the Czech koruna, the Romanian lei, the Russian rouble and the Japanese yen. The Group is exposed to exchange rate movements to the extent its revenues and expenses or its assets and liabilities are recorded in different currencies. Because the Group publishes its consolidated financial statements in euros, which is the currency of most of its liabilities, the Group is also subject to translation risk in the preparation of its financial statements. Fluctuations in the rate of exchange of these currencies into euros may have a negative impact on the Group's consolidated results of operations, financial position and cash flows, despite any hedges that may be implemented by the Group to limit its foreign exchange exposure. Exchange rate fluctuations may also affect the value (denominated in euros) of the Group's investments in its subsidiaries outside the Eurozone.

# 11. The Group is subject to extensive supervisory and regulatory regimes in the countries in which it operates and changes in these regimes could have a significant effect on the Group's businesse.

The Group is subject to extensive regulation and supervision in all jurisdictions in which it operates. The rules applicable to banks seek principally to limit their risk exposure, preserve their stability and financial solidity and protect depositors, creditors and investors. The rules applicable to financial services providers govern, among other things, the sale, placement and marketing of financial instruments. The banking entities of the Group must also comply with requirements as to capital adequacy and liquidity in the countries in which they operate. Compliance with these rules and regulations requires significant resources. Non-compliance with applicable laws and regulations could lead to fines, damage to the Group's reputation, forced suspension of its operations or the withdrawal of operating licenses.

Since the onset of the financial crisis, a variety of measures have been proposed, discussed and adopted by numerous national and international legislative and regulatory bodies, as well as other entities. Certain of these measures have already been implemented, while others are still under discussion. It therefore remains difficult to accurately estimate the future impacts or, in some cases, to evaluate the likely consequences of these measures.

In particular, the Basel 3 reforms are being implemented in the European Union through the Capital Requirements Regulation (CRR) and Capital Requirements Directive 4 (CRD4) which came into effect on 1 January 2014, with certain requirements being phased in over a period of time, at least until 2019. Basel 3 is an international regulatory framework to strengthen capital and liquidity requirements with the goal of promoting a more resilient banking sector. Recommendations and measures addressing systemic risk exposure of global banks, including additional loss absorbency requirements, were adopted by the Basel Committee and by the Financial Stability Board (FSB), which was established following the G20 London summit in 2009. Societe Generale, among other global banks, has been named by the FSB as a "systemically important financial institution" (G-SIB) and as a result will be subject to additional capital buffer requirements.

In France, the French law No. 2013-672 dated 26 July 2013 on the separation and regulation of banking activities (loi de séparation et de régulation des activités bancaires) (as amended by ordonnance No. 2014-158 dated 20 February 2014 (ordonnance portant diverses dispositions d'adaptation de la législation au droit de l'Union européenne en matière financière)) (the Banking Law) mandates the separation of certain market activities by significant credit institutions that are considered to be "speculative" (i.e. those deemed not necessary for financing the economy). Unless an exception applies under the law (such as market making), this obligation covers all banks' proprietary trading. In accordance with the Banking Law, the Group has segregated the relevant activities in a special subsidiary as from 1 July 2015. Given the recent implementation of the Banking Law, it is still too early to estimate the potential impact of these reforms on the Group's activities.

Ordonnance No. 2015-1024 dated 20 August 2015 (ordonnance n° 2015-1024 du 20 août 2015 portant diverses dispositions d'adaptation de la législation au droit de l'Union européenne en matière financière) (the Ordonnance) has amended the provisions of the French Monetary and Financial Code (Code monétaire et financier) to implement into French law Directive 2014/59/EU of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms (the BRRD). Many of the provisions contained in the Banking Law were already similar in effect to the provisions of the Ordonnance. Decree No. 2015-1160 dated 17 September 2015 and three orders (arrêtés) dated 11 September 2015 regarding (i) recovery planning, (ii) resolution planning and (iii) criteria to assess the resolvability for institutions or groups, were published on 20 September 2015 to supplement the provisions of the Ordonnance implementing the BRRD into French law.

The Ordonnance requires that credit institutions subject to the direct supervision of the ECB (such as Societe Generale) and credit institutions and investment firms that are a significant part of the financial system, draw up and submit to the ECB a recovery plan providing for measures to be taken by such institutions to restore their financial position following a significant deterioration of the same. The Ordonnance expands the powers of the ACPR over these institutions under resolution, in particular by allowing business disposals, the establishment of a bridge institution, the transfer of their assets to an asset management vehicle or the write-down and conversion or the amendment of the terms (including altering the maturity and/or payable interests and/or ordering a temporary suspension of payments) of their capital instruments and eligible liabilities (referred to as the bail-in tool). These reforms could have a significant impact on the Group and its structure and the value of its equity and debt securities.

Regulation (EU) No. 806/2014 of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund has created the Single Resolution Board (the Board). Since 1 January 2015, the Board has authority to collect information and cooperate with the ACPR for resolution planning purposes. As from 1 January 2016, the resolution powers of the ACPR have been overridden by those of the Board within the framework of the Single Resolution Mechanism. The entry into force of such mechanism could impact the Group and its structure in ways that cannot currently be estimated. Since November 2014, Societe Generale and all other major financial institutions in the Eurozone are subject to the supervision of the ECB as part of the implementation of the single supervisory mechanism. As set out above, Societe Generale is also subject to the Single Resolution Mechanism since January 2016. The impact of this new supervisory structure on the Group cannot yet be fully evaluated. Nevertheless, the new structure and the implementation of additional supervisory measures may increase volatility in financial markets.

The MREL ratio "Minimum requirement for own funds and eligible liabilities") is defined in the BRRD and has been implemented into French law by the *Ordonnance*. It entered into force on 1 January 2016. The MREL ratio is a minimum requirement for own funds and eligible liabilities that are available to absorb losses under resolution. This requirement is calculated as the amount of own funds and eligible liabilities expressed as a percentage of the total liabilities and own funds of the institution

The TLAC ratio (Total loss absorbing capacity") has been created by the FSB at the request of the G20. In November 2015, the FSB finalized its Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution, including the TLAC Term Sheet. It introduced a new international standard for external and internal TLAC. The final Term Sheet, published on 9 November 2015 and approved by the G20 Leaders in Antalya, provides for the following TLAC principles, which will form a new international standard for G-SIBs:

(i) G-SIBs may be required to meet the TLAC requirement alongside the minimum regulatory requirements set out in the Basel III framework. Specifically, G-SIBs may be required to meet a Minimum TLAC Requirement of at least 16% plus Basel III regulatory capital buffers of the resolution group's risk-weighted assets (TLAC RWA Minimum) as from 1 January 2019. As from 1 January 2022, the TLAC RWA Minimum will amount to at least 18% plus Basel III regulatory capital buffers. Minimum TLAC must also be at least 6% of the Basel III leverage ratio denominator (TLAC Leverage Ratio Exposure Minimum) as from 1 January 2019, and at least 6.75% as from 1 January 2022. Home authorities may apply additional firm-specific requirements above these minimum standards.

(ii) The Term Sheet determines the core features for TLAC-eligible external instruments. TLAC instruments must be subordinated (structurally, contractually or statutorily) to operational liabilities, except for EU banks which will be allowed to include a limited amount of senior debt (2.5% of RWA in 2019, 3.5% of RWA in 2022) subject to regulatory approval. TLAC instruments must have a remaining maturity of at least one year. Insured deposits, sight or short term deposits, derivatives and structured notes are excluded.

(iii) In order to reduce the risk of contagion, G-SIBs may be required to deduct exposures to eligible external TLAC instruments and liabilities issued by other G-SIBs from their own TLAC position.

The impact of the MREL and TLAC ratios on the Group and its structure may not be currently fully estimated, although our financial position and cost of funding could be materially and adversely affected.

The US Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 "Dodd-Frank") affects the Group and some of its businesses. Under Dodd-Frank, US regulators are required to implement significant structural reforms in the financial services industry, and many of its provisions apply to non-US banking organisations with US operations. Among other things, Dodd-Frank establishes or calls for new systemic risk oversight, bank capital standards, the orderly liquidation of failing systemically significant financial institutions, regulation of the over-the-counter derivatives market, and limitations on banking organisations'trading and fund activities.

Although the majority of required rules and regulations have now been finalised, many are still in proposed form, are yet to be proposed or are subject to extended transition periods. Finalised rules may in some cases be subject to ongoing uncertainty about interpretation and enforcement. Further implementation and compliance efforts may be necessary based on subsequent regulatory interpretations, guidelines or exams. Nevertheless, the rules and regulations are expected to result in additional costs and impose certain limitations, and the Group could be materially and adversely affected thereby.

The European Market Infrastructure Regulation (EMIR) published in 2012 places new constraints on derivatives market participants in order to improve the stability and transparency of this market. Specifically, EMIR requires the use of central counterparties for products deemed sufficiently liquid and standardised, the reporting of all derivative products transactions to a trade repository, and the implementation of risk mitigation procedures (e.g. exchange of collateral) for OTC derivatives not cleared by central counterparties. Some of these measures are already in effect, while others are expected to come into force in 2016 (e.g. mandatory central clearing for interest rate derivatives), making it difficult to accurately estimate their impact. In addition, Regulation (EU) 2015/2365 of 25<sup>th</sup> November 2015 on transparency of securities financing transactions and of reuse was published in the Official Journal of the European Union on 23<sup>rd</sup> December 2015.

In January 2015, the European Banking Authority (EBA) published the final draft Regulatory Technical Standards "RTS") laying out the requirements related to prudent valuation. Even though a prudent valuation of fair value assets was already specified in CRD3, the RTS implement uniform prudent valuation standards across Europe. The Additional Valuation Adjustments (AVAs) are defined as the difference between the prudent valuation and the accounting fair value and are deducted from "Common Equity Tier One Capital". Lastly, additional reforms are being considered that seek to enhance the harmonisation of the regulatory framework and reduce variability in the measurement of Risk Weighted Assets (RWA) across banks. In particular, the final text on the reform of internally-modelled and standardised approaches for market risk (the Minimum capital requirements for market risk) was published in January 2016 with a view to implementation in January 2019. Banks would be required to report under the new standards by the end of 2019. Further, in December 2014 and 2015, the Basel Committee on Banking Supervision (BCBS) published two consultative papers for a revision of methods for measuring credit risk, including, for example, the establishment of RWA floors and integrating standard approaches that are more sensitive to risk. At this stage, it is difficult to estimate the potential impact of these reforms with precision.

# 12. The Group is exposed to counterparty risk and concentration risk.

The Group is exposed to credit risk with respect to numerous counterparties in the ordinary course of its trading, lending, deposit-taking, clearance and settlement, and other activities. These counterparties include institutional clients, brokers and dealers, commercial and investment banks and sovereign states. The Group may realise losses if a counterparty defaults on its obligations and the collateral that it holds does not represent a value equal to, or is liquidated at prices not sufficient to recover the full amount of, the loan or derivative exposure it is intended to cover. Many of the Group's hedging and other risk management strategies also involve transactions with financial services counterparties. The weakness or insolvency of these counterparties may impair the effectiveness of the Group's hedging and other risk management strategies, which could in turn materially adversely affect its business, results of operations and financial situation.

The Group may also have concentrated exposure to a particular counterparty, borrower or issuer (including sovereign issuers), or to a particular country or industry. A ratings downgrade, default or insolvency affecting such a counterparty, or a deterioration of economic conditions in such a country or industry, could have a particularly adverse effect on the Group's business, results of operations and financial situation. The systems the Group uses to limit and monitor the level of its credit exposure to individual entities, industries and countries may not be effective to prevent concentration of credit risk. Because of a concentration of risk, the Group may suffer losses even when economic and market conditions are generally favourable for its competitors.

# 13. The financial soundness and conduct of other financial institutions and market participants could adversely affect the Group.

The Group's ability to engage in funding, investment and derivative transactions could be adversely affected by the soundness of other financial institutions or market participants. Financial services institutions are interrelated as a result of trading, clearing, counterparty, funding and other relationships. As a result, defaults by, or even rumours or questions about, one or more financial services institutions, or the loss of confidence in the financial services industry generally, may lead to market-wide liquidity scarcity and could lead to further losses or defaults. The Group has exposure to many counterparties in the financial industry, directly and indirectly, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, and other institutional clients with which it regularly executes transactions. Many of these transactions expose the Group to credit risk in the event of default by counterparties or clients. It should be noted that the number of cleared transactions is increasing and will continue to do so, thereby increasing our exposure to clearing houses while reducing our bilateral positions.

# 14. The Group's hedging strategies may not prevent all risk of losses.

If any of the variety of instruments and strategies that the Group uses to hedge its exposure to various types of risk in its businesses is not effective, it may incur significant losses. Many of its strategies are based on historical trading patterns and correlations that may not be effective in the future. For example, if the Group holds a long position in an asset, it may hedge that position by taking a short position in another asset whose value has historically moved in an offsetting direction. However, the hedge may only cover a part of its exposure to the long position, and the strategies used may not protect against all future risks or may not be fully effective in mitigating its risk exposure in all market environments or against all types of risk in the future. Unexpected market developments may also reduce the effectiveness of the Group's hedging strategies.

# 15. The Group's results of operations and financial situation could be adversely affected by a significant increase in new provisions or by inadequate provisioning.

The Group regularly sets aside provisions for loan losses in connection with its lending activities. Its overall level of loan loss provisions, recorded as "cost of risk" in its income statement, is based on its assessment of the recoverability of the relevant loans. This assessment relies on an analysis of various factors, including prior loss experience, the volume and type of lending being conducted, industry standards, past due loans, certain economic conditions and the amount and type of any guarantees and collateral. Notwithstanding the care with which the Group carries out such assessments, it has had to increase its provisions for loan losses in the past and may have to substantially increase its provisions in the future following an increase in defaults or for other reasons. Significant increases in loan loss provisions, a substantial change in the Group's estimate of its risk of loss with respect to loans for which no provision has been recorded, or the occurrence of loan losses in excess of its provisions, could have a material adverse effect on its results of operations and financial situation.

# 16. The Group relies on assumptions and estimates which, if incorrect, could have a significant impact on its financial statements.

When applying the IFRS accounting principles disclosed in the Financial Information (Chapter 6) of the Registration Document and for the purpose of preparing the Group's consolidated financial statements, management makes assumptions and estimates that may have an impact on figures recorded in the income statement, on the valuation of assets and liabilities in the balance sheet, and on information disclosed in the notes to the consolidated financial statements.

In order to make these assumptions and estimates, management exercises judgment and uses information available at the date of preparation of the consolidated financial statements. By nature, valuations based on estimates involve risks and uncertainties relating to their occurrence in the future. Actual future results may differ from these estimates, which could have a significant impact on the Group's financial statements.

The use of estimates principally relates to the following valuations:

- fair value of financial instruments that are not quoted on an active market, presented in the balance sheet or the notes to the financial statements;
- the amount of impairment of financial assets (loans and receivables, available-for-sale financial assets, held-tomaturity financial assets), lease financing and similar agreements, tangible or intangible fixed assets and goodwill;
- provisions recognised under liabilities, including provisions for employee benefits or underwriting reserves of insurance companies, and deferred profit-sharing on the asset side of the balance sheet;
- the amount of deferred tax assets recognised in the balance sheet;
- initial value of goodwill determined for each business combination; and
- in the event of the loss of control of a consolidated subsidiary, fair value of the entity's interest retained by the Group, where applicable.

# 17. The Group is exposed to legal risks that could negatively affect its financial situation or results of operations.

The Group and certain of its former and current representatives may be involved in various types of litigation including civil, administrative and criminal proceedings. The large majority of such proceedings arise from transactions or events that occur in the Group's ordinary course of business. There has been an increase in investor litigation and regulatory actions against intermediaries such as banks and investment advisors in recent years, in part due to the challenging market environment. This has increased the risk, for the Group as well as for other financial institutions, of losses or reputational harm deriving from litigation and other proceedings. Such proceedings or regulatory enforcement actions could also lead to civil or criminal penalties that adversely affect the Group's business, financial situation and results of operations.

It is inherently difficult to predict the outcome of litigation, regulatory proceedings and other adversarial proceedings involving the Group's businesses, particularly those cases in which the matters are brought on behalf of various classes of claimants, cases where claims for damages are of unspecified or indeterminate amounts or cases involving novel legal claims. In preparing the Group's financial statements, management makes estimates regarding the outcome of legal, regulatory and arbitration matters and records a provision when losses with respect to such matters are probable and can be reasonably estimated. Should such estimates prove inaccurate or the provisions set aside by the Group to cover such risks inadequate, its financial situation or results of operations could be materially and adversely affected. (See "Compliance, reputational and legal risks".)

# 18. If the Group makes an acquisition, it may be unable to manage the integration process in a cost-effective manner or achieve the expected benefits.

The selection of an acquisition target is carried out by the Group following a careful analysis of the business or assets to be acquired. However, such analyses often cannot be exhaustive due to various factors. As a result, certain acquired businesses may include undesirable assets or expose the Group to increased risks, particularly if the Group was unable to conduct full and comprehensive due diligence prior to the acquisition.

The successful integration of a new business typically requires effectively coordinating business development and marketing initiatives, retaining key managers, recruitment and training, and consolidating information technology systems. These tasks may prove more difficult than anticipated, require more management time and resources than expected, and/or the Group may experience higher integration costs and lower savings or earn lower revenues than expected. The pace and degree of synergy building is also uncertain.

### 19. The Group's risk management system may not be effective and may expose the Group to unidentified or unanticipated risks, which could lead to significant losses.

The Group has devoted significant resources to develop its risk management policies, procedures and assessment methods, and intends to continue to do so in the future. Nonetheless, its risk management techniques and strategies may not be fully effective in mitigating its risk exposure in all economic market environments or against all types of risk, including risks that it fails to identify or anticipate. Some of its qualitative tools and metrics for managing risk are based upon observed historical market behaviour. The Group applies statistical and other tools to these observations in order to assess its risk exposures. These tools and metrics may fail to predict accurate future risk exposures that arise from factors the Group did not anticipate or correctly evaluate in its statistical models. Failure to anticipate these risks or accurately estimate their impact could significantly affect the Group's business, financial situation and results of operations.

# 20. Operational failure, termination or capacity constraints affecting institutions the Group does business with, or failure or breach of the Group's information technology systems, could result in losses.

The Group is exposed to the risk of operational failure, termination or capacity constraints of third parties, including clients, financial intermediaries that it uses to facilitate cash settlement or securities transactions (such as clearing agents, exchanges and clearing houses), and other market participants. An increasing number of derivative transactions are now cleared on exchanges or will be in the near future, which has increased the Group's exposure to these risks, and could affect its ability to find adequate and costeffective alternatives in the event of any such failure, termination or constraint.

The interconnectivity of multiple financial institutions with clearing agents, exchanges and clearing houses, and the increased centrality of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact the Group's ability to conduct business. Industry consolidation, whether among market participants or financial intermediaries, can exacerbate these risks as disparate complex systems need to be integrated, often on an accelerated basis. As the Group becomes more interconnected with its clients, it also faces the risk of operational failure with respect to its clients'information technology and communication systems. Any failure, termination or constraint could adversely affect its ability to effect transactions, service its clients, manage its exposure to risk or expand its businesses or result in financial loss or liability to its clients, impairment of its liquidity, disruption of its businesses, regulatory intervention or reputational damage.

In addition, an increasing number of companies, including financial institutions, have experienced intrusion attempts or even breaches of their information technology security, some of

which have involved sophisticated and highly targeted attacks on their computer networks and resulted in the loss, theft or disclosure of confidential data. Because the techniques used to obtain unauthorised access, disable or degrade service or sabotage information systems change frequently and often are not recognised until launched against a target, the Group may be unable to anticipate these techniques or to implement effective countermeasures in a timely manner. Similarly, technical internal and external fraud are fluid and protean and closely follow the technological evolution of financial activities and customer behavior leading them Fraudsters regularly to develop new techniques attacks . Such actions could have a material adverse effect on the Group's business and be the origin of operational losses.

The Group relies heavily on communications and information systems to conduct its business. Any failure, interruption or breach in security of these systems, even if only brief and temporary, could result in business interruptions and lead to additional costs related to information retrieval and verification, reputational harm and a potential loss of business. A failure, interruption or security breach of its information systems could have a material adverse effect on its business, results of operations and financial situation.

### 21. The Group may incur losses as a result of unforeseen or catastrophic events, including the emergence of a pandemic, terrorist attacks or natural disasters.

The occurrence of unforeseen or catastrophic events, including the emergence of a pandemic or other widespread health crises (or concerns over the possibility of such crises), terrorist attacks or natural disasters, could create economic and financial disruptions, lead to operational difficulties (including travel limitations or relocation of affected employees) that could impair the Group's ability to manage its businesses, and expose its insurance activities to significant losses and increased costs (such as re-insurance premiums).

### 22. The Group may generate lower revenues from brokerage and other commission and fee-based businesses during market downturns.

During the recent market downturn, the Group experienced a decline in the volume of transactions that it executed for its clients, resulting in lower revenues from this activity. There is no guarantee that the Group will not experience a similar trend in future market downturns, which may occur periodically and unexpectedly. Furthermore, changes in applicable regulations, such as the adoption of a financial transaction tax, could also impact the volume of transactions that the Group executes for its clients, resulting in lower revenues from these activities. In addition, because the fees that the Group charges for managing its clients'portfolios are in many cases based on the value or performance of those portfolios, a market downturn that reduces the value of its clients'portfolios or increases the amount of withdrawals would reduce the revenues the Group generates from its asset management, custodial and private banking businesses.

### 23. The Group's ability to retain and attract qualified employees is critical to the success of its business, and the failure to do so may materially adversely affect its performance.

Societe Generale's employees are its most important resource, and industry competition for qualified personnel is intense. In order to attract, retain and engage talented employees, the Group must offer career paths, training and development opportunities and compensation levels in line with its competitors and market practices. If the Group were unable to continue to engage highly-qualified employees, its performance, including its competitive position and client satisfaction, could be materially adversely affected. Furthermore, the financial industry in Europe will continue to experience more stringent regulation of employee compensation, including rules related to bonuses and other incentive-based compensation, clawback requirements and deferred payments, and Societe Generale, like all participants in the financial industry, will need to adapt to this changing environment in order to attract and retain qualified employees.

The CRD4, which applies to banks from the European Economic Area, introduced a ceiling on the variable component of compensation in relation to the fixed component in 2014. This regulatory constraint could cause a relative increase in the fixed compensation in relation to its variable component based on riskadjusted performance. This could lead to challenges in attracting and retaining key personnel and to an increase in the fixed cost base, both of which would be detrimental to the financial stability of the Group.

Societe Generale has undertaken a review of the risks that could have a material adverse effect on its business, financial position and results of operations, and does not consider there to be other material risks beyond those presented in the "Types of risks" and "Risks factors" of this chapter.

This section provides details on capital resources, regulatory requirements and the composition of leverage ratio.



# **REGULATORY CAPITAL RATIOS(1)**



## Evolution of own funds

+FUR 7.6 br between 31.12.2014 and 31.12.2015

CET1 Ratio at end-2015

10.9%

## **REGULATORY CAPITAL (IN EUR BN)**



### **BASEL 3 CAPITAL ALLOCATED TO BUSINESSES** (ANNUAL AVERAGE)



## LEVERAGE RATIO<sup>(1)(2)</sup>



(1) Fully loaded proforma based on CRR/CRD4 rules as published on 26<sup>th</sup> June 2013, including Danish compromise for insurance.

(2) Fully loaded based on CRR rules as adopted by the EU in October 2014 (Delegated Act); 2013 calculated using previously applicable rules.

# 3. CAPITAL MANAGEMENT AND ADEQUACY

# **3.1. THE REGULATORY FRAMEWORK**

In response to the financial crisis of recent years, the Basel Committee, mandated by the G20, has defined the new rules governing capital and liquidity aimed at making the banking sector more resilient. The new so-called Basel 3 rules were published in December 2010. They were translated into European law by a directive (CRD4) and a regulation (CRR) which entered into force on 1<sup>st</sup> January 2014. In 2014 and 2015, several delegated and implementing acts entered into force in order to specify the regulation.

The general framework defined by Basel 3 is structured around three pillars, as in Basel 2:

- Pillar 1 sets the minimum solvency requirements and defines the rules that banks must use to measure risks and calculate associated capital requirements, according to standard or more advanced methods;
- Pillar 2 relates to the discretionary supervision implemented by the competent authority, which allows them – based on a constant dialogue with supervised credit institutions – to assess the adequacy of capital requirements as calculated under Pillar 1, and to calibrate additional capital requirements with regard to risks;
- Pillar 3 encourages market discipline by developing a set of qualitative or quantitative disclosure requirements which will allow market participants to make a better assessment of a given institution's capital, risk exposure, risk assessment processes and, accordingly, capital adequacy.

In terms of capital, the main new measures introduced to strengthen banks' solvency were as follows:

- the complete revision and harmonisation of the definition of capital, particularly with the amendment of the deduction rules, the definition of a standardised Common Equity Tier 1 (or CET1) ratio, and new Tier 1 capital eligibility criteria for hybrid securities;
- new capital requirements for the counterparty risk of market transactions, to factor in the risk of a change in CVA (Credit Value Adjustment) and hedge exposures on the central counterparties (CCP);
- the set-up of capital buffers that can be mobilised to absorb losses in case of difficulties. The new rules require banks to create a conservation buffer and a countercyclical buffer to preserve their solvency in the event of adverse conditions. Moreover, an additional buffer is required for systemically important banks. As such, the Societe Generale group, as a global systemically important bank (GSIB), has had its Common Equity Tier 1 ratio requirement increased by an additional 1%. Requirements related to capital buffers will gradually enter into force as from 1<sup>st</sup> January 2016, for full application by January 2019;

- the set-up of restrictions on distributions, relating to dividends, AT1 instruments and variable remuneration, via the maximum distributable amount (MDA) mechanism. At end-2015, the European Banking Authority (EBA) issued an opinion to clarify that the MDA should be applied when a bank no longer complies with its CET1 ratio requirements, including those of Pillar 2 and capital buffers.
- in addition to these measures, there will be measures to contain the size and consequently the use of excessive leverage. To this end, the Basel Committee defined a leverage ratio, for which the definitive regulations were published in January 2014. The Basel leverage ratio compares the bank's Tier 1 capital to the balance sheet and off-balance sheet items, with restatements for derivatives and pensions. Banks have been obliged to publish this ratio since 2015. By 2018, regulators will decide whether it is relevant to set a minimum requirement applicable to all banks.

From a regulatory perspective, the year 2015 saw the continued implementation of the Banking Union. The European Central Bank (ECB) took the helm of the Single Supervisory Mechanism in the Eurozone in November 2014, and in 2015 determined the Pillar 2 minimum requirements applicable to Societe Generale group and some of its subsidiaries. These requirements were previously determined by the Autorité de Contrôle Prudential et de Résolution (ACPR – French Prudential Supervisory and Resolution Authority). The ECB applied the new Supervisory Review and Evaluation Process (SREP) methodology in accordance with the guidelines of the EBA, published end-2014. The SREP review led to the notification of the Pillar 2 requirement applicable in 2016, i.e. a CET1 ratio requirement of 9.75% (phased-in).

Lastly, Societe Generale Group is classified as a financial conglomerate and is therefore subject to additional supervision by the French Prudential Supervisory and Resolution Authority.

At 31<sup>st</sup> December 2015, Societe Generale Group's financial conglomerate equity covered the solvency requirements for both banking activities and insurance activities.

Throughout 2015, the Societe Generale Group complied with the minimum ratio requirements applicable to its activities.

# **3.2. SCOPE OF APPLICATION – PRUDENTIAL SCOPE**

The Group's prudential reporting scope includes all fully and proportionally consolidated subsidiaries, with the exception of insurance subsidiaries, which are subject to a separete capital supervision.

### TABLE 1: DIFFERENCE BETWEEN ACCOUNTING SCOPE AND PRUDENTIAL REPORTING SCOPE

Type of entity	Accounting treatment	Prudential treatment under Basel 3
Subsidiaries with a finance activity	Full consolidation	Capital requirement based on the subsidiary's activities
Subsidiaries with an Insurance activity	Full consolidation	Weighted equity value
Holdings, joint ventures with a finance activity by nature	Equity method	Weighted equity value

The following table provides a reconciliation of the consolidated balance sheet and the accounting balance sheet within the prudential scope. The amounts presented are accounting data and not a measure of risk-weighted assets, EAD or prudential capital.

### TABLE 2: RECONCILIATION OF THE CONSOLIDATED BALANCE SHEET AND THE ACCOUNTING BALANCE SHEET

ASSETS at 31.12.2015 (In EUR m)	Consolidated balance sheet	Prudential restatements <sup>(1)</sup>	Accounting balance sheet within the prudential scope	See table 6a, p.37
Cash and amounts due from Central Banks	78,565	0	78,565	
Financial assets at fair value through profit and loss	519,333	(28,216)	491,117	
Hedging derivatives	16,538	(378)	16,160	
Available-for-sale assets	134,187	(72,303)	61,884	
Loans and advances to credit institutions	71,682	(7,263)	64,419	
of which subordinated loans to credit institutions	458	0	458	1
Loans and advances to clients	378,048	899	378,947	
Lease financing and equivalent transactions	27,204	0	27,204	
Revaluation of macro-hedged items	2,723	0	2,723	
Financial assets held to maturity	4,044	0	4,044	
Tax assets	7,367	(23)	7,344	
of which deferred tax assets that rely on future profitability excluding those arising from temporary differences	1,671	696	2,367	2
of which deferred tax assets arising from temporary differences	4,257	(699)	3,558	3
Other assets	69,398	(960)	68,438	
of which defined-benefit pension fund assets	32	0	32	4
Non-current assets held for sale	171	0	171	
Investments in subsidiaries and affiliates accounted for by the equity method	1,352	2,978	4,330	
Tangible and intangible assets	19,421	(648)	18,773	
of which intangible assets exclusive of leasing rights	1,511	(46)	1,465	5
Goodwill	4,358	5	4,363	5
Total ASSETS	1,334,391	(105,909)	1,228,482	

(1) Restatement of subsidiaries excluded from the prudential scope and reconsolidation of intragroup transactions related to its subsidiaries.

NB. The table 6a on page 37 provides detailed information on the creation of own funds and solvency ratios.

LIABILITIES at 31.12.2015 (In EUR m)	Consolidated balance sheet	Prudential restatements <sup>(1)</sup>	Accounting balance sheet within the prudential scope	See table 6a, p.37
Central banks	6,951	0	6,951	
Liabilities at fair value through profit or loss	454,981	1,412	456,393	
Hedging derivatives	9,533	2	9,535	
Amounts owed to credit institutions	95,452	(762)	94,690	
Amounts owed to clients	379,631	2,085	381,716	
Debt securities	106,412	4,415	110,827	
Revaluation reserve of interest-rate-hedged portfolios	8,055	0	8,055	
Tax liabilities	1,571	(519)	1,052	
Other Liabilities	83,083	(4,680)	78,403	
Debts related to Non-current liabilities held for sale	526	0	526	
Technical provisions of insurance companies	107,257	(107,257)	0	
Provisions	5,218	(22)	5,196	
Subordinated debts	13,046	245	13,291	
of which redeemable subordinated notes including revaluation differences on hedging items	12,488	240	12,728	8
Total debts	1,271,716	(105,081)	1,166,635	
EQUITY				
Equity, Group share	59,037	(1)	59,036	
of which capital and related reserves	19,979	0	19,979	7
of which other capital instruments	8,772	0	8,772	8
of which retained earnings	4,921	0	4,921	9
of which accumulated other comprehensive income (including gains and losses accounted directly in equity)	21,364	(1)	21,363	10
of which net income	4,001	0	4,001	11
Minority interests	3,638	(826)	2,811	12
Total equity	62,675	(827)	61,848	
Total LIABILITIES	1,334,391	(105,908)	1,228,482	

(1) Restatement of subsidiaries excluded from the prudential scope and reconsolidation of intragroup transactions related to its subsidiaries.

The main Group companies outside the prudential reporting scope are as follows:

## TABLE 3: SUBSIDIARIES OUTSIDE THE PRUDENTIAL REPORTING SCOPE

Company	Activity	Country
Antarius	Insurance	France
Catalyst RE International LTD	Insurance	Bermuda
Société Générale strakhovanie zhizni LLC	Insurance	Russia
Sogelife	Insurance	Luxembourg
Genecar - Société Générale de courtage d'assurance et de réassurance	Insurance	France
Inora life Itd	Insurance	Ireland
SG Strakhovanie LLC	Insurance	Russia
Sogecap	Insurance	France
KOMERCNI POJSTOVNA A.S.	Insurance	Czech Republic
La Marocaine Vie	Insurance	Morocco
Oradea Vie	Insurance	France
Société Générale Re SA	Insurance	Luxembourg
Sogessur	Insurance	France
Société Générale Life Insurance Broker SA	Insurance	Luxembourg
La Banque Postale Financement	Bank	France
SG Banque au Liban	Bank	Lebanon

Regulated financial subsidiaries and affiliates outside Societe Generale's prudential consolidation scope are all in compliance with their respective solvency requirements. More generally, all regulated Group undertakings are subject to solvency requirements set by their respective regulators.

# **3.3. REGULATORY CAPITAL**

Reported according to International Financial Reporting Standards (IFRS), Societe Generale's regulatory capital consists of the following components:

# **Common Equity Tier 1 capital**

According to CRR/CRD4 regulations, Common Equity Tier 1 capital is made up primarily of the following:

- ordinary shares (net of repurchased shares and treasury shares) and related share premium accounts;
- retained earnings;
- components of other comprehensive income;
- other reserves;
- minority interest limited by CRR/CRD4.

Deductions from Common Equity Tier 1 capital essentially involve the following:

- estimated dividend payment;
- goodwill and intangible assets, net of associated deferred tax liabilities;
- unrealised capital gains and losses on cash flow hedging;
- income on own credit risk;
- deferred tax assets on tax loss carryforwards;
- deferred tax assets resulting from temporary differences beyond a threshold;
- assets from defined benefit pension funds, net of deferred taxes;
- any positive difference between expected losses on customer loans and receivables, risk-weighted using the Internal Ratings Based (IRB) approach, and the sum of related value adjustments and collective impairment losses;
- expected loss on equity portfolio exposures;
- value adjustments resulting from the requirements of prudent valuation;
- securitisation exposures weighted at 1 250%, where these positions are not included in the calculation of total risk-weighted exposures.

# Additional Tier 1 Capital

According to CRR/CRD4 regulations, additional Tier 1 capital is composed of deeply subordinated notes that are issued directly by the bank, and have the following features:

- these instruments are perpetual and constitute unsecured, deeply subordinated obligations. They rank junior to all other obligations of the bank, including undated and dated subordinated debt, and senior only to common stock shareholders;
- in addition, Societe Generale may elect, on a discretionary basis, not to pay the interest and coupons linked to these instruments. This compensation is paid out of distributable items;
- they include neither a step-up in compensation nor any other incentive to redeem;
- they must have a loss-absorbing capacity;
- subject to the prior approval of the European Central Bank, Societe Generale has the option to redeem these instruments at certain dates, but no earlier than five years after their issuance date.

Deductions of additional Tier 1 capital essentially apply to the following:

- AT1 hybrid treasury shares;
- holding of AT1 hybrid shares issued by financial sector entities;
- minority interest beyond the minimum T1 requirement.

Issuance Date	Currency	lssue amount (in currency m)	First call date	Yield before the call date and frequency	Yield after the call date and frequency	Book value at 31.12.2015	Book value at 31.12.2014
05-Apr-07	USD	200 M	05-Apr-17	3-months USD Libor + 0.75% annually	3-months USD Libor + 0.75% annually	58	52
05-Apr-07	USD	1,100 M	05-Apr-17	5.922% semi-annually	3-months USD Libor + 0.75% annually	742	665
19-Dec-07	EUR	600 M	19-Dec-17	6.999% annually	Euribor 3 months + 3.35% annually	468	468
16-Jun-08	GBP	700 M	16-Jun-18	8.875% annually	Libor 3 months + 3.40% annually	689	649
07-Jul-08	EUR	100 M	07-Jul-18	7.715% annually	Euribor 3 months + 3.70% annually	100	100
27-Feb-09	USD	450 M	29-Feb-16	9.5045% annually	Libor 3 months + 6.77% annually	0	371
04-Sep-09	EUR	1,000 M	04-Sep-19	9.375% annually	Euribor 3 months + 8.9% annually	1,000	1,000
07-Oct-09	USD	1,000 M	07-Apr-15	8.75% annually	8.75% annually	0	824
06-Sep-13	USD	1,250 M	29-Nov-18	8.25% annually	Mid Swap Rate USD 5 years + 6.394%	1,148	1,030
18-Dec-13	USD	1,750 M	18-Dec-23	7.875% annually	Mid Swap Rate USD 5 years + 4.979%	1,607	1,441
07-Apr-14	EUR	1,000 M	07-Apr-21	6.75% annually	Mid Swap Rate USD 5 years + 5.538%	1,000	1,000
25-Jun-14	USD	1,500 M	27-Jan-20	6% semi-annually	Mid Swap Rate USD 5 years + 4.067%	1,378	1,235
22-Sep-15	USD	1,250 M	29-Sep25	8.000% semi-annually	Mid Swap Rate USD 5 years + 5.873%	1,148	0
Total						9,338	8,835

### TABLE 4: TOTAL AMOUNT OF DEBT INSTRUMENTS ELIGIBLE FOR TIER 1 EQUITY

# **Tier 2 Capital**

Tier 2 capital includes:

- undated deeply subordinated notes;
- dated subordinated notes;
- any positive difference between (i) the sum of value adjustments and collective impairment losses on customer loans and receivables exposures, risk-weighted using the IRB approach and (ii) expected losses, up to 0.6% of the total credit risk-weighted assets using the IRB approach;
- value adjustments for general credit risk related to collective impairment losses on customer loans and receivables exposures, risk-weighted using the standard approach, up to 1.25% of the total credit risk-weighted assets.

Deductions of Tier 2 capital essentially apply to the following:

- Tier 2 hybrid treasury shares;
- holding of Tier 2 hybrid shares issued by financial sector entities;
- share of non-controlling interest in excess of the minimum capital requirement in the entities concerned.

Tier 2 instruments are listed in Note 6.2 to the parent company financial statements for dated subordinated notes issued by Societe Generale SA, and in Note 7.1 to the consolidated financial statements for undated subordinated notes.

All capital instruments and their features are detailed online<sup>(1)</sup>.

<sup>(1)</sup> Information available on the www.sociétégénérale.com website, under Investors, Registration Document and Pillar 3.

(In EUR m)	31.12.2014	Issues	Redemptions	Prudential supervision valuation haircut	Others	31.12.2015
Debt instruments eligible for Tier 1	8,835	1,148	(1,195)	0	550	9,338
Debt instruments eligible for Tier 2	6,759	4,993	(11)	(831)	233	11,143
Total eligible debt instruments	15,594	6,141	(1,206)	(831)	783	20,481

### TABLE 5: CHANGES IN DEBT INSTRUMENTS ELIGIBLE FOR THE SOLVENCY CAPITAL REQUIREMENTS

## Solvency ratio

The solvency ratio is set by comparing the group's equity with the sum of risk-weighted assets for credit risk and the capital requirement multiplied by 12.5 for market risk and operational risk.

Since 1<sup>st</sup> January 2014, the new regulatory framework sets minimum requirements to be met for the CET1 ratio and the Tier 1 ratio. For 2015, the minimum requirement for CET1 was 4%, and that of Tier 1 5.5%, excluding the Pillar 2 requirement. The total equity requirement, including CET1, AT1 and Tier 2 equity, was set at 8%. In 2016, the minimum requirement for CET1 will be 4.5%, and that of Tier 1 6%.

In 2016, under Pillar 2, following the results of the Supervisory Review and Evaluation Process (SREP) performed by the European Central Bank (ECB), Societe Generale group is required to meet a Common Equity Tier 1 (CET1) ratio of 9.5% (phased-in ratio, including conservation buffer). The G-SIB buffer required by the Financial Stability Board (FSB) to be applied on top of this SREP ratio is equal to 0.25% for the Societe Generale Groupand will be increased by 0.25% per annum thereafter, ultimately reaching 1% in 2019. The prudential capital requirement of the Societe Generale Group will therefore be 9.75% as of 1<sup>st</sup> January 2016.

### TABLE 6: REGULATORY CAPITAL AND CRR/CRD4 SOLVENCY RATIOS - FULLY LOADED

(In EUR m)	31.12.2015	31.12.2014
Shareholders' equity (IFRS), Group share	59,037	55,168
Deeply subordinated notes	(9,552)	(9,364)
Perpetual subordinated notes	(366)	(335)
Consolidated shareholders' equity, Group share, net of deeply subordinated and perpetual subordinated notes	49,119	45,470
Non-controlling interests	2,487	2,671
Intangible assets	(1,443)	(1,419)
Goodwill	(4,533)	(5,132)
Proposed dividends (General Meeting of Shareholders) and interest expenses on deeply subordinated and perpetual subordinated notes	(1,764)	(1,120)
Deductions and regulatory adjustments	(5,000)	(4,679)
Common Equity Tier One Capital	38,865	35,792
Deeply subordinated notes and preferred shares	9,338	8,835
Other additional tier 1 capital	46	50
Additional Tier 1 deductions	(137)	(27)
Tier One Capital	48,112	44,650
Tier 2 instruments	11,143	6,759
Other tier 2 capital	278	441
Tier 2 deductions	(1,400)	(1,337)
Total regulatory capital	58,134	50,514
Total risk-weighted assets	356,725	353,196
Credit risk-weighted assets	293,543	285,095
Market risk-weighted assets	19,328	24,170
Operational risk-weighted assets	43,854	43,931
Solvency ratios		
Common Equity Tier 1 Ratio	10.9%	10.1%
Tier 1 Ratio	13.5%	12.6%
Total capital adequacy ratio	16.3%	14.3%

Group shareholders' equity at 31<sup>st</sup> December 2015 totalled EUR 59 billion (compared to EUR 55.2 billion at 31<sup>st</sup> December 2014). After taking into account non-controlling interests and prudential deductions, Common Equity Tier 1 capital was EUR 38.9 billion at 31<sup>st</sup> December 2015, vs. EUR 35.8 billion at 31<sup>st</sup> December 2014.

The table below shows the key factors in this change.

### TABLE 7: FULLY LOADED DEDUCTIONS AND REGULATORY ADJUSTMENTS UNDER CRR/CRD4

(In EUR m)	31.12.2015	31.12.2015
Unrecognised minority interests	(1,131)	(1,366)
Defered tax assets	(2,318)	(2,641)
Prudent Valuation Adjustment	(735)	(557)
Adjustments related to changes in the value of own liabilities	200	880
Others	(1,016)	(995)
Total Basel 3 deductions and regulatory adjustments	(5,000)	(4,679)

### TABLE 8: FULLY LOADED REGULATORY CAPITAL FLOWS

End 2014 Common Equity Tion One Conital	35,792
End-2014 Common Equity Tier One Capital	35,792
Change in share capital resulting from the capital increase	1
Net income, Group share	1,311
Change in the provision for 2016 dividends	(651)
Change linked to translation differences	252
Change in value of financial instruments	170
Change in non-controlling interests	185
Change in goodwill and intangible assets	575
Change in deductions	(321)
Other	1,551
End-2015 Common Equity Tier 1 capital	38,865
End-2014 Additional Tier 1 capital	8,858
Change in debt instruments eligible for additional Tier 1	503
Change in other additional Tier 1 capital	(122)
Change in deductions	8
End-2015 Additional Tier 1 capital	9,247
Change in debt instruments eligible for Tier 2	5,864
Variation des instruments Tier 2	4,384
Change in other Tier 2 capital	(13)
Change in deductions	(213)
End-2015 Tier 2 capital	10,022

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# **3.4. CAPITAL REQUIREMENTS**

The Basel 3 Accord established the new rules for calculating minimum capital requirements with the aim of more accurately assessing the risks to which banks are exposed. The calculation of risk-weighted assets for credit risk takes into account the transaction risk profile,

by means of two approaches for determining risk-weighted assets: a standard method, and advanced methods based on internal models for rating counterparties.

## TABLE 9: GROUP CAPITAL REQUIREMENTS AND RISK-WEIGHTED ASSETS

			-		
(In EUR m)	31 <sup>st</sup> Decem	nber 2015	- 31 <sup>st</sup> December 2014		
Type of risk	Minimum capital requirements	Risk- weighted assets	Minimum capital requirements	Risk- weighted assets	
Sovereign	0	0	0	0	
Institutions	0	5	0	3	
Corporate	294	3,673	282	3,519	
Total credit risk assessed using the foundation IRB approach	294	3,679	282	3,523	
Sovereign	468	5,849	415	5,187	
Institutions	847	10,591	859	10,733	
Corporate	8,423	105,288	7,517	93,961	
Retail	2,319	28,982	2,413	30,162	
Total credit risk assessed using the advanced IRB approach	12,057	150,710	11,203	140,044	
Shares in the banking book	1,477	18,462	1418	17,725	
Securitisation positions	126	1,576	130	1,629	
Other non-credit obligation assets	2	29	3	37	
Total credit risk assessed using the IRB approach	13,956	174,456	13,037	162,957	
Sovereign	834	10,421	900	11,256	
Institutions	512	6,403	347	4,342	
Corporate	4,144	51,806	4,248	53,102	
Retail	2,060	25,747	2,145	26,813	
Shares in the banking book	238	2,972	409	5,115	
Securitisation positions	23	289	30	374	
Other non-credit obligation assets	1,273	15,914	1,218	15,221	
Total credit risk assessed using the standard approach	9,084	113,551	9,298	116,224	
Credit, counterparty and delivery risk	0	2	0	0	
Total credit risk	23,040	288,008	22,334	279,181	
Value at Risk	311	3,892	319	3,983	
Stressed Value at Risk	510	6,379	828	10,349	
Incremental default and migration risk (IRC)	403	5,038	422	5,276	
Correlation portfolio (CRM)	163	2,031	173	2,160	
Market risk assessed using the IRB approach	1,387	17,340	1,741	21,769	
General risk and specific risk related to interest rates (excluding securitisation)	33	414	26	323	
Specific risk related to securitisation positions	37	467	24	300	
Market risk assessed using the standard approach for ownership interests	41	510	36	445	
Market risk assessed using the standard approach for currency positions	41	513	101	1,268	
Market risk assessed using the standard approach for commodities	7	83	5	64	
Market risk assessed using the standard approach	159	1,987	192	2,401	
Market risk	1,546	19,327	1,934	24,170	
Operational risk assessed using AMA	3,257	40,717	3,230	40,375	
Operational risk assessed using the standardised approach	251	3,137	284	3,556	
Operational risk	3,508	43,854	3,514	43,931	
Credit Value Adjustment	443	5,535	505	6,318	
Totals	28,538	356,725	28,288	353,600	

Further information on each type of risk (credit risk, market risk and operational risk) is provided in the ad-hoc sections ofhe Pillar 3.

# Change in risk-weighted assets and capital requirements

The following table presents the risk-weighted assets by pillar.

## TABLE 10: RWA BY PILLAR AND RISK TYPE

(In EUR bn) at 31.12.2015	Credit	Market	Operational	Total	Total 2014
French Retail Banking	91.82	0.08	4.75	96.65	93.9
International Retail Banking and Financial Services	97.92	0.09	7.5	105.51	103.8
Global Banking and Investor Solutions	91.29	18.63	28.26	138.18	136.2
Corporate Centre	12.51	0.54	3.34	16.39	19.7
Group	293.54	19.34	43.85	356.73	353.6

Risk-weighted assets (EUR 356.7 billion) by type of activity break down at 31st December 2015 as follows:

- credit risk accounted for 83% of risk-weighted assets (of which 31% for French Retail Banking);
- market risk accounted for 5% of risk-weighted assets (of which 96% for Global Banking and Investor Solutions);
- operational risk accounted for 12% of risk-weighted assets (of which 65% for Global Banking and Investor Solutions).

The two following tables present the change in RWA between end-2014 and end-2015 for credit and market risks.

Between 31<sup>st</sup> December 2014 and 31<sup>st</sup> December 2015, risk-weighted assets for credit risk increased by EUR 8.0 billion, whereas risk-weighted assets for market risk decreased by EUR 4.9 million.

### TABLE 11: CHANGE IN CREDIT RWAS

11	n ł	=11	R	bn,

End-2014 Credit risks RWAs	285.5
Scope effect	(0.3)
Foreign exchange effect	4.9
Other (including volume, rating, etc.)	3.4
End-2015 Credit risks RWAs	293.5

## TABLE 12: CHANGE IN MARKET RISK RWAS

(In EUR bn)	
End-2014 Market risks RWAs	24.2
Change in Internal Model RWA	(4.4)
of which change in VaR	(0.1)
of which change in SVaR	(4)
of which change in IRC	(0.2)
of which change in CRM	(0.1)
Change in Standard Model RWA	(0.4)
End-2015 Market risks RWAs	19.3

# Information relative to key subsidiaries' contributions to the group's risk-weighted assets

The contributions of the three key subsidiaries collectively contributing more than 10% of the Group's risk-weighted assets are as follows:

### TABLE 13: KEY SUBSIDIARIES' CONTRIBUTION TO THE GROUP'S RISK-WEIGHTED ASSETS

	Crédit du Nord		Rosbank		Komerčni Banka	
(In EUR m)	IRB	Standard	IRB	Standard	IRB	Standard
Credit and counterparty risk	16,280	2,377	794	6,025	9,955	1,839
Sovereign	0	3	739	50	403	8
Financial institutions	163	145	0	428	1,084	27
Corporate	8,739	400	0	3,925	5,237	815
Retail	5,862	732	0	1,303	3,040	605
Securitisation	0	0	0	0	0	0
Equity investments	1,515	311	55	0	190	0
Other assets	0	786	0	319	0	384
Market risk	75		68		8	
Operational risk	1,016		1,333		688	
Total 2015	19,748		8,220		12,490	
Total 2014	18,475		9,833		11,437	

# **3.5. CAPITAL MANAGEMENT**

Capital management is implemented by the Finance Division. As part of managing its capital, the Group ensures that its solvency level is always compatible with the following objectives:

- maintaining its financial solidity and respecting the Risk Appetite targets;
- preserving its financial flexibility to finance organic growth and growth through acquisitions;
- adequate allocation of capital among the various business lines according to the Group's strategic objectives;
- maintaining the Group's resilience in the event of stress scenarios;
- meeting the expectations of its various stakeholders: supervisors, debt and equity investors, rating agencies, and shareholders.

The Group determines its internal solvency targets in accordance with these objectives and regulatory thresholds.

The Group has an internal process for assessing the adequacy of its capital that measures the adequacy of the Group's capital ratios in light of regulatory constraints.

Since mid-2015, the Group has been managed with a target Common Equity Tier 1<sup>(1)</sup> ratio of 11%. At 31<sup>st</sup> December 2015, the Common Equity Tier 1 ratio of the Group was 10.9%.

In 2015, the Group's capital generation funded growth in risk-weighted assets and the developments in its operations portfolio (specifically the year's disposals and acquisitions), all while maintaining a sufficient margin to ensure dividend distribution and hybrid coupons payment.

In addition, the Group maintains a balanced capital allocation among its three strategic pillars:

- French Retail Banking;
- International Retail Banking and Financial Services;
- Global Banking and Investor Solutions.

Each of the Group's three pillars accounts for around a third of all riskweighted assets (RWA), with French and International Retail Banking (more than 59% of total business line loans and receivables) and credit risks (representing nearly 65% of the Group's risk-weighted assets) accounting for the largest share.

At  $31^{st}$  December 2015, the Group's risk-weighted assets were up 0.9% to EUR 356.7 billion, compared to EUR 353.6 billion at end-December 2014.

<sup>(1)</sup> Fully loaded ratio determined according to CRR/CRD4 rules.

# 3.6. LEVERAGE RATIO MANAGEMENT

The Group steers its leverage effect according to the CRR leverage ratio rules, as amended by the delegated act of 10<sup>th</sup> October 2014.

Steering the leverage ratio means both calibrating the amount of Tier 1 capital (the ratio's numerator) and controlling the Group's leverage exposure (the ratio's denominator) to achieve the target ratio levels that the Group sets for itself. To do this, the "leverage" exposure of the different business lines is contained under the Finance Division's control.

The Group aims to maintain a consolidated leverage ratio that is significantly higher than the 3% minimum in the Basel Committee's recommendations. The leverage ratio is in an observation phase in order to set the minimum requirements. Once they have been set, the Group's target will be adjusted as needed.

At the end of 2015, sustained by the higher Common Equity Tier 1 capital and additional Tier 1 capital, and the control of the Group's leverage exposure, Societe Generale's leverage ratio was 4.0% vs. 3.8% at end-2014.

### TABLE 14 (LRSUM): SUMMARY RECONCILIATION OF ACCOUNTING ASSETS AND LEVERAGE RATIO EXPOSURES (31.12.2015)

(In EUR m		Applicable Amounts
1	Total assets as per published financial statements	1,334,391
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	(105,909)
3	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429 <sup>(13)</sup> of Regulation (EU) No 575/2013 «CRR»)	0
4	Adjustments for derivative financial instruments	(88,837)
5	Adjustments for securities financing transactions «SFTs»	(25,097)
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	90,374
EU-6a	Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013	0
EU-6b	Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013	0
7	Other adjustments	(10,117)
8	Total leverage ratio exposure	1,194,805
#### TABLE 15 (LRCOM): LEVERAGE RATIO COMMON DISCLOSURE (31.12.2015)

I (In EUR m)		CRR leverage ratio exposures
On-balanc	e sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	802,731
2	(Asset amounts deducted in determining Tier 1 capital)	(10,118)
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)	792,613
Derivative	exposures	
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	21,076
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	109,809
EU-5a	Exposure determined under Original Exposure Method	0
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	0
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(18,650)
8	(Exempted CCP leg of client-cleared trade exposures)	(21,138)
9	Adjusted effective notional amount of written credit derivatives	338,446
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(303,854)
11	Total derivative exposures (sum of lines 4 to 10)	125,689
Securities	financing transaction exposures	
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	254,343
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(84,800)
14	Counterparty credit risk exposure for SFT assets	16,586
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	0
15	Agent transaction exposures	0
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	0
16	Total securities financing transaction exposures (sum of lines 12 to 15a)	186,129
Other off-b	palance sheet exposures	
17	Off-balance sheet exposures at gross notional amount	188,086
18	(Adjustments for conversion to credit equivalent amounts)	(97,712)
19	Other off-balance sheet exposures (sum of lines 17 to 18)	90,374
Exempted	exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)	
EU-19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429 (7) of Regulation (EU) No 575/2013 (on and off balance sheet))	0
EU-19b	(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	0
Capital an	d total exposures	
20	Tier 1 capital	48,112
21	Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)	1,194,805
Leverage i	ratio	
22	Leverage ratio	4.0%
Choice on	transitional arrangements and amount of derecognised fiduciary items	
EU-23	Choice on transitional arrangements for the definition of the capital measure	Fully phased in
EU-24	Amount of derecognised fiduciary items in accordance with Article 429 (11) of Regulation (EU) NO 575/2013	0

### TABLE 16 (LRSPL): TABLE LRSPL: SPLIT-UP OF ON BALANCE SHEET EXPOSURES (EXCLUDING DERIVATIVES, SFTS AND EXEMPTED EXPOSURES) (31.12.2015)

(In EUR m)		CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	802,731
EU-2	Trading book exposures	116,813
EU-3	Banking book exposures, of which:	685,918
EU-4	Covered bonds	0
EU-5	Exposures treated as sovereigns	175,411
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	14,996
EU-7	Institutions	39,135
EU-8	Secured by mortgages of immovable properties	17,556
EU-9	Retail exposures	159,234
EU-10	Corporate	189,332
EU-11	Exposures in default	12,379
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	77,875

### **3.7. RATIO OF LARGE EXPOSURES**

The CRR incorporates the provisions regulating large exposures. As such, Societe Generale Group must not have any exposure where the total amount of net risks incurred on a single beneficiary exceeds 25% of the Group's capital.

The eligible capital used to calculate the large exposure ratio is the total regulatory capital, with a limit on the amount of Tier 2 capital. Tier 2 capital cannot exceed one-third of Tier 1 capital.

#### 3.8. APPENDIX: INFORMATION ON REGULATORY OWN FUNDS AND SOLVENCY RATIOS

#### TABLE 6a: EGULATORY OWN FUNDS AND CRR/CRD4 SOLVENCY RATIOS (DETAILS OF TABLE 6)

2014	20	15			
Fully Loaded <sup>(1)</sup>	Fully Loaded	Phased-In	Cross Ref. Table 2, p. 24	Cross Ref. Table 6b p. 39	Cross Ref notes
47,282	49,965	50,534			
19,974	19,979	19,979	7	1	
5,578	4,921	4,921	9	2	
18,855	21,473	21,473	10	3	1
1,304	1,355	1,925	12	5	2
1,572	2,237	2,237	11	5a	
(11,491)	(11,100)	(9,799)			
(557)	(735)	(733)		7	
(6,550)	(5,975)	(5,975)	5	8	3
(2,641)	(2,318)	(294)	2	10	4
(23)	(150)	(150		11	5
(830)	(759)	(759)		12	
880	199	199		14	6
(11)	(20)	(8)	4	15	
(1,475)	(1,249)	(1,221)		16	
(122)	(93)	(93)		20a	
(162)	0	0	3	21	
0	0	(766)		26a	
35,792	38,865	40,735		29	
8,885	9,384	9,357			
4706	6,282	6,282	8	30	7
4129	3,057	3,057	8	33	7
50	46	18	12	34	8
(27)	(137)	(165)			
(7)	(125)	(153)		37	
(20)	(12)	(12)	1	39	9
8,858	9,247	9,191		44	
44,650	48,112	49,926		45	
5,864	10,022	9,993			
6,425	10,778	10,778	6	46	10
335	366	366	8	47	
93	49	20	12	48	11
	Fully Loaded <sup>(1)</sup> 47,282       19,974       5,578       18,855       1,304       1,572       (11,491)       (557)       (6,550)       (2,641)       (23)       (830)       880       (11)       (1,475)       (122)       (162)       0       35,792       8,885       4706       4129       50       (27)       (7)       (20)       8,858       44,650       5,864       6,425       335	Fully Loaded <sup>(1)</sup> Fully Loaded       47,282     49,965       19,974     19,979       5,578     4,921       18,855     21,473       1,304     1,355       1,572     2,237       (11,491)     (11,100)       (557)     (735)       (6,550)     (5,975)       (2,641)     (2,318)       (23)     (150)       (830)     (759)       880     199       (111)     (20)       (1,475)     (1,249)       (162)     0       0     0       0     0       0     0       (162)     0       0     0       0     0       0     0       0     0       0     0       0     0       0     0       0     0       1,475)     50       4885     9,384       4706     6,282  4129     <	Fully Loaded <sup>(1)</sup> Fully Loaded     Phased-In       47,282     49,965     50,534       19,974     19,979     19,979       5,578     4,921     4,921       18,855     21,473     21,473       1,304     1,355     1,925       1,572     2,237     2,237       (11,491)     (11,100)     (9,799)       (557)     (735)     (733)       (6,550)     (5,975)     (5,975)       (2,641)     (2,318)     (294)       (23)     (150)     (150       (830)     (759)     (759)       (830)     (759)     (759)       (111)     (20)     (8)       (1,475)     (1,249)     (1,221)       (162)     0     0       0     0     (766)       35,792     38,865     40,735       8,885     9,384     9,357       4706     6,282     6,282       4129     3,057     3,057       50     46     18	Fully Loaded <sup>(n)</sup> Fully Loaded <sup>(n)</sup> Cross Ref. Table 2; p. 24       47,282     49,965     50,534       19,974     19,979     19,979     7       5,578     4,921     49,919     9       18,855     21,473     21,473     10       1,304     1,355     1,925     12       1,572     2,237     2,237     11       (11,491)     (11,100)     (9,799)     5       (2,641)     (2,318)     (294)     2       (23)     (150)     (150     1       (11)     (20)     (8)     4       (1,475)     (1,249)     (1,221)     1       (162)     0     0     3       0     0     (766)     3       10     (1,249)     3,057     8       112     (137)     (162)     3       0     0     (766)     3       11     (1,249)     3,057     8       11     (120)     (137)     1	Fully     Fully     Cross Ref. Table 2, p. 24     Cross Ref. Table 6b     Cross Ref. Table 6b       47,282     49,965     50,534       19,974     19,979     19,979     7       1,355     21,473     21,473     10     3       1,304     1,355     1,925     12     5       1,572     2,237     2,237     11     5a       (11,491)     (11,100)     (9,799)     7     1       (6,550)     (5,975)     (5,975)     5     8       (2,641)     (2,318)     (294)     2     10       (830)     (759)     (759)     12     16       (11)     (20)     (8)     4     15       (1,475)     (1,249)     (1,221)     16       (11)     (20)     (8)     4     15       (1,475)     (1,249)     (1,221)     16       (1422)     (93)     (93)     20a       (162)     0     0     3     21       0     0

(1) Basel 3 pro forma.

	2014	201	15	_		
(In EUR m)	Fully Loaded <sup>(1)</sup>	Fully Loaded	Phased-In	Cross Ref. Table 2, p. 24	Cross Ref. Table 6b p. 39	Cross Ref notes
of which credit risk adjustments	348	380	380		50	
of which direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	(11)	(150)	(150)		52	
of which direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	(1,326)	(1,400)	(1,400)	1	54	
Tier 2 capital (T2)	5,864	10,022	9,993		58	
Total capital (TC= T1 + T2)	50,514	58,134	59,919		59	
Total risk weighted assets	353,197	356,725	356,725		60	
Ratio Common Equity Tier 1	10.13%	10.90%	11.42%		61	
Ratio Tier 1	12.64%	13.49%	14.00%		62	
Ratio Total capital	14.30%	16.30%	16.80%		63	

(1) Basel 3 pro forma.

- Phased in amounts refer to transitional provisions resulting from the application of CRR articles 465-491.
- The regulatory own funds items are used as a starting point to describe differences between balance sheet items used to calculate own funds and regulatory own funds.

#### NOTES

#### I - COMMON EQUITY TIER 1 (CET1): INSTRUMENTS AND RESERVES:

- 1. Difference due to deduction for holdings of own CET1 instruments.
- 2. Difference linked to a limited recognition of minority interests.

#### **II - COMMON EQUITY TIER 1: REGULATORY ADJUSTMENTS**

- 3. Other comprehensive income from changes in the fair value through equity of financial assets are not deducted from regulatory own funds, except gains and losses on derivatives held as cash flow hedges.
- 4. The differences between the amounts of the balance sheet under the prudential scope and under regulatory capital are related to taxes deferred on OCA and DVA.
- 5. Goodwill and other intangible assets net of related deferred tax liabilities are fully deducted from regulatory own funds.
- 6. Gains or losses on liabilities valued at fair value and recognised in the income statement resulting from changes in own credit spread (OCA) as well as gains or losses resulting from changes in credit spread on own liability derivatives (DVA) are deducted from Common Equity Tier 1 instruments.

#### **III - ADDITIONAL TIER 1 (AT1) CAPITAL: INSTRUMENTS**

- 7. Differences between balance sheet items used to calculate own funds and regulatory own funds are referring to the translation differences associated with these instruments.
- 8. Minority interests recognised in Additional Tier 1 instruments receive the same accounting treatment as described in note 2.

#### IV - ADDITIONAL TIER 1 (AT1) CAPITAL: REGULATORY ADJUSTMENTS

9. Discrepancy due to the exclusion of insurance subordinated loans in the consolidated balance sheet.

#### V - TIER 2 (T2) CAPITAL: INSTRUMENTS AND PROVISIONS

- 10. Difference due to instruments ineligible to a classification as regulatory own funds.
- 11. Minority interests recognised in Tier 2 instruments receive the same accounting treatment as described in note 2.

#### TABLE 6b: TRANSITIONAL OWN FUNDS DISCLOSURE TEMPLATE

Ref		Amount at disclosure date	Transitional provisions
Commo	on Equity Tier 1 (CET1) capital: instruments and reserves		
1	Capital instruments and the related share premium accounts	19,979	
2	Retained earnings	4,921	
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	21,473	
3a	Funds for general banking risk	0	
4	Amount of qualifying items referred to in Article 484, paragraph 3 and the related share premium accounts subject to phase out from CET1	0	
	Public sector capital injections grandfathered until 1st January 2018	0	
5	Minority interests (amount allowed in consolidated CET1)	1,355	569
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	2,237	
6	Common Equity Tier 1 (CET1) capital before regulatory adjustments	49,965	569
Commo	on Equity Tier 1 (CET1) capital: regulatory adjustments		
7	Additional value adjustments (negative amount)	(735)	2
8	Intangible assets (net of related tax liability) (negative amount)	(5,975)	
9	Empty set in the EU		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38, paragraph 3 are met) (negative amount)	(2,318)	2,024
11	Fair value reserves related to gains or losses on cash flow hedges	(150)	
12	Negative amounts resulting from the calculation of expected loss amounts	(759)	
13	Any increase in equity that results from securitised assets (negative amount)	0	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	199	
15	Defined-benefit pension fund assets (negative amount)	(20)	12
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	(1,249)	28
17	Holdings of the CET1 instruments of financial sector entities where+ those entities have reciprocal cross holdings with the institutions designed to inflate artificially the own funds of the institution (negative amount)	0	
18	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	
20	Empty set in the EU		
20a	Exposure amount of the following items which qualify for a RW of 1,250%, where the institution opts for the deduction alternative	(93)	
20b	of which: qualifying holdings outside the financial sector (negative amount)	0	
20c	of which: securitisation positions (negative amount)	(93)	
20d	of which: free deliveries (negative amount)	0	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in 38, paragraph 3 are met) (negative amount)	0	0
22	Amount exceeding the 15% threshold (negative amount)	0	
23	of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	852	
24	Empty set in the EU		
25	of which: deferred tax assets arsing from temporary differences	5,370	
25a	Losses for the current financial year (negative amount)	0	
25b	Foreseeable tax charges relating to CET1 items (negative amount)	0	
26	Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR treatment	0	(766)

Ref		Amount at disclosure date	Transitional provisions
26a	Regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 and 468	0	(766)
	of which: filter for unrealised loss 1		<u>· · ·</u>
	of which: filter for unrealised loss 2		
	of which: filter for unrealised gain 1		(168)
	of which: filter for unrealised gain 2		(598)
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR	0	
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution	0	
28	Total regulatory adjustment to Common Equity Tier 1 (CET1)	(11,100)	1,301
29	Common Equity Tier 1 (CET1) capital	38,865	1,870
Additio	nal Tier 1 (AT1) capital: instruments		
30	Capital instruments and the related share premium accounts	6,282	
31	of which: classified as equity under applicable accounting standards	6,282	
32	of which: classified as liabilities under applicable accounting standards		
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1 Public sector capital injections grandfathered until 1st January 2018	3,057	
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	46	(27)
35	of which: instruments issued by subsidiaries subject to phase out		
36	Additional Tier 1 (AT1) capital before regulatory adjustments	9,384	(27)
Additio	nal Tier 1 (AT1) capital: regulatory adjustments		
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	(125)	(28)
38	Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	0	
39	Direct and indirect holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	0	
40	Direct and indirect holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant in those entities (amount above the 10% threshold net of eligible short positions) (negative amount)	(12)	
41	Regulatory adjustments applied to AT1 in respect of amounts subject to pre- CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	0	
41a	Residual amounts deducted from AT1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013 Of which items to be detailed line by line, e.g. Material net interim losses, intangibles, shortfall of provisions to expected losses etc	0	
41b	Residual amounts deducted from AT1 capital with regard to deduction from Tier 2 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013 Of which items to be detailed line by line, e.g. Reciprocal cross holdings in Tier 2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc	0	
41c	Amount to be deducted from or added to AT1 capital with regard to additional filters and deductions required pre-CRR	0	
	of which: filter for unrealised losses		
	of which: filter for unrealised gains		
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0	
43	Total regulatory adjustments to Additional Tier 1 (AT1) capital	(137)	(28)
44	Additional Tier 1 (AT1) capital	9,247	(55)
45	Tier 1 capital (T1= CET1+AT1)	48,112	1,815
Tier 2 (	T2) capital: instruments and provisions		
46	Capital instruments and the related share premium accounts	10,778	
47	Amount of qualifying items referred to in Article 484, paragraph 5 and the related share premium account subject to phase out from T2 Public sector capital injections grandfathered until 1st January 2018	366	

Ref		Amount at disclosure date	Transitional provisions
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	49	(29)
49	of which: instruments issued by subsidiaries subject to phase out	0	0
50	Credit risk adjustments	380	
51	Tier 2 (T2) capital before regulatory adjustments	11,572	(29)
-	(T2) capital: regulatory adjustments	11,072	(20)
52	Direct and indirect holdings by an institution of own T2 instruments	(150)	
52	and subordinated loans (negative amount)	(100)	
53	Holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	0	
54	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	
54a	of which new holdings not subject to transitional arrangements		
54b	of which holdings existing before 1st January 2013 and subject to transitional arrangements		
55	Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	(1,400)	
56	Regulatory adjustments applied to Tier 2 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	0	
56a	Residual amounts deducted from Tier 2 capital with regard to deduction form Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013 Of which items to be detailed line by line, e.g. Material net interim losses, intangibles, shortfall of provisions to expected losses etc	0	
56b	Residual amounts deducted from Tier 2 capital with regard to deduction from Additional Tier 1 capital during the transitional period pursuant to Article 475 of Regulation (EU) No 575/2013 Of which items to be detailed line by line, e.g. Reciprocal cross holdings in Tier 2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc	0	
56c	Amount to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre-CRR	0	
	of which: filter for unrealised losses		
	of which: filter for unrealised gains		
57	Total regulatory adjustments to Tier 2 (T2) capital	(1,550)	0
58	Tier 2 (T2) capital	10,022	(29)
59	Total capital (TC=T1+T2)	58,134	1,785
59a	Risk weighted assets in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	0	0
	of which: items not deducted from CET1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Deferred tax assets that rely on future profitability net of related tax liability, indirect holdings of own CET1, etc.)	0	0
	of which: items not deducted from AT1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Reciprocal cross holdings in T2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc.)	0	0
	Items not deducted from T2 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Indirect holdings of own T2 instruments, indirect holdings of non-significant investments in the capital of other financial sector entities etc)	0	0
60	Total risk weighted assets	356,725	0
Capita	I ratios and buffers		
61	Common Equity Tier 1 (as a percentage of risk exposure amount)	10.90%	11.42%
62	Tier 1 (as a percentage of risk exposure amount)	13.49%	14.00%
63	Total capital (as a percentage of risk exposure amount)	16.30%	16.80%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92, paragraph 1 point a plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus the systemically important institution buffer (G-SII or O-SII buffer), expressed as a percentage of risk exposure amount)	0	
65	of which: capital conservation buffer requirement	0	

Ref		Amount at disclosure date	Transitional provisions
66	of which: countercyclical buffer requirement	0	
		0	
67	of which: systemic risk buffer requirement		
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0	
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)		
69	[non relevant in the EU regulation]		
70	[non relevant in the EU regulation]		
71	[non relevant in the EU regulation]		
Capital	ratios and buffers		
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	3,885	
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	852	
74	Empty set in the EU		
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38, paragraph 3 are met)	3,499	
Applica	ble caps on the inclusion of provisions in Tier 2		
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	380	
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	116,609	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the gap)	0	
79	Cap for inclusion of credit risk adjustments in T2 under internal rating-based approach	150,538	
Capital	instruments subject to phase-out arrangements (only applicable between 1st January	2014 and 1st January 2	.022)
80	Current cap on CET1 instruments subject to phase out arrangements	0	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0	
82	Current cap on AT1 instruments subject to phase out arrangements	4,123	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0	
84	Current cap on T2 instruments subject to phase out arrangements	522	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0	

# IN BRIEF

Credit and counterparty risks correspond to the risk of losses arising from the inability of the Group's customers, issuers or other counterparties to meet their financial commitments. Credit risk includes counterparty risk linked to market transactions (replacement risk) and securitisation activities. In addition, credit risk may be further amplified by concentration risk, which arises from a large exposure to a given risk, to one or more counterparties, or to one or more omogeneous groups of counterparties. Country risk arises when an exposure (loan, security, guarantee or derivative) becomes liable to negative impact from changing political, economic, social and financial conditions in the country of exposure.

This section describes the Group's risk profile. It focuses on regulatory indicators, including Exposure at Default (EAD) and Risk Weighted Assets (RWA). The risk profile is analysed according to several approaches (countries, sectors, probabilty of default, residual maturities, etc.).

Credit risk RWA at end-2015

EUR 293.5 bn

(Credit risk RWA at end-2014: EUR 285.5 bn)

EAD calculated in IRB

79%

Share of performing loans calculated under the IRB approach with an investment grade rating (excluding defaulted exposures)



#### GEOGRAPHIC BREAKDOWN OF GROUP CREDIT RISK EXPOSURE (EAD)



DISTRIBUTION OF CREDIT RISKS RWA BY PILLAR



Credit risk RWA at end-2015: EUR 293 bn

#### **DISTRIBUTION OF EAD BY PORTFOLIO**



Credit risk exposure (EAD) at end-2015: EUR 781 bn

# 4. CREDIT RISKS

### 4.1. CREDIT RISK MANAGEMENT: ORGANISATION AND STRUCTURE

The Risk Division has defined a control and monitoring system, in conjunction with the business divisions and based on the credit risk policy, to provide a framework for the Group's credit risk management. This framework is periodically reviewed and approved by the Board of director's Risk Committee.

Credit risk supervision is organised by business division (French Retail Banking Networks, International Retail Banking and Financial Services, Global Banking and Investor Solutions) and is supplemented by departments with a more cross-business approach (monitoring of country risk, risk linked to financial institutions, etc.). In addition, the definition of counterparty risk assessment methods is provided by the Market Risk Department. Within the Risk Division, each of these departments is responsible for:

- setting global and individual credit limits by client, client category or transaction type
- authorising transactions submitted by the sales departments
- approving ratings or internal client rating criteria
- monitoring and supervising large exposures and various specific credit portfolios
- approving specific and general provisioning policies.

In addition, a specific department performs comprehensive portfolio analyses and provides the associated reports, including those for the supervisory authorities. A monthly report on the Risk Division's activity is presented to CORISQ and specific analyses are submitted to the General Management.

#### **4.2. CREDIT POLICY**

Societe Generale's credit policy is based on the principle that approval of any credit risk undertaking must be based on sound knowledge of the client and the client's business, an understanding of the purpose and structure of the transaction, and the sources of repayment of the debt. Credit decisions must also ensure that the structure of the transaction will minimise the risk of loss in the event that the counterparty defaults. Furthermore, the credit approval process takes into consideration the overall commitment of the group to which the client belongs. Risk approval forms part of the Group's risk management strategy in line with its risk appetite.

The risk approval process is based on four core principles:

- all transactions involving credit risk (debtor risk, settlement/ delivery risk, issuer risk and replacement risk) must be preauthorised
- responsibility for analysing and approving transactions lies with

the dedicated primary customer relation unit and risk unit, which examine all authorisation requests relating to a specific client or client group, to ensure a consistent approach to risk management

- the primary customer relation unit and the risk unit must be independent from each other
- credit decisions must be systematically based on internal risk ratings (obligor rating), as provided by the primary customer relation unit and approved by the Risk Division.

The Risk Division submits recommendations to CORISQ on the limits which it deems appropriate for certain countries, geographic regions, sectors, products or customer types, in order to reduce risks with strong correlations. The allocation of limits is subject to final approval by the Group's General Management and is based on a process that involves the operating divisions exposed to risk and the Risk Division.

### 4.3. RISK SUPERVISION AND MONITORING SYSTEM

#### Portfolio review and sector risk monitoring

Authorisation limits are set by counterparty and the credit approval process must comply with the overall authorisation limit for the group to which the counterparty belongs.

Individual large exposures are reviewed by the Large Exposures Committee chaired by the General Management.

Concentrations are measured using an internal model and individual concentration limits are defined for larger exposures. Any concentration limit breach is managed over time by reducing exposures and/or hedging positions using credit derivatives.

Concentration targets are defined for the biggest counterparties at Concentration Committee meetings.

In addition, the Group regularly reviews its entire credit portfolio through analyses by type of counterparty or business sector. In addition to industry research and regular sector concentration analyses, sector research and more specific business portfolio analyses are carried out at the request of the bank's General Management and/or Risk Division and/or business divisions.

#### **Monitoring of Country Risk**

Country risk arises when an exposure (loan, security, guarantee or derivative) becomes liable to negative impact from changing political, economic, social and financial conditions in the country of exposure.

It includes exposure to any kind of counterparty, including a sovereign state (sovereign risk is also controlled by the system of counterparty risk limits).

Country risk breaks down into two major categories:

- political and non-transfer risk covers the risk of non-payment resulting from either actions or measures taken by local government authorities (decision to prohibit the debtor from meeting its commitments, nationalisation, expropriation, nonconvertibility, etc.), domestic events (riots, civil war, etc.) or external events (war, terrorism, etc.)
- commercial risk occurs when the credit quality of all counterparties in a given country deteriorates due to a national economic or financial crisis, independently of each counterparty's individual financial situation. This could be macroeconomic shock (sharp slowdown in activity, systemic banking crisis, etc.) or currency depreciation, or sovereign default on external debt possibly entailing other defaults.

Overall limits and strengthened monitoring of exposures have been established for countries based on their internal ratings and governance indicators. Supervision is not limited to emerging markets.

Country limits are approved annually by General Management. They can also be revised downward at any time if the country's situation deteriorates or is expected to deteriorate.

All Group exposures (securities, derivatives, loans and guarantees) are taken into account by this monitoring. The Country Risk methodology determines an initial country of risk and a final country of risk (after the effects of any guarantees) within the country limits framework.

#### Specific monitoring of hedge funds

Hedge funds are important counterparties for the Group. Whether they are regulated or not, and regardless of the nature of the end investor, hedge funds pose specific risks: they are able to use significant leverage as well as investment strategies that involve illiquid financial instruments, which leads to a strong correlation between credit risk and market risk.

Activities carried out in the hedge fund sector are governed by a set of global limits established by the General Management:

- a Credit VaR limit which controls the maximum replacement risk that may be taken in this segment
- a stress test limit governing market risks and the risks associated with financing transactions guaranteed by shares in hedge funds.

#### **Credit stress tests**

With the aim of identifying, monitoring and managing credit risk, the Risk Division works with the business divisions to conduct a set of specific stress tests relating to a country, subsidiary or activity. These specific stress tests combine both recurring stress tests, conducted on those portfolios identified as structurally carrying risk, and occasional stress tests, designed to recognise emerging risks. Some of these stress tests are presented to the Risk Committee and used to determine how to govern the activities concerned.

Like global stress tests, specific stress tests draw on a core *scenario* and a stressed *scenario* that are defined by the Group's sector experts and economists. The core *scenario* draws on an in-depth analysis of the situation surrounding the activity or the country concerned. The stressed *scenario* describes triggering events and assumptions about the sequence of a crisis, both in quantitative terms (changes in a country's GDP, the unemployment rate, deterioration in a sector) and qualitative terms.

Structured around the portfolio analysis function, the Risk Division teams translate these economic scenarios into impacts on risk parameters (default exposure, default rate, provisioning rate at entry into default, etc.). To this end, the leading methods are based in particular on the historical relationship between economic conditions and risk parameters. Like in global stress tests, in connection with the regulatory Pillar, stress tests routinely take into account the possible effect of counterparty performance for counterparties in which the Group is most highly concentrated in a stressed environment.

#### Impairment

Impairments include impairments on groups of homogeneous assets, which cover performing loans, and specific impairments, which cover counterparties in default.

# IMPAIRMENT ON GROUPS OF HOMOGENEOUS ASSETS

Impairments on groups of homogeneous assets are collective impairments booked for portfolios that are homogenous and have a deteriorated risk profile although no objective evidence of default can be observed at an individual level.

These homogeneous groups include sensitive counterparties, sectors or countries. They are identified through regular analyses of the portfolio by sector, country or counterparty type.

These impairments are calculated on the basis of assumptions on default rates and loss rates after default. These assumptions are calibrated by homogeneous group based on their specific characteristics, sensitivity to the economic environment and historical data. They are reviewed periodically by the Risk Division.

#### SPECIFIC IMPAIRMENT

Decisions to book specific impairments on certain counterparties are taken where there is objective evidence of default. The amount of impairment depends on the probability of recovering the amounts due. The expected cash flows are based on the financial position of the counterparty, its economic prospects and the guarantees called up or that may be called up. A counterparty is deemed to be in default when at least one of the following conditions is verified:

- a significant decline in the counterparty's financial position leads to a high probability of it being unable to fulfil its overall commitments (credit obligations), thereby generating a risk of loss to the bank whether or not the debt is restructured; and/or
- regardless of the type of loan (property or other), one or more receivables past due at least 90 days were recorded (with the exception of loans restructured on probation, which are considered in default at first missed payment, in accordance with the technical standard published in 2013 by the EBA relative to restructured loans) and/or
- a recovery procedure is started; and/or
- the debt was restructured less than one year previously; and/or
- a legal proceeding such as a bankruptcy, legal settlement or compulsory liquidation is in progress.

The Group applies the default contagion principle to all a counterparty's outstandings. When a debtor belongs to a group, all of the group's outstandings are generally defaulted as well.

### 4.4. REPLACEMENT RISK

Counterparty risk associated with derivative transactions is a type of credit risk (potential loss in the event that the counterparty defaults) that is also called replacement risk. It represents the current cost to the Group of replacing transactions with a positive value should the counterparty default. Transactions giving rise to a replacement risk are, inter alia, security repurchase agreements, securities lending and borrowing, and derivative contracts such as swaps, options and futures traded over the counter or with central counterparty clearing houses (CCP).

# Management of counterparty risk linked to market transactions

Societe Generale places great emphasis on carefully monitoring its credit and counterparty risk exposure in order to minimise its losses in case of default. Counterparty limits are assigned to all counterparties (banks, other financial institutions, corporates, public institutions and CCP).

In order to quantify the potential replacement risk, Societe Generale uses an internal model: the future fair value of trading transactions with counterparties is modelled, taking into account any netting and correlation effects. Estimates are derived from Monte-Carlo models developed by the Risk Division, based on a historical analysis of market risk factors, and take into account guarantees and collateral.

Societe Generale uses two indicators to describe the subsequent distribution resulting from the Monte-Carlo simulations:

- current average risk, particularly suited to analysing the risk exposure for a portfolio of customers
- credit VaR (or CVaR): the largest loss that would be incurred after eliminating the top 1% of the most adverse occurrences, used to set the risk limits for individual counterparties.

Societe Generale has also developed a series of stress test scenarios used to calculate the exposure linked to changes in the fair value of transactions with all of its counterparties in the event of an extreme shock to market parameters.

#### Setting individual counterparty limits

The credit profile of counterparties is reviewed on a regular basis and limits are set both according to the type and maturity of the instruments concerned. The intrinsic creditworthiness of counterparties and the reliability of the associated legal documentation are two factors considered when setting these limits. Fundamental credit analysis is also supplemented by relevant peer comparisons and a market watch. Information technology systems allow both traders and the Risk Division to ensure on a day-to-day basis that counterparty limits are not exceeded and that incremental authorisations are requested as needed.

Any significant weakening in the bank's counterparties also prompts urgent internal rating reviews. A specific supervision and approval process is put in place for more sensitive counterparties or more complex financial instruments.

# Calculation of Exposure at Default<sup>(1)</sup> within the regulatory framework

The Autorité de contrôle Prudentiel et de Résolution (ACPR - French Prudential and Resolution Supervisory Authority) approved the use of the internal model described above to determine the Effective Expected Positive Exposure (EEPE) indicator used in calculating counterparty risk-adjusted capital. This internal model is used for 96% of transactions.

For other purposes, the Group uses the marked-to-market valuation method. In this method, the EAD relative to the bank's counterparty risk is determined by aggregating the positive market values of all transactions (replacement cost) and increasing the sum with an addon. This add-on, which is calculated in line with the CRD (Capital Requirement Directive) guidelines, is a fixed percentage according to the type of transaction and the residual maturity, which is applied to the transaction's nominal value.

In both cases, the effects of netting agreements and collateral are factored in either by their simulation in the internal model, or by applying the netting rules as defined by the marked-to-market method and by subtracting guarantees or collateral. Regulatory capital requirements also depend on the internal rating of the debtor counterparty.

#### Credit valuation adjustment for counterparty risk

Derivatives and security financing transactions are subject to a Credit Valuation Adjustment (CVA) to take into account counterparty risk.

The Group includes in this adjustment all clients which are not subject to a daily margin call or for which the collateral only partially covers the exposure. This adjustment also reflects the netting agreements existing for each counterparty. CVA is determined on the basis of the Group entity's positive expected exposure to the counterparty, the counterparty's probability of default (conditional on the entity not defaulting), and the loss in the event of default.

Furthermore, since 1<sup>st</sup> January 2014, financial institutions must determine capital requirements related to CVA, covering its variation over 10 days. The scope of counterparties is reduced to financial counterparties as defined in the EMIR (European Market Infrastructure Regulation) or certain corporates that would use derivatives beyond certain thresholds and for purposes other than hedging. Societe Generale has implemented an internal model to compute these

<sup>(1)</sup> Exposure at default (EAD) of a loan is equal to its nominal amount. The potential loss amount of a derivative product is its marked-to-market valuation when the counterparty defaults, which can be only statistically approximated. Therefore, two methods for the calculation of the EAD of derivative products are allowed, one using the marked-to-market valuation and one using the internal model approach (see above).

capital requirements, covering 65% of the scope. The method used is the same as the one used for the market VaR computation (refer to Chapter 4.5 of the Registration Document, p. 176: it consists in carrying out an historical simulation of the change in CVA due to the variations observed in the credit spreads of the counterparties, with a 99% confidence level. The computation is done on the credit spreads variation observed, on the one hand, over a one-year rolling period (VaR on CVA), and, on the other hand, over a fixed one-year historical window corresponding to a period of significant tension regarding credit spreads (Stressed VaR on CVA). The associated capital requirements are equal to the sum of these two computations multiplied by a factor set by the regulator, specific to each bank. For the remaining part determined according to the standard method, Societe Generale applies the rules defined by the Capital Requirement Regulation: weighting by a normative factor of the EAD multiplied by a recomputed maturity.

The management of this exposure and regulatory capital charge led the Group to buy protection (such as Credit Default Swaps) from major financial institutions. In addition to reducing the credit risk, it decreases their variability resulting from a change in the credit spreads of counterparties.

#### Wrong-way risk adjustment

Wrong-way risk is the risk that occurs when Group exposure to a counterparty strongly increases whereas the probability that the counterparty defaults also increases.

There are two cases of wrong-way risk:

- specific wrong-way risk, where the amount of exposure is directly related to the credit quality of the counterparty
- general wrong-way risk, where there is a significant correlation between some market factors and the creditworthiness of the Group's counterparty.

Wrong-way risk is subject to identification procedures, calculation of exposures as well as specific and regular monitoring of identified counterparties.

### 4.5. HEDGING OF CREDIT RISK

#### **Guarantees and collateral**

The Group uses credit risk mitigation techniques both for market and commercial banking activities. These techniques provide partial or full protection against the risk of debtor insolvency.

There are two main categories:

- personal guarantees are commitments made by a third party to replace the primary debtor in the event of the latter's default. These guarantees encompass the protection commitments and mechanisms provided by banks and similar credit institutions, specialised institutions such as mortgage guarantors (e.g. Crédit Logement in France), monoline or multiline insurers, export credit agencies, etc. By extension, credit insurance and credit derivatives (purchase of protection) also belong to this category
- collateral can consist of physical assets in the form of property, commodities or precious metals, as well as financial instruments such as cash, high-quality investments and securities, and also insurance policies.

Appropriate haircuts are applied to the value of collateral, reflecting its quality and liquidity.

The Group proactively manages its risks by diversifying guarantees: physical collateral, personal guarantees and others (including CDS).

During the credit approval process, an assessment is performed on the value of guarantees and collateral, their legal enforceability and the guarantor's ability to meet its obligations. This process also ensures that the collateral or guarantee successfully meets the criteria set forth in the Capital Requirements Directive (CRD).

Guarantor ratings are reviewed internally at least once a year and collateral is subject to revaluation at least once a year.

The Risk function is responsible for approving the operating procedures established by the business divisions for the regular valuation of guarantees and collateral, either automatically or based on an expert opinion, both during the approval phase for a new loan or upon the annual renewal of the credit application.

The amount of guarantees and collateral is capped at the amount of outstanding loans, i.e. EUR 248.59 billion at 31<sup>st</sup> December 2015, of which EUR 128.74 billion for retail customers and EUR 119.85 billion for non-retail customers (versus EUR 111.5 billion and EUR 109.5 billion, respectively, at 31<sup>st</sup> December 2014).

Guarantees and collateral received for outstanding loans not individually impaired amounted to EUR 2.11 billion at 31<sup>st</sup> December 2015 (of which EUR 1.24 billion for retail customers and EUR 0.87 billion for nonretail customers). Guarantees and collateral received for individually impaired loans amounted to EUR 6.69 billion at 31<sup>st</sup> December 2015 (of which EUR 3.13 billion for retail customers and EUR 3.56 billion for non-retail customers). These amounts are capped at the amount of outstanding individually impaired loans.

# Use of credit derivatives to manage corporate concentration risk

Within Corporate and Investment Banking, the Credit Portfolio Management (CPM) team is responsible for working in close cooperation with the Risk Division and the businesses to reduce excessive portfolio concentrations and react quickly to any deterioration in the creditworthiness of a particular counterparty. CPM has now been merged with the department responsible for managing scarce resources for the credit and loan portfolio.

The Group uses credit derivatives in the management of its Corporate credit portfolio, primarily to reduce individual, sector and geographic concentration and to implement a proactive risk and capital management approach. Individual protection is essentially purchased under the over-concentration management policy. For example, the ten most hedged names account for 90% of the total amount of individual protections purchased. The notional value of Corporate credit derivatives (Credit Default Swaps, CDS) purchased for this purpose is booked in off-balance sheet commitments under guarantee commitments received.

Total outstanding purchases of protection through Corporate credit derivatives decreased to EUR 0.7 billion at end-December 2015 (compared to EUR 1.2 billion at end-December 2014).

In 2015, the Credit Default Swap (CDS) spreads from European investment-grade issuances (iTraxx index) slightly widened, increasing the individual sensitivity of covered entities to the increase of spreads. The decline in outstandings mitigated this effect, with the portfolio's overall sensitivity remaining virtually unchanged.

Almost all protection was purchased from bank counterparties (from now on mainly through clearing houses) with ratings of A- or above, the average being A+. The Group is also careful to avoid an excessive concentration of risks with respect to any particular counterparty.

# Mitigation of counterparty risk linked to market transactions

Societe Generale uses different techniques to reduce this risk. With regard to trading counterparties, it seeks to implement master agreements with a termination-clearing clause wherever it can. In the event of default, they allow netting of all due and payable amounts. The contracts usually call for the revaluation of the required collateral at regular intervals (often on a daily basis) and for the payment of the corresponding margin calls. Collateral is largely composed of cash and high-quality liquid assets, such as government bonds with a good rating. Other tradable assets are also accepted, provided that the appropriate haircuts are made to reflect the lower quality and/or liquidity of the asset.

At 31<sup>st</sup> December 2015, most over-the-counter (OTC) transactions were secured: by amount<sup>(1)</sup>, 64% of transactions with positive mark to market (collateral received by Societe Generale) and 68% of transactions with negative mark to market (collateral posted by Societe Generale).

Management of OTC collateral is monitored on an ongoing basis in order to minimize operational risk:

- the exposure value of each collateralised transaction is certified on a daily basis
- specific controls are conducted to make sure the process goes smoothly (settlement of collateral, cash or securities; monitoring of suspended transactions, etc.)
- all outstanding secured transactions are reconciled with those of the counterparty according to a frequency set by the regulator (mainly on a daily basis) in order to prevent and/or resolve any disputes on margin calls
- any legal disputes are monitored daily and reviewed by a committee.

Moreover, the European Market Infrastructure Regulation (EMIR) published in 2012 places new measures on derivatives market participants in order to improve the stability and transparency of this market. Specifically, the EMIR requires the use of central counterparties for products deemed sufficiently liquid and standardised, the reporting of all derivative products transactions to a trade repository, and the implementation of risk mitigation procedures (e.g. exchange of collateral, timely confirmation, portfolio compression<sup>(2)</sup>) for OTC derivatives not cleared by central counterparties. Some of these measures are already in effect (portfolio reconciliation, dispute resolution, first clearing obligation), while others are expected to come into force only gradually. As of the end of December 2015, 15% of the OTC transactions (amounting to 43% of the nominal) are cleared through clearing houses.

#### **Credit insurance**

In addition to using export credit agencies (for example Coface and Exim) and multilateral organisations (for example the EBRD), Societe Generale has been developing relationships with private insurers over the last several years in order to hedge some of its loans against commercial and political non-payment risks.

This activity is performed within a risk framework and monitoring system approved by the Group's General Management. The system is based on an overall limit for the activity, along with sub-limits by maturity, and individual limits for each insurance counterparty which must meet strict eligibility criteria.

The implementation of such a policy contributes overall to a sound risk reduction.

<sup>(1)</sup> Excluding OTC deals cleared in clearing houses.

<sup>(2)</sup> Process which consists in i) the identification of the deals whose risks can be offset and ii) their replacement by a lower number of transactions, while keeping the same residual exposure.

### 4.6. IFRS 9 ORGANISATION

# General concepts of IFRS 9 debts instruments provisioning

A loss allowance shall be recognized for expected credit losses on debts instruments that will be classified at amortised cost or Fair value through OCI under IFRS 9 new, financing lease, loan commitments and financial guarantees as of 1<sup>st</sup> January 2018.

The loss allowance will be measured at an amount equal to 12-month expected losses and shall be increased to an amount equal to a lifetime expected credit losses as soon as the credit risk has been significantly deteriorated since inception.

Therefore the main change is the recognition of a loss allowance on both loans and debt securities at inception notwithstanding the quality of the credit risk.

#### NEW APPROACH

Debts instruments will be allocated to three categories according to the gradual deterioration of their credit risk since their initial recognition and impairment will be booked to each of these categories as follows:

#### STAGE 1

- All financial assets in question are initially recognised in this category.
- A loss allowance will be recorded at an amount equal to 12-month expected credit losses.

#### STAGE 2

- If the credit risk on a financial asset has significantly increased since its initial recognition, the asset will be transferred to this category.
- The loss allowance for the financial asset will then be increased to the level of its lifetime expected credit losses.
- Interest income will be recognised in the income statement using the effective interest rate method applied to the gross carrying amount of the asset before impairment.

#### STAGE 3

- Financial assets identified as being credit-impaired will be transferred to this category.
- The loss allowance for credit risk will continue to be measured at an amount equal to the lifetime expected credit losses and its will be adjusted if necessary to take into account any additional deterioration in credit risk.
- Interest income will be then recognised in the income statement using the effective interest rate method applied to the net carrying amount of the asset after impairment.

#### DEFINITIONS

#### **DEGRADATION SIGNIFICATIVE**

The significant increase in credit risk is key in measuring the expected credit losses because it automatically implies a transfer between the stage one and the stage 2 and an increase in provisions.

The significant increase in credit risk will be assessed on an instrument-by-instrument basis, but it will also be possible to assess it on the basis of consistent portfolios of similar assets, where individual assessment is not relevant. A counterparty-based approach (applying the default contagion principle to all of the counterparty's outstanding loans) will also be possible if it gives similar results.

The Group will have to take into account all available past due and forward-looking information as well as the potential consequences of a change in macro-economic factors at a portfolio level, so that any significant increase in the credit risk on a financial asset may be assessed as early as possible. Particular attention should be paid to the potential impact of macroeconomic factors in the assessment of this degradation.

There will be a rebuttable presumption that the credit risk on a financial asset has increased significantly where the contractual payments on the asset are more than 30 days past due. However, this is an ultimate indicator, as the Group may have determined through advanced indicators such as behavioral scores, loans to value as well as all reasonable and supportable forward looking information that there have been significant increases in credit risk before contractual payments are more than 30 days past due.

The application of IFRS 9 will not alter the definition of default currently used to determine whether or not there is objective evidence of impairment of a financial asset. An asset will notably be classified in default if one or more contractual payments ar more than 90 days past due.

#### ONE YEAR EL

The one year horizon measurement takes into account all available past due and reasonable and supportable forward-looking information as well as the potential consequences of a change in macro-economic factors. As these expected losses will not be calculated through the credit cycle, the result may become more procyclical than it currently is.

While relying on the Basel framework, the IFRS 9 credit expected losses are different from the regulatory credit expected losses (i.e, lack of conservative bias, forward looking perspective included in IFRS 9).

#### LIFETIME EL

The expected losses calculation takes into account historical data, current conditions and reasonable and supportable forward looking information as well as relevant macro economic factors until the contract maturity.

#### **IFRS 9 provisioning description**

Financial assets definition: the assessment and measurement of provisioning for amortised cost and available for sale assets are detailed on page 322 and 323 of the Registration document.

Default definition: The application of IFRS 9 will not alter the definition of default describe on page 47 of the Registration document.

Collective provisions, as defined on page 47 of the registration document, will be replaced by the one year horizon and lifetime provisions.

At a general level,

- Financial assets where the credit risk has significantly been deteriorated since origination without any objective credit losses evidence be individually identified will probably be included into the stage 2.
- Financial assets on counterparties linked to economic sectors considered as being in crisis further to the occurrence of loss events or on geographical sectors or countries in which a deterioration of credit risk has been assessed will be classified either on stage 1 or stage 2 depending on their individual credit risk.

This framework will be completed by a systematic loss allowances for financial assets classified in stage 1. The regular credit risk assessment on assets, economic and geographic sectors and, countries will be improved to transfer prospectively financial assets from stage 1 to stage 2.

#### Implementation strategy

#### GOVERNANCE

A joint program between the risk and the finance division was launched in 2013 to be able to assess the future accounting requirement and put it in place, relying on pillars and entities organization.

Risk and Finance division as well as each pillars divisions have settled a specific program team to monitor the needed work plan to ensure the compliance with the IFRS 9.2 standard, in respect with the framework defined by the group program team.

#### **PROGRAM MILESTONES**

The group program is responsible for the credit risk provision calculation, compliant with the new accounting standard for 1<sup>st</sup> January 2018, including the regulatory and accounting reporting requirements as well as the management monitoring.

Several tasks have been achieved at the end of 2015 and in particular the methodological framework and the IT and business framework.

The work plan for 2016 is to develop the IT system both at the central and the entities level in order to calculate the provisions and to collect all the new added data.

The Group aims to finalise the main part of the programme by the end of the third quarter of 2017 in order to commence a general rehearsal.

#### PROJECT ORGANISATION

The achievements of 2015 are splitted into two main streams, a banking stream and an IT and process stream. The two streams did not start simultaneously, in order to let the banking stream define the calculation concepts and thereby support the IT and process stream.

The main task of the banking stream in 2015 was to define the methodological framework including:

- The rules for assessing the credit risk deterioration:
  - Use of the internal credit risk system, already used in the Basel calculation;
  - Definition of normative rules to transfer all the contracts of a counterparty to stage 2;
  - Use and improvement of the watchlist system;
  - Creation of a direct link between provisionning and watchlist;
- Determination of one year and lifetime probabilities of default, including macro economic forecasts to take into account the economic cycle;
- Loss rates using either the existing Basel system or loss rates of defaulted financial assets.

The first calibration and validation work on this framework will take place in 2016 in order to become properly acquainted with the new IFRS 9 provisioning models. These works require the simulation of various management and calibration rules (as consistent as possible with those implemented under the Basel regulation) in order to determine the conjunctions that best meet the normative and business criteria.

The organisation, the process and the IT system articulated between the group level (Risk division for the calculation and Finance division for the consolidated accounts) and the local entities put in place as of 1<sup>st</sup> January 2018 should:

- permettre un processus aussi fluide que possible pour le calcul de la provision pour risque de crédit et pour la comptabilisation des provisions ainsi constituées;
- Allow a calculation and an accounting process as fluid as possible;
- Meet the disclosure requirements that are far more demanding than the current requirements (qualitative and quantitative information).

### 4.7. RISK MEASUREMENT AND INTERNAL RATINGS

In 2007, Societe Generale obtained authorisation from its supervisory authorities to apply the Internal Ratings-Based (IRB) approach to most of its exposures – this is the most advanced method for calculating capital requirements in respect of credit risk.

Since the initial authorisation was given, the transition from the standard approach to the IRB approach for some of its activities and exposures has been selective and marginal.

#### TABLE 17: BREAKDOWN OF EAD<sup>(1)</sup> BY THE BASEL METHOD

	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014
IRB	79%	78%
Standard	21%	22%
Total	100%	100%

(1) Excluding equity investments, fixed assets, and all accruals.

#### TABLE 18: SCOPE OF APPLICATION OF THE IRB AND STANDARD APPROACHES FOR THE GROUP

	IRB Approach	Standard Approach
French Retail Banking	Majority of portfolios	Some retail customer portfolios including those of the SOGELEASE subsidiary
International Retail Banking and Financial Services	The subsidiaries Komercni Banka (Czech Republic), CGI, Fiditalia, GEFA and SG Finans,	The other subsidiaries
	SG leasing SPA, Fraer Leasing SPA	
	Majority of Corporate and nvestment Banking portfolios	
Global Banking and Investor Solutions	As for Private Banking, Securities Services and Brokerage, mainly the Retail portfolios of the following subsidiaries:	As for Private Banking, Securities Services and Brokerage, the exposures granted to banks and companies
	SG Hambros, SGBT Luxembourg, SGBT Monaco, SG Private Banking Suisse	
Corporate Centre	Majority of portfolios	-

# General framework of the internal approach

To calculate its capital requirements under the IRB method, Societe Generale estimates the Risk Weighted Asset (RWA) and the Expected Loss (EL), a loss that may be incurred due to the nature of the transaction, the quality of the counterparty and all measures taken to mitigate risk.

To calculate its RWA, Societe Generale uses its own Basel parameters, which are estimated using its internal risk measurement system:

- the Exposure at Default (EAD) value is defined as the Group's exposure in the event the counterparty should default. The EAD includes exposures recorded on the balance sheet (loans, receivables, income receivables, market transactions, etc.), and a proportion of off -balance sheet exposures calculated using internal or regulatory Credit Conversion Factors (CCF);
- the Probability of Default (PD): the probability that a counterparty of the bank will default within one year;

the Loss Given Default (LGD): the ratio between the loss incurred on an exposure in the event a counterparty defaults and the amount of the exposure at the time of the default.

The Societe Generale Group also takes into account:

- the impact of guarantees and credit derivatives with the substitution of the PD, the LGD and the risk weighting calculation of the guarantor with those of the obligor (the exposure is considered to be a direct exposure to the guarantor) in the event that the guarantor's risk weighting is more favourable than that of the obligor;
- collaterals used as guarantees (physical or financial). This impact is factored either at the level of the LGD models in the pools concerned or on a line-by-line basis.

The Group has also received authorisation from the regulator to use the IAA (Internal Assessment Approach) method to calculate the regulatory capital requirement for ABCP (Asset-Backed Commercial Paper) securitisation.

Besides the capital requirement calculation objectives under the IRBA method, the Group's credit risk measurement models contribute to the management of the Group's operational activities. They also constitute tools to structure, price and approve transactions and participate in the setting of approval limits granted to business lines and the Risk Department.

# Credit risk measurement for wholesale clients

The Group's credit risk measurement system, which estimates internal Basel parameters, uses a quantitative evaluation mechanism coupled with an expert judgement.

For Corporate, Banking and Sovereign portfolios, the measurement system is based on three key pillars:

a counterparty rating system;

- a system that automatically assigns Loss Given Default (LGD) and Credit Conversion Factor (CCF) parameters according to the characteristics of each transaction;
- a collection of procedures also sets out the rules relating to ratings (application field, revision frequency, rating approval procedure, etc.), as well as for the supervision, backtesting and validation of models. These procedures help among others to facilitate the human judgement that casts an indispensable critical eye on the models for these portfolios

#### RATING SYSTEM

The rating system consists in assigning a rating to each counterparty according to an internal scale, for which each grade corresponds to a probability of default determined using historical series observed by Standard & Poor's over more than 20 years.

The following table presents Societe Generale's internal rating scale and the corresponding scales of the main external credit assessment institutions, as well as the corresponding mean estimated probability of default.

#### TABLE 19: SOCIETE GENERALE'S INTERNAL RATING SCALE AND CORRESPONDING SCALES OF RATING AGENCIES

Counterparty internal rating	DBRS	FitchRatings	Moody's	S&P	1 year probability
1	AAA	AAA	Aaa	AAA	0.01%
2	AA high to AA low	AA+ to AA-	Aa1 to Aa3	AA+ to AA-	0.02%
3	A high to A low	A+ to A-	A1 to A3	A+ to A-	0.04%
4	BBB high to BBB low	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	0.30%
5	BB high to BB low	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	2.16%
6	B high to B low	B+ to B-	B1 to B3	B+ to B-	7.93%
7	CCC high to CCC low	CCC+ to CCC-	Caa1 to Caa3	CCC+ to CCC-	20.67%
8, 9 and 10	CC and below	CC and below	Ca and below	CC and below	100.00%

The rating assigned to a counterparty is generally proposed by a model and then adjusted and approved by experts in the Risk Department following the individual analysis of each counterparty.

The counterparty rating models are structured in particular according to the type of counterparty (companies, financial institutions, public entities, etc.), the country, geographical region and size of the company (usually assessed through its annual turnover).

The company rating models are underpinned by statistical models (regression methods) of client default. They combine quantitative parameters derived from financial data that evaluate the sustainability and solvency of counterparties and qualitative parameters that evaluate economic and strategic dimensions.

#### LGD MODELS

The loss given default (LGD) is an economic loss that is measured by taking into account all parameters pertaining to the transaction, as well as the fees incurred for recovering the receivable in the event of a counterparty default.

The models used to estimate the loss given default (LGD) excluding retail clients are applied by regulatory sub-portfolios, type of asset, size and geographical location of the transaction or of the counterparty, depending on the existence or not of collateral and its nature. This makes it possible to define homogenous risk pools, notably in terms of recovery, procedures and the legal environment. These estimates are built on a statistical basis when the number of loans in default is sufficient. They are based in this case on the observation of recovery data over a long period.

When the number of defaults is insufficient, the estimate is revised or determined by an expert.

# THE CCF MODELS (CREDIT CONVERSION FACTOR)

For its off-balance sheet exposures, Societe Generale is authorised to use the internal approach for "term loan with drawing period" products and revolving credit lines.

#### TABLE 20: WHOLESALE CLIENTS - MODELS AND PRINCIPAL CHARACTERISTICS OF MODELS

Modelled Parameter	Portfolio/Category of Basel assets	Number of models	Model and methodology Number of years default/loss					
	PORTFOLIO / CATEGORY OF BASEL ASSETS							
	Sovereigns	Expert rating	Expert-type model, use of the external ratings of agencies.					
	Public sector entities	4 models according to the geographical regions (FR-US-Czech Rep Other).	Statistical-type models (regression) for the rating process, based on the combination of financial ratios and a qualitative questionnaire. Low default portfolio					
Probability of	Financial institutions	5 models according to the type of counterparty: Banks Insurances, Funds, Financial intermediaries, Funds of Funds	Expert-type models based on a qualitative questionnaire. Low default portfolio.					
default (PD)	Specialised financing	5 models according to the type of transaction	Expert-type models based on a qualitative questionnaire.					
	Large corporates	9 models according to the geographical regions	Statistical-type models (regression) for the rating process, based on the combination of financial ratios and a qualitative questionnaire. Defaults observed over a period of 8 to 10 years.					
	Small and medium- sized companies	12 models according to the size of companies and the geographical region	Statistical-type models (regression) for the rating process, based on the combination of financial ratios and a qualitative questionnaire. Defaults observed over a period of 8 to 10 years.					
	Public sector entities - Sovereigns	4 models – According to the type of counterparty	Calibration based on historical data and expert judgments. Losses observed over a period of more than 10 years.					
	Large corporates - Flat-rate Approach	>20 models Flat-rate approach according to the type of collateral	Calibration based on historical data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
	Large corporates - Discount Approach	12 models Discount approach according to the type of recoverable collateral	Calibration based on historical market data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
Loss given default (LGD)	Small and medium- sized companies	13 models Flat-rate approach according to the type of collateral or unsecured.	Calibration based on historical data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
	Project financing	10 models Flat-rate approach according to the project type.	Calibration based on historical data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
	Financial institutions	7 models Flat-rate approach according to the type of counterparty: banks, insurances, funds, etc. and the nature of the collateral.	Calibration based on historical data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
	Other specific portfolios	6models: factoring, leasing with option to purchase and other specific cases.	Calibration based on historical data adjusted by the expert judgments. Losses observed over a period of more than 10 years.					
Credit conversion factor (CCF)	Large corporates	3 models: Term loans with drawing period, revolving credits, Czech Corporates	Models calibrated by segment. Defaults observed over a period of more than 10 years.					
Expected Loss [EL]	Real estate transaction	1 model by slotting	Statistical model based on expert opinion and a qualitative questionnaire. Low default portfolio.					

#### BACKTESTS

The performance level of the entire wholesale client credit system is measured by regular backtests that compare estimates with actual results by PD, LGD, CCF and portfolios.

The compliance of this system is based on the consistency between the parameters used and the long-term trends analysed, with safety margins that take into account areas of uncertainty (cyclicity, volatility, quality of data, etc.). The safety margins applied are regularly estimated, checked and revised if necessary.

The results of backtests can justify the implementation of remedial plans or the application of add-ons if the system is deemed to be insufficiently prudent. The results of backtests, remedial plans and add-ons are presented to the Committee of Experts for discussion and approval (see Governance of the modelling of risks, p. 60).

#### TABLE 21: COMPARISON OF RISK PARAMETERS: ESTIMATED AND ACTUAL PD, LGD AND EAD VALUES - WHOLESALE CLIENTS

Basel Portfolio	Estimated probability of default	Actual default rate (long-term average)	Estimated LGD*	Actual LGD excluding safety margin	Actual EAD**/Estimated EAD
Sovereigns	0.7%	0.3%	-	-	-
Banks	1.4%	0.8%	-	-	-
Other financial institutions	0.7%	0.2%			
Large corporates	2.1%	1.1%	34%	24%	95.4%
Small and medium sized companies	3.9%	3.9%	41%	37%	

\* LGD senior unsecured.

\*\* Modelled CCF (revolving, term loans), only for defaults.

# Credit risks measurement of retail clients

#### PROBABILITY OF DEFAULT MODELS

The modelling of the probability of default of retail client counterparties is carried out specifically by each of the Group's business lines recording its assets using the IRBA method. The models incorporate data on the payment behaviour of counterparties. They are segmented by type of client and distinguish between retail clients, professional clients, very small businesses and real estate investment companies (SCI, Sociétés Civiles Immobilières).

The counterparties of each segment are classified automatically using statistical models in homogenous risk pools, each of which is assigned probabilities of default.

Once the counterparties are classified in statistically distinct homogenous risk pools, the probability of default parameters are estimated by observing the average long-term default rates for each product. These estimates are adjusted by a safety margin to estimate as best as possible a complete default cycle using a Through the Cycle (TTC) approach.

#### LGD MODELS

The models for estimating the loss given default (LGD) of retail clients are specifically applied by business line portfolio. LGD values are estimated by product, according to the existence or not of collateral.

Consistent with operational recovery processes, estimate methods are generally based on a two-step modelling process that initially estimates the proportion of defaulted loans in loan termination, followed by the loss incurred in case of loan termination.

The expected losses are estimated with internal long-term historical recovery data for exposures that have defaulted. These estimates are adjusted with safety margins in order to reflect the possible impact of a downturn.

#### CCF MODELS

For its off-balance sheet exposures, Societe Generale applies its estimates for revolving loans and overdrafts on current account held by retail and professional clients.

#### TABLE 22: RETAIL CLIENTS - MODELS AND PRINCIPAL CHARACTERISTICS OF MODELS

Modelled Parameter	Portfolio/Category of Basel assets	Number of models	Model and methodology Number of years default/loss
		RETAIL CLIENTS	
	Residential real estate	12 models according to the entity, the type of guarantee (security, mortgage), the type of counterparty: individuals or professionals / VSB, Real estate investment company (SCI).	Statistical-type model (regression), behavioural score. Defaults observed over a period from 5 to 8 years.
Duch chilithu cá	Other retail credits	> 20 models according to the entity, the nature and the object of the loan: personal loan, consumer loan, automobile, etc.	Statistical-type model (regression), behavioural score Defaults observed over a period from 5 to 8 years.
Probability of default (PD)	Renewable exposures	13 models according to the entity, the nature of the loan: overdraft on current account, revolving credit or consumer loan.	Statistical-type model (regression), behavioural score. Defaults observed over a period from 5 to 8 years.
	Professionals and very small businesses	14models according to the entity, the nature of the loan: medium and long-term investment credits, short-term credit, automobile, the type of counterparty (individual or Real	Statistical-type model (regression or segmentation), behavioural score. Defaults observed over a period from 5 to 8 years
		estate investment company (SCI)).	
Residential real estate	Residential real estate	12 models according to the entity, the type of guarantee (security, mortgage), the type of counterparty: individuals or professional / VSB, Real estate investment company (SCI).	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
1	Other retail credits	> 20 models according to the entity, the nature and the object of the loan: personal loan, consumer loan, automobile, etc.	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
Loss given default (LGD)	Renewable exposures	13 models according to the entity, the nature of the loan: overdraft on current account, revolving credit or consumer loan	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years/
	Professionals and very small businesses	13 models according to the entity, the nature of the loan: medium and long-term investment credits, short-term credit, automobile, the type of counterparty (individual or Real estate investment company (SCI)).	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
Credit Conversion Factor [CCF]	Renewable exposures	10 calibrations by entities for revolving products and personal overdrafts	Models calibrated by segments over a period of observation of defaults from 5 to 8 years.
Expected Loss [EL]	Private Banking exposures	PD and LGD derived from loss observations.	Models restructured into a PD/LGD based approach. Pending authorisation for use by supervision authorities.

#### BACKTESTS

TThe performance level of the whole retail client credit system is measured by regular backtests, which check the performance of PD, LGD and CCF models and compare estimated figures with actual figures.

Each year, the average long-term default rates observed by homogenous risk pools are compared with the probabilities of default. If necessary, the calibrations of probabilities of default are adjusted to preserve a satisfactory safety margin. The discrimination level of the models and changes in the portfolio's composition are also measured.

Regarding the LGD, the backtest consists in comparing the last estimation of the LGD obtained by computing the average level of payments observed and the value used to calculate regulatory capital. The difference should in this case reflect a sufficient safety margin to take into account a potential economic slowdown, uncertainties about estimation, and changes in the performance of recovery processes. The appropriateness of this safety margin is assessed by a Committee of experts.

Likewise for the CCF, the level of conservatism of estimates is assessed annually by comparing estimated drawdowns and observed drawdowns on the undrawn part.

The results presented below for the PD cover all the portfolios of the Group entities with the exception of Private Banking, where the restructured models are currently awaiting authorisation for use by the supervision authorities. The exposures to retail customers of subsidiaries specialised in Equipment Financing are integrated into the retail customer portfolio under the "VSB and professionals" sub-portfolio (exposures of GEFA, SGEF Italy, SG Finans).

The real estate exposures guaranteed by Crédit Logement are subject to special processing to calculate the capital requirements. The estimated risk parameters do not reflect the actual level of risk given the possible exercise of the guarantee. Accordingly, only the mean observed default rate is provided for information purposes.

The figures below aggregate French, Czech, German, Scandinavian and Italian exposures. For all the Basel portfolios of retail clients, the actual default rate over a long period is lower than the estimated probability of default, which confirms the overall conservatism of the rating system.

#### TABLE 23: COMPARISON OF RISK PARAMETERS: ESTIMATED PD, LGD, EAD AND ACTUAL VALUES- RETAIL CLIENTS

		31⁵t December 2015									
Basel Portfolio	Estimated probability of defaul	Actual default rate (long-term average)	Estimated LGD*	Actual LGD excluding safety margin	Actual EAD**/ Estimated EAD						
Real estate loans (excluding guaranteed exposures)	2.4%	2.1%	17%	14%	-						
Real estate loans (guaranteed exposures)	-	1.0%	-	-	-						
Renewable exposures	5.8%	5.4%	44%	41%	70.0%						
Other retail credits	3.4%	3.2%	25%	23%	_						
VSB and professionals	5.2%	4.2%	26%	21%	65.2%						
Total Group Retail Client*	<b>3.6</b> %	3.2%	<b>24</b> %	<b>21</b> %	<b>66.8</b> %						

	31 <sup>st</sup> December 2014										
Basel Portfolio	Estimated probability of defaul	Actual default rate (long-term average)	Estimated LGD*	Actual LGD excluding safety margin	Actual EAD**/ Estimated EAD						
Real estate loans (excluding guaranteed exposures)	2.2%	2.0%	19%	14%	_						
Real estate loans (guaranteed exposures)	_	0.9%	_	-	_						
Renewable exposures	6.2%	5.4%	44%	39%	Na						
Other retail credits	3.9%	3.2%	25%	22%							
VSB and professionals	5.3%	5.2%	29%	25%	Na						
Total Group Retail Client*	3.4%	2.9%	24%	20%	Na						

\* Excluding guaranteed exposures.

\*\* Revolving credits and current accounts of individual and professional clients.

#### Governance of the modelling of risks

Governance consists in developing, validating and monitoring decisions on changes with respect to internal credit risk measurement models. An independent and dedicated validation department within the Risk Division is more specifically responsible for validating the credit models and parameters used for the IRB method and monitoring the use of the rating system. The internal model validation team draws up an annual audit plan specifying the nature and extent of work that needs to be carried out, notably according to regulatory constraints, model risks, issues covered by the model and the strategic priorities of the business lines. It is careful to coordinate its work with the Internal Audit Division to ensure a simultaneous overall review (modelling and banking aspects) of the business scopes requiring such a review. The model validation team is included within the scope subject to inspections by the Internal Audit Division.

The internal validation protocol for new models and annual backtesting is broken down into three stages:

- a preparation stage during which the validation team takes control of the model and the environment in which it is built and/or backtested, ensures that the expected deliverables are complete, and draws up a working plan;
- an investigation stage intended to collect all statistical and banking data required to assess the quality of the models. For subjects with statistical components, a review is performed by the independent model control entity, whose conclusions are formally presented to the modelling entities within the framework of a committee (Models Committee);
- a validation stage that is structured around a Committee of experts whose purpose is to validate the consistency of the Basel parameters of an internal model from a banking perspective. The Committee of experts is a body reporting to the Group Chief Risk Officer and to the Management of the business lines concerned.

The Committee of experts is also responsible for defining the review guidelines and for revising models at the proposal of the Models Committee. These guidelines take into account the regulatory requirements and economic and financial issues of the business lines.

In accordance with the delegated regulation (EU) No.259/2014 of 20<sup>th</sup> May 2014 regarding the monitoring of internal models used to calculate capital requirements, changes to the Group's credit risk measurement system are subject to three types of notification to the competent supervisor according to the significant nature of the change, evaluated according to this rule:

- significant changes are subject to a request for authorisation prior to their implementation;
- changes which are not significant according to the criteria defined by the regulation are notified to the supervisor. Barring a negative response within a two-month period, these may be implemented;
- other changes are notified to the competent authorities after their implementation at least once annually in a specific report.

### 4.8. CREDIT RISK: QUANTITATIVE INFORMATION

The measurement used for credit exposures in this section is EAD – Exposure At Default (on- and off-balance sheet), excluding fixed assets, equity investments, and all accruals. Under the Standard Approach, EAD is calculated net of collateral and provisions.

14%

Exposures are broken down by portfolios, sectors and obligor ratings, before taking into account the substitution effect.

#### Credit risk exposure

At 31st December 2015, the Group's Exposure at Default (EAD) amounted to EUR 781 billion (of which 615 billion on-balance sheet).

#### CREDIT RISK EXPOSURE BY EXPOSURE CLASS (EAD) AT 31<sup>ST</sup> DECEMBER 2015)

# RETAIL CREDIT RISK EXPOSURE BY EXPOSURE CLASS (EAD) AT 31<sup>ST</sup> DECEMBER 2015

On- and off-balance sheet exposures (EUR 781 billion in EAD).





### Very small enterprises and self-employed 25% Other credit to individuals 4% Revolving credits

# CREDIT RISK EXPOSURE BY EXPOSURE CLASS (EAD) AT 31<sup>ST</sup> DECEMBER 2014

On- and off-balance sheet exposures (EUR 722 billion in EAD).



#### RETAIL CREDIT RISK EXPOSURE BY EXPOSURE CLASS (EAD) AT 31<sup>ST</sup> DECEMBER 2014

On- and off-balance sheet (EUR 179 billion in EAD).



<sup>(1)</sup> Institutions: Basel classification banks and public sector entities.

# SECTOR BREAKDOWN OF GROUP CORPORATE CLASS (EAD) AT 31<sup>ST</sup> DECEMBER 2015

(Basel corporate portfolio, EUR 313 billion in EAD).



The Group's Corporate portfolio (Large Corporates, SMEs and Specialised Financing) is highly diversified in terms of sectors.

As of 31<sup>st</sup> December 2015, the Corporate portfolio amounted to EUR 313 billion (on- and off-balance sheet exposures measured in EAD). Only the Finance and Insurance sector accounts for more than 10% of the portfolio.The Group's exposure to its 10 largest corporate counterparties accounts for 4% of this portfolio.

# SECTOR BREAKDOWN OF GROUP CORPORATE EXPOSURE AT 31<sup>ST</sup> DECEMBER 2015

(Basel corporate portfolio, EUR 313 billion in EAD).



\* Exposure at Default (EAD) relative to borrower, issuer and replacement risk on outstandings measured using the IRB method, excluding fixed assets, equity investments, all accruals, and doubtful loans.

The scope includes performing loans recorded under the IRB method for the entire Corporate client portfolio, all divisions combined, and represents EAD of EUR 239 billion (out of total EAD for the Basel Corporate client portfolio of EUR 313 billion, standardised method included).

The breakdown by rating of the Societe Generale Group's Corporate exposure demonstrates the sound quality of the portfolio. It is based on an internal counterparty rating system, presented above as its S&P equivalent.

At 31<sup>st</sup> December 2015, the majority of the portfolio (64% of Corporate customers) had an investment grade rating, i.e. counterparties with an S&P-equivalent internal rating higher than BBB-.

Transactions with non-investment grade counterparties are often backed by guarantees and collateral in order to mitigate the risk incurred.

#### Bank Counterparty exposure

#### BREAKDOWN OF RISK BY INTERNAL RATING FOR GROUP BANKING CLIENTS AT 31<sup>st</sup> DECEMBER 2015



\* Exposure at Default (EAD) relative to borrower, issuer and replacement risk on outstandings measured using the IRB method, excluding fixed assets, equity investments, all accruals, and doubtful loans..

The scope includes performing loans recorded under the IRB method for the entire bank customer portfolio, all divisions combined, and represents EAD of EUR 36 billion (out of total EAD for the Basel bank client portfolio of EUR 99 billion). The breakdown by rating of the Societe Generale Group's bank counterparty exposure demonstrates the sound quality of the portfolio. It is based on an internal counterparty rating system, presented above as its S&P equivalent.

At  $31^{st}$  December 2015, exposure was concentrated in investment grade counterparties (89% of exposure) on the one hand, and developed countries (67%) on the other hand.

#### Geographic breakdown of Group credit risk exposure

#### GEOGRAPHIC BREAKDOWN OF GROUP CREDIT RISK EXPOSURE AT 31<sup>st</sup> DECEMBER 2015 (ALL CLIENT TYPES INCLUDED)<sup>(1)</sup>

On- and off-balance sheet exposures (EUR 781 billion in EAD).



#### GEOGRAPHIC BREAKDOWN OF GROUP CREDIT RISK EXPOSURE AT 31<sup>st</sup> DECEMBER 2014 (ALL CLIENT TYPES INCLUDED)<sup>(1</sup>

On- and off-balance sheet exposures (EUR 722 billion in EAD).



(1) According to the country of the guarantor.

At 31<sup>st</sup> December 2015, 87% of the Group's on- and off-balance sheet exposure was concentrated in the major industrialised countries. Almost half of the overall amount of outstanding loans was to French customers (25% exposure to non-retail portfolio and 18% to retail portfolio).

# Provisions and impairments for credit risks at 31<sup>st</sup> December 2015

CHANGE IN GROUP NET COST OF RISK



**The Group's net cost of risk** amounted to EUR -3065 million in 2015, up +3.3% vs. 2014. In particular, it included an additional EUR -600 million collective provision for litigation issues (of which -400 million in Q4-15). This provision amounted to EUR 1.7 billion at end-2015.

**The Group's commercial cost of risk** confirmed its downward trend, in line with the 2016 target. It stood at 52<sup>(1)</sup> basis points in 2015 vs. 61 basis points in 2014.

- In French Retail Banking, the commercial cost of risk continued to decline to 43 basis points (vs. 56 basis points in 2014), thanks to the low level for business customers.
- At 102 basis points (vs. 123 basis points in 2014), International Retail Banking & Financial Services' cost of risk was lower, due primarily to an improvement in the cost of risk in Europe, particularly in Romania, and on the African continent. The cost of risk in Russia remained under control despite a challenging economic environment.
- Global Banking & Investor Solutions' cost of risk amounted to 27 basis points in 2015 (vs. 10 basis points in 2014). 2015 was marked by increased provisioning on counterparties exposed to the oil and gas sector. In addition, a substantial provision was booked on a defaulting counterparty in Q4-15.

Excluding litigation issues, in basis points for outstandings at the beginning of the period, including operating leases. Annualised calculation.

#### Specific provisions and impairments for credit risks

Impairments for credit risks are primarily booked for doubtful and disputed loans (customer loans, amounts due from banks, operating leases, lease financing and similar agreements). These loans amounted to EUR 24.6 billion at 31<sup>st</sup> December 2015 (vs. EUR 25.8 billion at 31<sup>st</sup> December 2014).

#### BREAKDOWN OF DOUBTFUL AND DISPUTED LOANS BY GEOGRAPHIC REGION AT 31<sup>ST</sup> DECEMBER 2015

At 31st December 2015, these loans amounted to EUR 24.6 billion.



# BREAKDOWN OF DOUBTFUL AND DISPUTED LOANS AT 31<sup>st</sup> DECEMBER 2014

At 31<sup>st</sup> December 2014, these loans amounted to EUR 25.8 billion.



# BREAKDOWN OF PROVISIONS AND IMPAIRMENTS AT 31<sup>st</sup> DECEMBER 2015

At 31st December 2015, these loans amounted to EUR 14.3 billion.



# BREAKDOWN OF PROVISIONS AND IMPAIRMENTS AT 31<sup>st</sup> DECEMBER 2014

At 31<sup>st</sup> December 2014, these loans were provisioned or impaired for an amount of EUR 15.1 billion.



#### Impairments on groups of homogeneous assets

At 31<sup>st</sup> December 2015, the Group's provisions for groups of homogeneous assets amounted to EUR 1.4 billion (vs. EUR 1.3 billion at 31<sup>st</sup> December 2014

#### TABLE 24: DOUBTFUL LOANS COVERAGE RATIO

	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014
Gross book outstandings (in EUR bn)	461.4	431.0
Doubtful loans (in EUR bn)	24.6	25.9
Gross doubtful loans ratio	5.3%	6.0%
Specific impairments (in EUR bn)	14.3	15.1
Impairment on groups of homogenous assets (in EUR bn)	1.4	1.3
Gross doubtful loans coverage ratio (Overall provisions/doubtful loans)	64%	63%
Gross doubtful loans coverage ratio (excluding legacy assets)	63%	61%

See page 162: the amount of guarantees and collateral is capped at the amount of outstanding loans, i.e. EUR 248.59 billion at 31<sup>st</sup> December 2015, of which EUR 128.74 billion for retail customers and EUR 119.85 billion for non-retail customers (versus EUR 111.5 billion and EUR 109.5 billion, respectively, at 31<sup>st</sup> December 2014).

Guarantees and collateral received for outstanding loans not individually impaired amounted to EUR 2.11 billion at 31<sup>st</sup> December 2015 (of which EUR 1.24 billion for retail customers and EUR 0.88 billion for non-retail customers). Guarantees and collateral received for individually impaired loans amounted to EUR 6.69 billion at 31<sup>st</sup> December 2015 (of which EUR 3.13 billion for retail customers and EUR 3.56 billion for non-retail customers). These amounts are capped at the amount of outstanding individually impaired loans.

#### **Restructured debt**

For Societe Generale, "restructured" debt refers to loans whose amount, term or financial conditions have been contractually modified due to the borrower's insolvency (whether insolvency has already occurred or will definitely occur unless the debt is restructured).

Societe Generale aligns its definition of restructured loans with the EBA definition of forborne loans.

Restructured debt does not include commercial renegotiations involving customers for which the bank has agreed to renegotiate the debt in order to retain or develop a business relationship, in accordance with credit approval rules in force and without giving up any of the principal or accrued interest. Any situation leading to debt restructuring entails placing the customers in question in the Basel default category and classifying the loans themselves as impaired.

The customers whose loans have been restructured are kept in the default category, as long as the bank remains uncertain of their ability to meet their future commitments and for a minimum of one year.

Restructured debt totalled EUR 7.03 billion at 31st December 2014

#### TABLE 25: RESTRUCTURED DEBT

(In EUR bn)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014
Non-performing restructured debt	6,036	5,883
Performing restructured debt	992	2,407
Total	7,028	8,291

#### Loans and advances past due but not individually impaired

Outstanding loans in the on-balance-sheet credit portfolio could be broken down as follows:

1												
		31 <sup>st</sup> [	December :	2015		31⁵t December 2014						
(In EUR bn)	between 1 and 30 days	between 31 and 90 days	between 91 and 180 days	More than 180 days	Total	between 1 and 30 days	between 31 and 90 days	between 91 and 180 days	More than 180 days	Total		
Due from banks (A)	0.04	0.03	0.01	-	0.08	0.01	0.03	0.01	-	0.05		
Sovereign (B)	0.02	0.08	0.03	-	0.13	0.03	0.06	0.03	-	0.12		
Corporates (C)	1.03	1.20	0.18	0.29	2.70	1.05	1.13	0.15	0.17	2.50		
Retail (D)	2.08	0.83	0.08	0.08	3.07	2.17	0.94	0.11	0.10	3.32		
Securitisations (E)	-	-	-	-	-	-	-	-	-	-		
Customer loans (F = B + C + D + E)	3.13	2.11	0.29	0.37	5.90	3.25	2.13	0.29	0.27	5.94		
Total (G = A + F)	3.17	2.14	0.30	0.37	5.98	3.26	2.16	0.30	0.27	5.99		

#### TABLE 26: ROANS AND ADVANCES PAST DUE BUT NOT INDIVIDUALLY IMPAIRED

The amounts presented in the table above include loans and advances that are past due for technical reasons, which primarily affect the "less than 31 days old" category. Loans past due for technical reasons are loans that are classified as past due on account of a delay between the value date and the date of recognition in the customer account.

Total declared past due loans not individually impaired included all receivables (outstanding principal, interest and past due amounts) with at least one recognised past due amount. These outstanding loans can be placed on a watch list as soon as the first payment is past due.

At 31<sup>st</sup> December 2015, outstanding performing assets with past due amounts accounted for 1.4% of unimpaired on-balance sheet assets excluding debt instruments and including loans that are past due for technical reasons. The amount is stable compared to 31<sup>st</sup> December 2014 (1.5% of outstanding performing assets excluding debt/securities).

### 4.9. CREDIT RISK: ADDITIONAL QUANTITATIVE INFORMATION

The additional quantitative disclosures in the following tables enhance the information of the previous section under the Pillar 3 of Basel 2 regulation.

These tables set forth detailed information on the bank's global credit risk, notably with regard to total exposure, exposure at default and risk-weighted assets.

In these tables, in addition to the exposure at default (EAD), the probability of default (PD) and the loss given default ratio (LGD) explained in the previous section the key variables are the following:

- exposure is defined as all assets (e.g. loans, receivables, accruals, etc.) associated with market or customer transactions, recorded on and off-balance sheet;
- expected Loss (EL), which is the potential loss incurred, taking into account the quality of the transaction's structuring and any risk mitigation measures such as collateral. Under the AIRB method,

Exposure to credit risk is presented by the following categories of debtors:

the following equation summarises the relation between these variables:  $EL = EAD \times PD \times LGD$  (except for defaulted exposures);

 Risk Weighted-Assets (RWA): their calculation compute the exposures and the level of risk associated, which depends on the debtors' credit quality.

Compared to previous sections the exposure is presented on different axes:

The breakdowns are shown after taking into account substitution effects (including for data at 31st December 2014 restated accordingly).

Equity investments, fixed assets and other assets not relating to credit obligations are excluded except for accruals assigned to other exposure classes defined below. The residual risk value is not taken into account.

Sovereign	Claims or contingent claims on central governments, regional governments, local authorities or public sector entities as well as on multilateral development banks and international organisations.
Institutions	Claims or contingent claims on regulated credit institutions, as well as on governments, local authorities and other public sector entities that do not qualify as sovereign counterparties.
Corporates	Claims or contingent claims on corporates, which include all exposures not covered in the portfolios defined above. In addition, small/medium-sized enterprises are included in this category as a sub-portfolio, and defined as entities with total annual sales below EUR 50 m.
Retail	Claims or contingent claims on an individual or individuals, or on a small or medium-sized entity, provided in the latter case that the total amount owed to the credit institution does not exceed EUR 1 m.
netali	Retail exposure is further broken down into residential mortgages, revolving credit and other forms of credit to individuals, the remainder relating to exposures to very small entities and self-employed.
Securitisation	Claims relating to securitisation transactions.

#### TABLE 27: EXPOSURE CLASS

The overall increase in exposure and EAD in 2015, includes all categories.

On Sovereign, the change in the exposure is notably due to the Group's liquidity management, on Institutions, it is partly explained by exposure to clearing houses and for Corporates about half of the increase comes from a foreign exchange effect. As for the growth in the Retail, it is mainly on real estate loans in France.

### TABLE 28: CREDIT RISK EXPOSURE, EXPOSURE AT DEFAULT (EAD) AND RISK-WEIGHTED ASSETS (RWA) BY APPROACH AND EXPOSURE CLASS

		31 <sup>st</sup> December 2015													
		Global portfolio													
(In EUR m)	IR	B approac	h	Stan	dard appro	ach		Total		Avera	age <sup>(1)</sup>				
	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	RWA				
Exposure Class															
Sovereign	173,165	169,253	5,849	11,043	11,002	10,538	184,209	180,255	16,387	179,414	16,461				
Institutions	55,749	51,048	10,596	49,072	48,248	5,652	104,821	99,296	16,249	105,734	16,584				
Corporates	316,913	235,400	108,962	89,508	65,750	55,240	406,421	301,150	164,201	409,966	162,314				
Retail	144,891	143,955	28,982	51,933	45,733	26,601	196,825	189,688	55,582	193,916	56,589				
Securitisation	17,263	17,248	1,606	52	43	289	17,315	17,291	1,895	18,064	1,947				
Total	707,982	616,903	155,995	201,608	170,776	98,319	909,590	787,679	254,314	907,093	253,896				

\_\_\_\_\_

(1) The average exposure and RWA are determined by aggregating the total gross exposure and RWA at the end of the last four quarters and dividing the result by 4.

(In EUR m)		31 <sup>st</sup> December 2014												
		Global portfolio												
	IF	RB approac	h	Stan	dard appro	ach		Total		Avera	age <sup>(1)</sup>			
	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	RWA			
Exposure Class														
Sovereign	150,726	147,707	5,187	10,272	10,181	11,221	160,999	157,888	16,408	160,290	13,274			
Institutions	60,875	55,205	10,737	34,001	33,519	3,722	94,877	88,724	14,459	100,079	12,672			
Corporates	282,599	212,882	97,480	94,295	74,336	53,112	376,894	287,218	150,592	362,110	145,685			
Retail	134,939	133,927	30,162	52,468	45,418	27,458	187,407	179,345	57,620	188,865	58,597			
Securitisation	15,348	15,035	1,629	47	47	374	15,395	15,082	2,003	16,517	2,297			
Total	644,488	564,756	145,195	191,083	163,501	95,888	835,571	728,257	241,083	827,861	232,524			

(1) The average exposure and RWA are determined by aggregating the total gross exposure and RWA at the end of the last four quarters and dividing the result by 4.

# TABLE 29: RETAIL CREDIT RISK EXPOSURE, EXPOSURE AT DEFAULT (EAD) AND RISK-WEIGHTED ASSETS (RWA) BY APPROACH AND EXPOSURE CLASS

		31 <sup>st</sup> December 2015													
(In EUR m)		Retail portfolio													
	IF	IRB approach			dard appro	ach		Total		Average <sup>(1)</sup>					
	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	RWA				
Exposure Class									-						
Residential mortgages	91,290	91,070	12,858	16,935	16,239	5,615	108,224	107,309	18,473	104,783	19,127				
Revolving credits	6,412	5,543	2,416	4,558	2,525	1,914	10,970	8,068	4,330	11,386	4,461				
Other credits to individuals	30,070	30,094	8,489	20,308	18,042	13,635	50,378	48,136	22,124	51,484	22,740				
Other - small entities or self employed	17,119	17,248	5,219	10,133	8,927	5,437	27,252	26,175	10,656	26,263	10,261				
Total	144,891	143,955	28,982	51,933	45,733	26,601	196,825	189,688	55,582	193,916	56,589				

(1) The average exposure and RWA are determined by aggregating the total gross exposure and RWA at the end of the last four quarters and dividing the result by 4.

		31 <sup>st</sup> December 2014 Retail portfolio												
(In EUR m)	IF	B approacl	h	Stan	dard appro	ach		Total		Avera	ge <sup>(1)</sup>			
	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	EAD	RWA	Exposure	RWA			
Exposure Class														
Residential mortgages	82,543	82,403	13,436	15,808	15,030	5,457	98,351	97,433	18,893	97,401	18,581			
Revolving credits	6,979	5,656	2,541	4,752	2,611	1,979	11,731	8,267	4,520	12,161	4,745			
Other credits to individuals	29,081	29,184	8,325	21,912	19,111	14,754	50,994	48,294	23,078	52,995	23,743			
Other - small entities or self employed	16,336	16,683	5,861	9,995	8,667	5,268	26,331	25,350	11,129	26,308	11,528			
Total	134,939	133,927	30,162	52,468	45,418	27,458	187,407	179,345	57,620	188,865	58,597			

(1) The average exposure and RWA are determined by aggregating the total gross exposure and RWA at the end of the last four quarters and dividing the result by 4.

#### Breakdown of credit risk

#### TABLE 30: CREDIT AND COUNTERPARTY RISK EXPOSURE BY APPROACH AND EXPOSURE CLASS

(In EUR m)	31 <sup>st</sup> December 2015									
	IRB			Standard			Total			
	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	
Exposure class										
Sovereign	161,588	11,577	173,165	10,883	160	11,043	172,471	11,737	184,209	
Institutions	38,160	17,589	55,749	25,215	23,857	49,072	63,375	41,446	104,821	
Corporates	270,249	46,664	316,913	84,776	4,731	89,508	355,025	51,396	406,421	
Retail	144,836	55	144,891	51,879	54	51,933	196,715	109	196,825	
Securitisation	17,226	37	17,263	52	1	52	17,278	38	17,315	
Total	632,059	75,922	707,982	172,805	28,804	201,608	804,864	104,726	909,590	

(In EUR m)	31 <sup>st</sup> December 2014									
	IRB			Standard			Total			
	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	
Exposure class										
Sovereign	141,921	8,805	150,726	10,070	202	10,272	151,991	9,008	160,999	
Institutions	41,620	19,255	60,875	18,061	15,940	34,001	59,681	35,196	94,877	
Corporates	240,598	42,001	282,599	75,516	18,779	94,295	316,114	60,780	376,894	
Retail	134,927	12	134,939	52,300	168	52,468	187,226	180	187,407	
Securitisation	15,248	100	15,348	46	0	47	15,295	101	15,395	
Total	574,314	70,174	644,488	155,993	35,090	191,083	730,307	105,264	835,571	
#### TABLE 31: CREDIT AND COUNTERPARTY EXPOSURE AT DEFAULT (EAD) BY APPROACH AND EXPOSURE CLASS

				31°	<sup>t</sup> December 20	15					
		IRB			Standard			Total			
(In EUR m)	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total		
Exposure class											
Sovereign	157,676	11,577	169,253	10,842	160	11,002	168,518	11,737	180,255		
Institutions	33,459	17,589	51,048	24,391	23,857	48,248	57,851	41,445	99,296		
Corporates	188,736	46,664	235,400	61,018	4,731	65,750	249,754	51,396	301,150		
Retail	143,899	55	143,955	45,679	54	45,733	189,579	109	189,688		
Securitisation	17,211	37	17,248	42	1	43	17,253	38	17,291		
Total	540,981	75,922	616,903	141,973	28,803	170,776	682,954	104,725	787,679		

				31°	<sup>t</sup> December 20	14			
		IRB			Standard		Total		
(In EUR m)	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total	Credit risk	Counterparty risk	Total
Exposure class									
Sovereign	138,902	8,805	147,707	9,979	202	10,181	148,880	9,008	157,888
Institutions	35,949	19,255	55,205	17,580	15,939	33,519	53,530	35,195	88,724
Corporates	170,881	42,001	212,882	55,597	18,739	74,336	226,478	60,740	287,218
Retail	133,914	12	133,927	45,250	168	45,418	179,164	180	179,345
Securitisation	14,935	100	15,035	46	0	47	14,981	101	15,082
Total	494,582	70,174	564,756	128,452	35,049	163,501	623,033	105,223	728,257

#### **Guarantees and Collateral**

As at 31<sup>st</sup> December 2015, on- and off-balance sheet guarantees and collateral amounted to EUR 221 billion. The amount of guarantees and collateral integrated in the calculation of the group capital requirements totalled EUR 168 billion and can be broken down into:

# TABLE 32: ON AND OFF-BALANCE SHEET PERSONAL GUARANTEES (INCLUDING CREDIT DERIVATIVES) AND COLLATERAL BY EXPOSURE CLASS

(En M EUR)	31 <sup>st</sup> Decembe	er 2015	31 <sup>st</sup> December 2014			
	Sûretés personnelles	Sûretés réelles	Sûretés personnelles	Sûretés réelles		
Sovereign	5,666	733	4,583	838		
Institutions	2,354	1,129	2,890	897		
Corporates	23,043	38,622	20,513	36,439		
Retail	68,212	42,018	62,344	39,755		
Total	99,275	82,503	90,330	77,929		

#### TABLE 33: CORPORATE CREDIT EXPOSURE AT DEFAULT (EAD) BY INDUSTRY SECTOR

EAD	Corporate - 31 <sup>st</sup> I	December 2015	Corporate - 31 <sup>st</sup> December 2014			
(In EUR m)	EAD	Breakdown in %	EAD	Breakdown in %		
Finance & insurance	55,526	18.4%	60,975	21.2%		
Real estate	26,122	8.7%	22,379	7.8%		
Public administration	978	0.3%	3,347	1.2%		
Food & agriculture	13,708	4.6%	12,395	4.3%		
Consumer goods	6,506	2.2%	6,014	2.1%		
Chemicals, rubber, plastics	5,175	1.7%	4,661	1.6%		
Retail trade	14,449	4.8%	13,408	4.7%		
Wholesale trade	25,432	8.4%	24,137	8.4%		
Construction	10,737	3.6%	10,149	3.5%		
Transport equip. manuf.	3,932	1.3%	3,124	1.1%		
Education and associations	1,145	0.4%	1,025	0.4%		
Hotels and catering	4,755	1.6%	4,222	1.5%		
Automobiles	7,861	2.6%	5,500	1.9%		
Machinery and equipment	10,446	3.5%	9,499	3.3%		
Forestry, paper	1,337	0.4%	1,277	0.4%		
Metals, minerals	11,499	3.8%	9,771	3.4%		
Media	3,224	1.1%	3,020	1.1%		
Oil and Gas	21,250	7.1%	21,271	7.4%		
Health, social services	2,998	1.0%	2,829	1.0%		
Business services (including conglomerates)	27,191	9.0%	24,152	8.4%		
Collective services	20,311	6.7%	17,057	5.9%		
Personal & domestic services	233	0.1%	205	0.1%		
Telecoms	7,858	2.6%	8,790	3.1%		
Transport & logistics	18,477	6.1%	18,011	6.3%		
Total	301,149	100%	287,218	100%		

#### 31<sup>st</sup> December 2015 EAD Breakdown (In EUR m) Sovereign Institutions Corporates Retail Securitisation Total in % 22,283 136,697 335,902 42.6% 65,253 108,260 3,409 France 19,653 20,408 2,856 46,629 5.9% United Kingdom 3,182 531 Germany 7,833 8,483 13,592 8,920 1,466 40,294 5.1% 8,236 18,537 Italy 2,976 1,616 4,778 932 2.4% 7,835 Luxembourg 296 7,252 131 0 15,514 2.0% Spain 1,429 2,971 7,246 306 32 11,983 1.5% Switzerland 12,288 773 3,952 831 1 17,844 2.3% Other Western European countries 7,442 5,809 20,897 1,338 1,193 36,679 4.7% **Czech Republic** 8.535 1.532 9.081 10.223 0 29.372 3.7% 3,689 Romania 320 2,493 4,248 10,750 1.4% 0 Other Eastern European countries EU 5,263 2 2,157 494 4,926 12,842 1.6% Russia 2,287 868 6,731 4,995 0 14,881 1.9% Other Eastern European 2,267 1,333 5,775 2,776 15 12,165 1.5% countries excluding EU United States 34,555 15,086 39,481 128 9,138 98,388 12.5% Other countries of North America 777 1,436 2,286 14 259 4,772 0.6% Latin America and Caribbean 425 836 6,285 123 151 7,820 1.0% Africa and Middle East 4,135 2,134 17,110 5,987 75 29,439 3.7% Japan 9,581 3,774 1,332 11 2 14,700 1.9% Asia-Pacific 3,611 9,600 15,472 400 86 29,168 3.7% Total 180,255 99,296 301,150 189,688 17,291 787,679 100.0%

#### TABLE 34: EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC REGION AND MAIN COUNTRIES AND BY EXPOSURE CLASS

Two-thirds of the Group's total exposure was concentrated in Western Europe inc. France (more than 80% for Retail) in 2015 as well as in 2014.

Exposure to Russia (including Private Banking russian clients) amounted less than 2% of the Group total EAD, the yearly decrease is mainly on Retail.

As for the sovereign exposure, the change in the exposure on some countries (for example: France, United States Switzerland) is due to the Group's liquidity management.

EAD			31 <sup>st</sup> D	ecember 20	014		
(In EUR m)	Sovereign	Institutions	Corporates	Retail	Securitisation	Total	Breakdown in %
France	43,533	28,613	108,853	128,343	7,828	317,169	43.6%
United Kingdom	1,018	9,796	13,547	2,240	172	26,774	3.7%
Germany	7,358	6,307	11,228	7,833	21	32,746	4.5%
Italy	2,958	1,312	7,798	5,413	82	17,562	2.4%
Luxembourg	5,666	955	6,361	119	0	13,102	1.8%
Spain	2,006	2,281	7,670	310	55	12,322	1.7%
Switzerland	3,832	1,419	4,604	748	1	10,603	1.5%
Other Western European countries	6,516	4,555	20,792	1,193	585	33,640	4.6%
Czech Republic	10,996	1,751	8,449	8,910	0	30,106	4.1%
Romania	3,135	285	2,665	4,027	0	10,112	1.4%
Other Eastern European countries EU	2,845	610	4,880	4,375	0	12,709	1.7%
Russia	1,559	1,486	7,288	6,628	0	16,962	2.3%
Other Eastern European countries excluding EU	2,384	530	5,104	2,728	0	10,744	1.5%
United States	41,381	17,406	34,679	120	5,929	99,515	13.7%
Other countries of North America	778	867	2,380	16	206	4,247	0.6%
Latin America and Caribbean	372	537	5,748	654	41	7,352	1.0%
Africa and Middle East	5,404	2,075	14,871	5,304	78	27,732	3.8%
Japan	12,343	935	2,883	9	0	16,171	2.2%
Asia-Pacific	3,804	7,004	17,417	376	86	28,688	3.9%
Total	157,888	88,724	287,218	179,345	15,082	728,257	100%

#### 31<sup>st</sup> December 2014

EAD			31 <sup>st</sup> Decembe	er 2015		
(In EUR m)	Residential mortgages	Revolving credits	Others credits to individuals	Others - small entities or self employed	Total	Breakdown in %
France	87,370	6,580	27,088	15,659	136,697	72.1%
Germany	21	198	4,450	4,252	8,920	4.7%
Italy	33	83	3,350	1,312	4,778	2.5%
Other Western European countries	1,670	38	1,820	1,933	5,462	2.9%
Czech Republic	7,709	381	1,081	1,053	10,223	5.4%
Romania	2,575	319	1,164	190	4,248	2.2%
Other Eastern European countries EU	2,265	78	2,011	572	4,926	2.6%
Russia	2,429	283	2,201	83	4,995	2.6%
Other Eastern European countries excluding EU	1,160	38	1,313	265	2,776	1.5%
North America	41	6	90	6	142	0.1%
Latin America and Carribbean	14	10	87	12	123	0.1%
Africa and Middle East	1,877	40	3,407	662	5,987	3.2%
Asia-Pacific	145	15	74	177	411	0.2%
Total	107,309	8,068	48,136	26,175	189,688	100%

#### TABLE 35: RETAIL EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC REGION AND MAIN COUNTRIES

EAD

#### 31<sup>st</sup> December 2014

(In EUR m)	Residential mortgages	Revolving credits	Others credits to individuals	Others - small entities or self employed	Total	Breakdown in %
France	79,237	6,649	26,714	15,744	128,343	71.6%
Germany	21	194	3,812	3,805	7,833	4.4%
Italy	28	107	3,783	1,496	5,413	3.0%
Other Western European countries	1,333	38	1,636	1,603	4,610	2.6%
Czech Republic	6,697	371	949	893	8,910	5.0%
Romania	2,417	325	1,103	182	4,027	2.2%
Other Eastern European countries EU	1,965	77	1,892	441	4,375	2.4%
Russia	2,708	387	3,329	204	6,628	3.7%
Other Eastern European countries excluding EU	1,092	35	1,306	295	2,728	1.5%
North America	38	6	80	11	136	0.1%
Latin America and Carribbean	13	12	620	8	654	0.4%
Africa and Middle East	1,755	48	3,003	498	5,304	3.0%
Asia-Pacific	131	17	67	171	385	0.2%
Total	97,433	8,267	48,294	25,350	179,345	100%

# TABLE 36: UNDER THE IRB APPROACH FOR NON-RETAIL CUSTOMERS: CREDIT RISK EXPOSURE BY RESIDUAL MATURITY AND EXPOSURE CLASS

As at 31<sup>st</sup> December 2015, about 80% of the total credit risk's exposure (excluding Retail) had a maturity less than five years and circa 40% a maturity less than one year (vs. 35% in 2014, partially explained by an increase of the Sovereign exposure).

	31 <sup>st</sup> December 2015									
		Maturity analysis								
(In EUR m)	< 1 year	1 to 5 years	5 to 10 years	> 10 years	Total					
Sovereign	98,638	25,502	37,161	11,865	173,165					
Institutions	22,093	16,058	5,367	12,231	55,749					
Corporates	93,760	169,865	28,823	24,466	316,913					
Securitisation	12,573	2,492	143	2,055	17,263					
Total	227,064	213,917	71,493	50,617	563,091					

		31 <sup>st</sup> December 2014								
			Maturity analysis							
(In EUR m)	< 1 year	1 to 5 years	5 to 10 years	> 10 years	Total					
Sovereign	63,263	37,619	39,642	10,202	150,726					
Institutions	20,515	21,970	5,166	13,225	60,875					
Corporates	84,577	152,423	23,048	22,551	282,599					
Securitisation	10,757	1,182	270	3,140	15,348					
Total	179,113	213,193	68,126	49,117	509,549					

#### Global credit risk by rating

The breakdown by rating of the Societe Generale Group's Corporates exposure demonstrates the sound quality of the portfolio. At 31<sup>st</sup> December 2015, more than 75% of EAD (excluding defaulted exposure) under the IRB method had an investment grade rating. Transactions with non-investment grade counterparties are often backed by guarantees and collateral in order to mitigate the risk incurred.

# TABLE 37: UNDER THE IRB APPROACH: CREDIT RISK EXPOSURE BY EXPOSURE CLASS AND INTERNAL RATING (EXCLUDING DEFAULTED EXPOSURE)

					31 <sup>st</sup> Dece	ember 20	15				
(In EUR m)	Internal obligor rating	Gross exposure	On- balance- sheet exposure	Off- balance- sheet exposure	Average CCF (Off- balance sheet)	EAD	RWA	Average LGD	Average PD	Average RW <sup>(1)</sup>	Expected Loss
Sovereign	1	66,310	63,009	3,301	71%	65,203	5	0%	0.00%	0%	0
	2	77,217	72,688	4,529	74%	75,887	401	2%	0.00%	1%	0
	3	13,773	11,044	2,728	70%	13,032	547	19%	0.03%	4%	1
	4	13,229	11,899	1,330	49%	12,545	3,275	20%	0.19%	26%	6
	5	1,950	1,915	36	99%	1,950	994	19%	1.63%	51%	9
	6	601	503	98	50%	551	574	16%	7.46%	104%	12
	7	21	15	6	76%	19	45	35%	18.81%	233%	2
Sub-total		173,100	161,072	12,028	69%	169,188	5,841	4%	0.06%	3%	30
Institutions	1	4	4	0	100%	4	0	0%	0.03%	0%	0
	2	21,073	16,306	4,767	80%	19,770	926	10%	0.03%	5%	1
	3	19,674	9,980	9,694	85%	17,591	1,682	21%	0.04%	10%	2
	4	10,762	6,498	4,264	82%	10,002	4,215	28%	0.29%	42%	11
	5	3,572	1,747	1,825	76%	3,132	2,900	31%	1.68%	93%	17
	6	458	256	202	64%	385	537	30%	8.30%	140%	10
	7	154	35	119	67%	116	232	34%	17.31%	201%	7
Sub-total		55,697	34,827	20,870	82%	50,999	10,493	19%	0.29%	21%	47
Corporates	1	1,274	856	419	67%	1,135	146	85%	0.03%	13%	0
	2	26,302	8,432	17,870	66%	19,547	2,758	36%	0.03%	14%	2
	3	71,975	25,611	46,364	53%	49,668	8,554	39%	0.05%	17%	9
	4	114,078	42,144	71,935	53%	79,353	30,041	30%	0.31%	38%	112
	5	70,398	42,180	28,219	55%	57,676	41,778	28%	2.03%	72%	323
	6	20,923	13,235	7,688	56%	17,547	17,281	27%	6.66%	98%	322
	7	3,180	2,573	607	63%	2,957	4,185	29%	20.27%	142%	172
Sub-total		308,132	135,030	173,102	55%	227,883	104,743	32%	1.41%	46%	940
Retail	1	2,250	1,801	449	100%	2,250	231	100%	0.03%	10%	1
	2	2,387	2,149	238	100%	2,386	224	100%	0.03%	9%	1
	3	36,420	35,130	1,290	94%	36,423	3,392	21%	0.04%	9%	3
	4	48,677	46,200	2,478	74%	48,035	3,677	17%	0.18%	8%	22
	5	34,647	31,201	3,446	83%	34,045	10,580	22%	1.73%	31%	137
	6	9,798	9,187	612	116%	9,991	5,369	29%	6.91%	54%	196
	7	4,020	3,920	99	64%	4,139	3,224	27%	24.77%	78%	280
Sub-total		138,199	129,589	8,611	85%	137,269	26,698	23%	1.75%	19%	640
Corporate in IRB slotting		1,426	311	1,115	33%	681	423			62%	2
CR IRB: "alternative treatment: secured by real estate"		0	0	0	0%	0	0			00/	0
by real estate		U	0	0	0%	0	0			0%	0

					31ª Decen		+				
(In EUR m)	Internal obligor rating	Gross exposure	On- balance- sheet exposure	Off- balance- sheet exposure	Average CCF (Off- balance sheet)	EAD	RWA	Average LGD	Average PD	Average RW <sup>(1)</sup>	Expected Loss
Sovereign	1	61,616	59,015	2,600	65%	60,717	8	0%	0.00%	0%	0
	2	66,889	61,944	4,946	78%	65,814	400	2%	0.00%	1%	0
	3	10,809	8,570	2,239	65%	10,017	908	19%	0.05%	9%	1
	4	9,609	9,111	498	59%	9,405	2,548	22%	0.27%	27%	7
	5	1,126	1,037	89	93%	1,119	753	32%	2.43%	67%	8
	6	544	472	72	43%	503	357	19%	7.60%	71%	8
	7	78	34	44	94%	76	213	47%	20.11%	281%	7
Sub-total		150,671	140,183	10,489	71%	147,652	5,187	4%	0.08%	4%	31
Institutions	1	105	55	50	96%	103	5	13%	0.03%	5%	0
	2	20,043	16,424	3,619	83%	19,448	852	11%	0.03%	4%	0
	3	24,547	12,436	12,112	74%	21,059	1,850	22%	0.04%	9%	1
	4	11,071	6,725	4,346	86%	10,209	4,157	32%	0.27%	41%	9
	5	4,440	2,068	2,372	75%	3,856	2,873	29%	1.63%	75%	19
	6	341	116	224	70%	267	433	40%	6.88%	162%	7
	7	282	113	169	61%	217	554	43%	18.02%	255%	17
Sub-total		60,828	37,936	22,892	78%	55,159	10,724	20%	0.29%	19%	54
Corporates	1	1,890	1,424	467	71%	1,756	212	87%	0.03%	12%	0
	2	26,881	12,042	14,839	74%	22,790	3,472	40%	0.03%	15%	3
	3	63,077	21,197	41,880	55%	43,936	7,466	37%	0.05%	17%	7
	4	93,724	31,840	61,884	56%	66,065	24,587	30%	0.31%	37%	62
	5	63,238	36,817	26,420	53%	50,279	37,102	29%	2.03%	75%	285
	6	21,148	12,522	8,626	61%	17,487	16,675	27%	6.68%	95%	302
	7	3,364	2,550	814	62%	3,056	4,605	30%	20.48%	151%	188
Sub-total		273,322	118,393	154,929	57%	205,369	94,120	33%	1.48%	46%	848
Retail	1	2,324	1,930	394	97%	2,314	241	100%	0.03%	10%	1
	2	2,640	2,385	255	99%	2,638	259	100%	0.03%	10%	1
	3	46,372	45,204	1,168	99%	46,428	2,660	17%	0.04%	6%	3
	4	32,283	29,981	2,303	60%	31,380	3,392	19%	0.33%	11%	22
	5	28,338	25,189	3,150	79%	27,691	9,623	23%	1.93%	35%	118
	6	9,070	8,489	581	114%	9,358	4,826	28%	7.32%	52%	185
	7	4,191	4,101	91	56%	4,404	3,533	28%	25.70%	80%	307
Sub-total		125,219	117,278	7,940	80%	124,214	24,535	23%	1.99%	20%	636
Corporate in IRB slotting		1,738	358	1,380	32%	803	501			62%	3
CR IRB: "alternative treatment: secured by real estate"		395	395	0	0%	395	197			50%	0
Total		612,173	414,542	197,631	61%			21%	1.09%	25%	1,573
		5.2,110			<b>01</b> /0			2170		20,0	

#### 31st December 2014

# TABLE 38: UNDER THE IRB APPROACH FOR RETAIL CUSTOMERS: CREDIT RISK EXPOSURE BY EXPOSURE CLASS AND INTERNAL RATING (EXCLUDING DEFAULTED EXPOSURE)

_					31 <sup>st</sup> Decem	ber 2015					
(In EUR m)	Internal obligor rating	Gross exposure	On- balance- sheet exposure	Off- balance- sheet exposure	Average CCF (Off- balance sheet)	EAD	RWA	Average LGD	Average PD	Average RW <sup>(1)</sup>	Expected Loss
Residential											
Mortgage	1	362	354	8	100%	362	34	100%	0.03%	9%	0
	2	2,176	2,104	72	99%	2,175	202	100%	0.03%	9%	1
	3	33,851	33,062	790	99%	33,845	2,707	15%	0.04%	8%	2
	4	37,159	36,485	674	91%	37,096	2,060	14%	0.12%	6%	10
	5	13,657	13,204	453	68%	13,514	4,689	17%	1.59%	35%	37
	6	1,688	1,663	25	78%	1,682	1,198	16%	7.89%	71%	22
	7	1,117	1,100	17	98%	1,117	945	16%	19.32%	85%	34
Sub-total		90,011	87,972	2,039	89%	89,792	11,834	17%	0.69%	13%	106
Revolving credit	1	0	0	0	0%	0	0	0%	0.00%	0%	0
	2	0	0	0	0%	0	0	0%	0.00%	0%	0
	3	121	20	101	100%	207	27	51%	0.07%	13%	0
	4	1,350	154	1,195	47%	713	65	45%	0.44%	9%	1
	5	2,534	574	1,960	74%	2,029	584	44%	1.88%	29%	17
	6	1,224	919	305	131%	1,318	815	41%	6.42%	62%	35
	7	465	427	38	0%	563	645	42%	26.20%	115%	56
Sub-total		5,693	2,094	3,599	70%	4,830	2,136	43%	5.66%	44%	110
Other credit to individuals	1	1,888	1,447	440	100%	1,888	198	100%	0.03%	10%	1
	2	211	46	165	100%	211	22	100%	0.03%	10%	0
	3	2,440	2,042	399	83%	2,363	483	99%	0.03%	20%	1
	4	8,284	7,780	503	111%	8,338	1,230	24%	0.32%	15%	8
	5	10,213	9,517	696	108%	10,269	3,636	26%	1.87%	35%	52
	6	3,254	3,136	118	109%	3,243	1,640	31%	6.40%	51%	64
	7	1,217	1,203	14	120%	1,218	888	29%	30.38%	73%	99
Sub-total		27,506	25,170	2,336	102%	27,530	8,097	38%	2.90%	29%	224
Very small business or		0		0	00/			00/	0.00%	0.07	
self-employed	1	0	0	0	0%	0	0	0%	0.00%	0%	0
	2	0	0	0	0%	0	0	0%	0.00%	0%	0
	3	7	7	0	100%	2	0	9%	0.03%	19%	0
	4	1,884	1,780	104	103%	1,893	497	31%	0.46%	26%	3
	5	8,243	7,906	337	97%	8,233	1,671	21%	1.77%	20%	31
_	6	3,633	3,469	164	100%	3,748	1,716	28%	7.08%	46%	75
	7	1,221	1,191	30	100%	1,241	746	30%	23.52%	60%	91
Sub-total		14,988	14,353	636	<b>99</b> %	15,117	4,631	25%	4.71%	31%	200
Total		138,199	129,589	8,611	85%	137,269	26,698	23%	1.75%	19%	640

	31 <sup>st</sup> December 2014										
(In EUR m)	Internal obligor rating	Gross exposure	On- balance- sheet exposure	Off- balance- sheet exposure	Average CCF (Off- balance sheet)	EAD	RWA	Average LGD	Average PD	Average RW <sup>(1)</sup>	Expected Loss
Residential Mortgage	1	267	260	7	100%	267	26	100%	0.03%	10%	0
	2	2,424	2,340	84	98%	2,422	237	100%	0.03%	10%	1
	3	42,325	41,607	718	100%	42,325	2,362	13%	0.04%	6%	2
	4	22,104	21,817	286	87%	22,066	1,849	15%	0.29%	8%	10
	5	11,041	10,735	307	70%	10,949	4,432	17%	1.90%	40%	33
	6	1,788	1,765	23	85%	1,784	1,293	17%	8.08%	72%	23
	7	1,263	1,248	15	97%	1,263	1,180	16%	19.32%	93%	39
Sub-total		81,212	79,772	1,440	91%	81,076	11,378	17%	0.84%	14%	108
Revolving credit	1	0	0	0	0%	0	0	0%	0.00%	0%	0
	2	0	0	0	0%	0	0	0%	0.00%	0%	0
	3	120	20	100	100%	190	4	51%	0.06%	2%	0
	4	1,705	160	1,545	39%	765	66	44%	0.39%	9%	1
	5	2,585	591	1,995	70%	1,985	577	43%	2.06%	29%	17
	6	1,288	955	333	119%	1,351	826	41%	6.97%	61%	35
	7	551	507	44	0%	638	698	40%	29.06%	109%	64
Sub-total		6,250	2,233	4,016	62%	4,931	2,172	43%	6.56%	44%	117
Other credit to individuals	1	2,057	1,671	387	97%	2,047	215	100%	0.03%	10%	1
	2	2,007	45	172	100%	2,047	210	100%	0.03%	10%	0
	3	3,923	3,574	349	96%	3,909	294	54%	0.04%	8%	1
	4	5,788	5,430	359	115%	5,857	1,055	26%	0.41%	18%	7
	5	8,279	7,692	587	106%	8,315	2,980	26%	1.93%	36%	42
	6	2,713	2,636	78	127%	2,733	1,380	31%	6.68%	50%	56
	7	1,159	1,148	11	137%	1,163	764	27%	33.80%	66%	96
Sub-total		24,136	22,195	1,941	105%	24,239	6,709	38%	3.14%	28%	203
Very small business or											
self-employed	1	0	0	0	0%	0	0	0%	0.00%	0%	0
	2	0	0	0	0%	0	0	0%	0.00%	0%	0
	3	3	3	0	100%	3	0	16%	0.04%	4%	0
	4	2,687	2,573	113	105%	2,692	422	26%	0.42%	16%	4
	5	6,432	6,171	261	104%	6,443	1,634	22%	1.92%	25%	26
	6	3,280	3,134	147	100%	3,490	1,327	27%	7.57%	38%	70
	7	1,218	1,197	21	100%	1,340	892	33%	23.08%	67%	108
Sub-total		13,620	13,078	542	103%	13,968	4,275	25%	5.06%	31%	209
Total		125,219	117,278	7,940	80%	124,214	24,535	23%	1.99%	20%	636

31<sup>st</sup> December 2014

	31 <sup>st</sup> December 2015						
(In EUR m)	External Rating	Gross exposure	EAD	RWA			
Sovereign	AAA to AA-	2,940	2,940	0			
	A+ to A-	2	2	0			
	BBB+ to BBB-	6	6	3			
	BB+ to B-	1,072	1,071	1,071			
	<b-< td=""><td>0</td><td>0</td><td>0</td></b-<>	0	0	0			
	Without external rating	6,872	6,833	9,324			
Sub-total		10,893	10,853	10,399			
Institutions	AAA to AA-	19,122	18,799	944			
	A+ to A-	470	429	213			
	BBB+ to B-	747	680	680			
	<b-< td=""><td>114</td><td>114</td><td>309</td></b-<>	114	114	309			
	Without external rating	28,547	28,175	3,457			
Sub-total		49,000	48,197	5,603			
Corporates	AAA to AA-	4,648	4,006	165			
	A+ to A-	549	520	272			
	BBB+ to B-	12,712	12,182	12,051			
	<b-< td=""><td>959</td><td>706</td><td>1,059</td></b-<>	959	706	1,059			
	Without external rating	65,263	46,140	39,206			
Sous-total		84,131	63,554	52,752			
Retail	Without external rating	47,569	44,087	24,633			
Total		191,593	166,690	93,388			

#### TABLE 39: UNDER THE STANDARD APPROACH: CREDIT RISK EXPOSURE BY EXPOSURE CLASS AND EXTERNAL RATING

#### 31<sup>st</sup> December 2014

(En M EUR)	External Rating	Gross exposure	EAD	RWA
Sovereign	AAA à AA-	721	669	0
	A+ à A-	35	35	7
	BBB+ à BBB-	204	173	87
	BB+ à B-	1,439	1,439	1,434
	<b-< td=""><td>0</td><td>0</td><td>0</td></b-<>	0	0	0
	Without external rating	7,869	7,862	9,685
Sub-total		10,268	10,178	11,213
Institutions	AAA à AA-	26,228	26,373	1,455
	A+ à A-	504	413	267
	BBB+ à B-	1,073	1,031	959
	<b-< td=""><td>235</td><td>235</td><td>383</td></b-<>	235	235	383
	Without external rating	5,905	5,450	639
Sub-total		33,946	33,503	3,703
Corporates	AAA à AA-	10,825	9,124	733
	A+ à A-	1,177	1,073	534
	BBB+ à B-	13,780	9,717	9,723
	<b-< td=""><td>1,035</td><td>933</td><td>1,496</td></b-<>	1,035	933	1,496
	Without external rating	61,885	51,192	37,924
Sub-total		88,703	72,038	50,410
Retail	Without external rating	47,509	43,346	25,040
Total		180,426	159,065	90,366

The exposures in 2014 without external rating in the above table relate partially to accruals for the sovereign portfolio and to exposures to certain clearing houses for the Institutions portfolio.

#### **Counterparty risk**

Counterparty risk is mainly concentrated in the major industrialised countries and in counterparties with an investment grade rating.

#### TABLE 40: COUNTERPARTY RISK EXPOSURE BY EXPOSURE CLASS

(In EUR m)	31 <sup>st</sup> Decembe	er 2015	31⁵t December 2014		
Counterparty Risk	EAD	RWA	EAD	RWA	
Sovereign	11,737	465	9,008	373	
Institutions	41,445	5,778	35,195	5,623	
Corporates	51,396	20,437	60,740	23,413	
Retail	109	18	180	43	
Securitisation	38	34	101	8	
Total	104,725	26,730	105,223	29,461	

# TABLE 41: COUNTERPARTY RISK EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC REGION AND MAIN COUNTRIES (WHICH EXPOSURE IS ABOVE EUR 1 BN)

(In EUR m)	31 <sup>st</sup> December 2015
Counterparty Risk	EAD
France	18,540
United Kingdom	15,902
Germany	8,811
Luxembourg	5,247
Other Western European countries	12,716
Czech Republic	2,039
Other Eastern European countries EU	1,616
Eastern Europe excluding EU	1,911
Africa and Middle East	2,080
United States	21,086
Other countries of North America	2,232
Latin America and Caribbean	1,553
Japan	4,378
Asia-Pacific	6,615
Total	104,725

(In EUR m)	31 <sup>st</sup> December 2014
Counterparty Risk	EAD
France	21,669
United Kingdom	10,365
Germany	7,538
Spain	3,922
Other Western European countries	13,624
Czech Republic	2,251
Other Eastern European countries EU	977
Eastern Europe excluding EU	1,708
Africa and Middle East	2,470
United States	27,035
Other countries of North America	1,912
Latin America and Caribbean	1,591
Japan	3,708
Other countries of Asia-Pacific <sup>(1)</sup>	6,452
Total	105,223

#### 31<sup>st</sup> December 2015 31<sup>st</sup> December 2014 (In EUR m) Counterparty risk - IRB EAD EAD Internal obligor rating 1 4,508 1,845 2 16,061 19,289 27,148 3 24,149 4 18,783 15,047 5 7,104 6,445 6 1,768 2,646 7 274 400 8 à 10 275 353 75,922 Total 70,174

#### TABLE 42: UNDER THE IRB APPROACH: COUNTERPARTY RISK EXPOSURE AT DEFAULT (EAD) BY INTERNAL RATING

# Unimpaired past due exposures, impaired exposures, impairments and expected losses

The definitions relative to the following tables can be found pages p. 47 and following.

#### TABLE 43: IMPAIRED ON-BALANCE SHEET EXPOSURES AND IMPAIRMENTS BY EXPOSURE CLASS AND COST OF RISK

(In EUR m)	31 <sup>st</sup> December 2015						
Impaired exposure	Standard approach	IRB approach	Total	Specific impairment	Impairment for groups of homogeneous assets	Cost of risk 2015	
Sovereign	66	553	619	75			
Institutions	48	72	119	119			
Corporates	4,670	6,119	10,789	8,050			
Retail	4,256	7,526	11,782	6,025			
Securitisation	52	1,238	1,290	63			
Total	9,092	15,508	24,600	14,332	1,388	3,065	

(In EUR m)		31 <sup>st</sup> December 2014					
Impaired exposure	Standard approach	IRB approach	Total	Specific impairment	Impairment for groups of homogeneous assets	Cost of risk 2014	
Sovereign	20	442	462	79			
Institutions	60	70	130	126			
Corporates	5,148	5,984	11,132	8,462			
Retail	4,749	7,442	12,191	6,333			
Securitisation	0	1,964	1,964	58			
Total	9,977	15,903	25,880	15,058	1,256	2,967	

# TABLE 44: IMPAIRED ON-BALANCE SHEET EXPOSURES AND IMPAIRMENTS BY APPROACH AND BY GEOGRAPHIC REGION AND MAIN COUNTRIES

	31 <sup>st</sup> December 2015					
	I	mpaired exposure		Specific impairment		
(In EUR m)	Standard approach	Approche IRB	Total	Total		
France	2,116	9,950	12,066	6,974		
Germany	270	181	451	132		
Switzerland	11	22	33	9		
Spain	38	755	793	242		
Italy	302	992	1,293	638		
United Kingdom	61	31	92	49		
Luxembourg	104	26	129	41		
Other Western European countries	11	373	384	138		
Romania	1,296	20	1,317	809		
Czech Republic	200	653	852	535		
Other Eastern European countries EU	729	36	765	468		
Russia	920	20	940	683		
Other Eastern European countries excluding EU	748	498	1,246	513		
Africa and Middle East	2,128	219	2,347	1,668		
The United States	41	1,413	1,454	1,232		
Other countries of North America	0	15	15	2		
Latin America and Carribbean	33	129	162	94		
Asia-Pacific	84	176	260	104		
Total	9,092	15,508	24,600	14,332		

#### 31<sup>st</sup> December 2014

			Specific impairment		
(In EUR m)	Standard approach	Approche IRB	Total	Total	
France	2,634	9,909	12,544	7,889	
Germany	196	212	408	142	
Switzerland	16	12	29	7	
Spain	49	678	728	230	
Italy	682	625	1,307	659	
United Kingdom	62	58	120	57	
Luxembourg	8	99	107	-1	
Other Western European countries	82	389	470	229	
Romania	1,521	19	1,540	1,015	
Czech Republic	195	676	871	599	
Other Eastern European countries EU	775	40	815	604	
Russia	894	76	970	757	
Other Eastern European countries excluding EU	748	466	1,214	989	
Africa and Middle East	1,964	211	2,175	1,648	
The United States	11	2,106	2,117	94	
Other countries of North America	0	0	1	0	
Latin America and Carribbean	70	45	115	44	
Asia-Pacific	67	282	349	95	
Total	9,977	15,903	25,880	15,058	

#### TABLE 45: IMPAIRED ON-BALANCE SHEET EXPOSURES BY INDUSTRY SECTOR

				Odst December 0011	
	31 <sup>st</sup> Decembe	r 2015	31 <sup>st</sup> December 2014		
(In EUR m)	Impaired exposure	%	Impaired exposure	%	
Finance & insurance	2,799	11%	3,873	15%	
Real Estate	1,072	4%	1,166	5%	
Public administration	81	0%	79	0%	
Food & agriculture	534	2%	457	2%	
Consumer goods	417	2%	519	2%	
Chemicals, rubber and plastics	141	1%	156	1%	
Retail trade	679	3%	606	2%	
Wholesale trade	1,443	6%	1,398	5%	
Construction	1,090	4%	971	4%	
Transport equip. Manuf.	48	0%	121	0%	
Education and Associations	51	0%	57	0%	
Hotels & Catering	364	1%	315	1%	
Automobiles	120	0%	116	0%	
Machinery and equipment	347	1%	313	1%	
Forestry, paper	177	1%	229	1%	
Metals, minerals	440	2%	418	2%	
Media	134	1%	167	1%	
Oil and Gas	222	1%	65	0%	
Health, social services	65	0%	62	0%	
Business services (including conglomerates)	637	3%	640	2%	
Collective services	380	2%	344	1%	
Personal and domestic services	18	0%	17	0%	
Telecom	21	0%	20	0%	
Transport & logistics	524	2%	514	2%	
Retail	11,782	48%	12,191	47%	
Others	1,014	4%	1,067	4%	
Total	24,600	100%	25,880	100%	

# TABLE 46: UNDER THE IRB APPROACH: EXPECTED LOSSES (EL) ON A ONE-YEAR HORIZON BY EXPOSURE CLASS (EXCLUDING DEFAULTED EXPOSURES)

(In EUR m)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014
Sovereign	30	31
Institutions	47	54
Corporates	942	851
Retail	640	636
Securitisation	1	1
Total	1,659	1,574

The EL/EAD ratio stood at 0.28% at 31<sup>st</sup> December 2015, It decreased slightly compared with 31<sup>st</sup> December 2014. The ratio is calculated on sovereign, banking, institutions, corporate and retail portfolios.

EL and actual losses are not comparable insofar as the parameters of the expected loss calculation (PD, LGD, EAD) provide estimations throughout the cycle, whereas the actual loss presents a piece of accounting information pertaining to a particular year.

#### TABLE 47: EXPOSURES TO CENTRAL COUNTERPARTIES

	31 <sup>st</sup> December	2015	31 <sup>st</sup> December 2014		
(In EUR m)	EAD (post-CRM)	RWA	EAD (post-CRM)	RWA	
Exposures to QCCPs					
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	31,907	324	29,383	383	
<ul> <li>OTC derivatives</li> </ul>	1,109	20	3,214	83	
Exchange-traded derivatives	30,564	300	25,974	296	
Securities financing transactions	234	5	195	4	
Netting sets where cross-product netting has been approved	-	-	-	-	
Segregated initial margin	5,680		4,806		
Non-segregated initial margin	10,119	403	9,207	327	
Pre-funded default fund contributions	2,553	710	2,157	730	
Unfunded default fund contributions	-	-	-	-	
Exposures to non-QCCPs					
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	23	5	27	38	
OTC derivatives	23	5	27	38	
Exchange-traded derivatives					
<ul> <li>Securities financing transactions</li> </ul>					
Netting sets where cross-product netting has been approved	-	-	-	-	
Segregated initial margin					
Non-segregated initial margin	2	2			
Pre-funded default fund contributions	0	3			
Unfunded default fund contributions	-	-	-	-	

CREDIT RISKS I RISK REPORT I 9 4

# IN BRIEF

This section provides information on Societe Generale's securitisation positions, which have already been incorporated into the relevant sections (credit risks and market risks).

They are subject to specific capital requirements according to European regulations (CRR/CRD4).

Regulatory capital requirements for securitisations held or acquired in the banking book at end-2015

EUR 220 m (Total at end-2014: EUR 238 m)

Regulatory capital requirements for securitisations held or acquired in the trading book at end-2015

EUR 62 M (Total at end-2014: EUR 63 m)

# 5. SECURITISATION

### 5.1. SECURITISATIONS AND REGULATORY FRAMEWORK

This chapter presents information on Societe Generale's securitisation activities, acquired or carried out for proprietary purposes or for its customers. It describes the risks associated with these activities and the management of said risks. Finally, it contains some quantitative information to describe these activities during 2015 as well as the capital requirements for the Group's regulatory banking book and trading book within the scope defined by prudential regulations.

As defined in prudential regulations, the term securitisation refers to a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, having the following characteristics:

- the transaction achieves significant risk transfer, in case of origination;
- payments in the transaction or scheme are contingent on the performance of the exposure or pool of exposures;
- the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or risk transfer scheme.

Securitisation positions are subject to the regulatory accounting treatment defined the  $3^{rd}$  Part – Title 2 – Chapter 5 of the European

Regulations N° 575/2013 on capital requirements applicable to credit institutions and investment firms (CRR). Such positions held in the regulatory banking book or trading book are given weightings ranging from 7% to 1,250% depending on their credit quality and subordination rank.

The securitisation regulation frame tends to evolve. Indeed, Basel committee has published at the end of 2014 new rules applied to the Securitisation framework. This review aim to reduce the dependence to external ratings and threshold effects, but also to define a more sensitive risk measure methodology and enhance the capital requirement link to certain types of securitisation exposures. In parallel, the Regulator is looking to promote a better quality of securitisation; a category in which the standardisation work has been initiated by the Basel Committee, European Commission and EBA (e.g. the consultative document published by the Basel Committee concerning the Capital treatment for "Simple, transparent and comparable" securitisations). Exposures from this category will probably benefits a more favorable prudential treatment. This set of regulations will come into force at the latest by 1<sup>st</sup> January 2020.

#### **5.2. ACCOUNTING METHODS**

The securitisation transactions that Societe Generale invests in (i.e. the Group invests directly in certain securitisation positions, is a liquidity provider or a counterparty of derivative exposures) are recognised in accordance with Group accounting principles, as set forth in the notes to the consolidated financial statements ("Significant accounting principles").

After initial recognition, securitisation positions booked to "Loans and receivables" are measured at amortised cost using the effective interest rate method and impairment may be recorded if appropriate.

Securitisation positions booked to "Available-for-sale financial assets" are measured at their fair value at the closing date. Interest accrued or paid on fixed-income securities is recognised in the income statement using the effective interest rate method under "Interest and similar income – Transactions in financial instruments". Changes in fair value other than income are recorded in shareholders' equity under "Gains and losses recognised directly in equity".

The Group only records these changes in fair value in the income statement when the asset is sold or impaired, in which case they are reported as "Net gains or losses on available-for-sale financial assets". When a decline in the fair value of an Available-for-sale financial asset has been recognised directly in shareholders'equity under "Gains and losses recognised directly in equity" and subsequent objective evidence of impairment emerges, the Group recognises the total accumulated unrealised loss previously booked to shareholders'equity in the income statement under "Cost of risk" for debt instruments and under "Net gains and losses on available for-sale financial assets" for equity securities.

This cumulative loss is measured as the difference between acquisition cost (net of any repayments of principal and amortisation) and the current fair value, less any impairment of the financial asset that has already been booked through profit or loss.

For assets transferred from another accounting category, amortised cost is determined based on estimated future cash flows determined at the date of reclassification. The estimated future cash flows are reviewed at each closing. In the event of an increase in estimated future cash flows, as a result of an increase in their recoverability, the effective interest rate is adjusted prospectively. However, where there is objective evidence of impairment due to an event occurring after the reclassification of the financial assets under consideration, and said event has an adverse impact on initially estimated future cash flows, an impairment on the asset in question is booked to "Cost of risk" on the income statement. Synthetic securitisations in the form of Credit Default Swaps follow accounting recognition rules specific to trading derivatives.

The securitisation transactions are derecognised when the contractual rights to the cash flows on the asset expire or when the Group has transferred the contractual rights to receive the cash flows and substantially all of the risks and rewards linked to the ownership of the asset. Where the Group has transferred the cash flows of a financial asset but has neither transferred nor retained substantially all the risks and rewards of its ownership and has effectively not retained control of the financial asset, the Group derecognises it and, where necessary, recognises a separate asset or liability to cover any

rights and obligations created or retained as a result of the asset's transfer. If the Group has retained control of the asset, it continues to recognise it in the balance sheet to the extent of its continuing involvement in that asset.

When a financial asset is derecognised in its entirety, a gain or loss on disposal is recorded in the income statement for an amount equal to the difference between the carrying value of the asset and the payment received for it, adjusted where necessary for any unrealised profit or loss previously recognised directly in equity.

#### **5.3. STRUCTURED ENTITIES**

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity.

When assessing the existence of a control over a structured entity, all facts and circumstances shall be considered among which:

- the purpose and design of the entity;
- the structuring of the entity (especially, the power over the relevant activities of the entity);
- risks to which the entity is exposed by way of its design and the Group's exposure to some or all of these risks;
- potential returns and benefits for the Group.

Unconsolidated structured entities are those that are not exclusively controlled by the Group.

In consolidating structured entities that are controlled by the Group, the shares of said entities not held by the Group are recognised as Debt in the balance sheet.

When customers loans are securitised and partially sold to external investors, the entity carrying the loans are consolidated if the Group still has the control and remains exposed to the majority of the risks and benefits associated with these loans.

#### **5.4. MONITORING OF SECURITISATION RISKS**

Securitisation risks are monitored according to the rules established by the Group, depending on whether the assets are recorded in the regulatory banking book (*via* credit risk and counterparty risk) or in the trading book (*via* market risk and counterparty risk).

#### Structural risks and liquidity risk

Structural risks and foreign exchange risk associated with securitisation activities are monitored in the same way as for other Group assets. Oversight of structural interest rate risks is described in section 8 of this document (p.121).

Liquidity risk linked to securitisation activities is subject to more specific monitoring, both at the level of the responsible business lines and centrally at the Finance Division level, through the measure of the impact of these activities on the Group's liquidity ratios, stress tests and liquidity gaps. The organisation and oversight of liquidity risk is described in section 9 of this document (p.127).

#### **Operational risks**

Securitisation operational risks follow-up are taking into account in the Group operational risks steering. Reports targeting zero tolerance for operational risk in the Group's originator and sponsor activities are established and checked on a monthly basis. Oversight of operational risk is described in section 7 of this document (p.113).

### 5.5. SOCIETE GENERALE'S SECURITISATION ACTIVITIES

Securitisation activities allow the Group to raise liquidity or manage risk exposures, for proprietary or customers'purposes. Within the framework of these activities, the Group can act as originator, sponsor/arranger or investor:

- as an originator, the Group directly or indirectly participates in the initial agreement on assets which subsequently serve as underlying in securitisation transactions, primarily for refinancing purposes;
- as a sponsor, the Group establishes and manages a securitisation programme used to refinance customers'assets, mainly via the non-consolidated vehicles Antalis and Barton and via certain other special purpose vehicles;
- as an investor, the Group invests directly in certain securitisation positions, is a liquidity provider or a counterparty of derivative exposures.

This information must be considered within the context of the specific structure of each transaction and vehicle, which cannot be described in this report. Taken separately, the level of payments past due or in default does not provide sufficient information on the types of exposures securitised by the Group, mainly because the default criteria may vary from one transaction to another. Furthermore, these data reflect the situation of the underlying assets.

In securitisation transactions, past-due exposures are generally managed *via* structural mechanisms that protect the most senior positions.

Impaired exposures belong mainly to CDOs of US subprime residential mortgages occurred in 2014.

#### Societe Generale as originator

As part of its refinancing activities, the Group securitises some of its portfolios of receivables granted to individuals or corporate customers. With the securities created in these transactions, the Group is able to fund its own operations or expand its portfolio of assets eligible for repurchase transactions, notably with the European Central Bank.

In 2015, two new securitisation transactions were carried out:

- 1.0 billion of euros securitisation of auto loans, placed in the market for 0.9 billion of euros;
- 0.5 billion of euros securitisation of auto lease receivables and related residual values, privately placed for 0.3 billion of euros.

Given that there is no significant risk transfer arising from these transactions, they have no impact on the Group's regulatory capital and are therefore not included in tables in this section. The vehicles carrying the transferred receivables are consolidated. The Group remains exposed to the majority of the risks and rewards associated with these receivables; furthermore, these receivables cannot be used as collateral or sold outright as part of another transaction.

The total outstanding of the receivables securitised without significant risk transfer amounted to 9.5 billions of euros as at 31<sup>st</sup> December 2015, including 3.3 billions of euros in French residential mortgages, 1.1 billions of euros in auto loans, 3.6 billions of euros in consumer loans and 1.6 billions of euros in auto lease receivables and related residual values.

Besides, the Group also detains two synthetics securitisation programs in which the risk transfer is made by using credit derivatives and where the portfolio is conserved in the balance sheet of the Group.

The securitised stock of these transactions is 0.3 billion of euros as of 31<sup>st</sup> December 2015, mainly composed of loans to corporates.

#### Société Générale as sponsor

The Société Générale Group carries out transactions on behalf of its customers or investors. As of 31<sup>st</sup> December 2015, there were two consolidated multi-seller vehicles in operation (Barton and Antalis), structured by the Group on behalf of clients. This ABCP (Asset-Backed Commercial Paper) activity funds the working capital requirements of some of the Group's customers by backing short-term financing with traditional assets such as trade receivables or consumer loans. Total assets held by these vehicles and financed through the issuance of commercial paper amounted to 11,031 millions of euros at 31<sup>st</sup> December 2015 (8,645 millions of euros as of 31<sup>st</sup> December 2014).

As part of the implementation of the new IFRS 10 norm on 1<sup>st</sup> January 2014, Société Générale has consolidated the two vehicles, Barton and Antalis, from this date onwards.

The default risk on the assets held by these vehicles is borne by the transferors of the underlying receivables or by external investors. Société Générale bears part of the risk through the liquidity lines in the amount of 14,928 millions of euros as of 31<sup>st</sup> December 2015 (11,260 millions of euros as of 31<sup>st</sup> December 2014).

ABCP activity remained solid in 2015, with newly securitised outstanding predominantly comprising trade receivables, leasing or consumer loans.

#### Societe Generale as investor

In 2015, Societe Generale has kept on decreasing the size of its legacy portfolio assets, especially through assets disposal. The remaining 3.3 billions of euros as of 31<sup>st</sup> December 2015, including 2.1 billions of euros from securitisation activity, including 0.2 billions of euros rated under investment grade. Therefore, the portfolio is no longer classified under major risk by the Group.

Societe Generale also acts as a market maker for securitised assets, resulting in securitisation positions in the Group's trading book. As of 31<sup>st</sup> December 2011, CRD3 requires the same prudential treatment regardless of prudential classification.

The following tables show the securitisation exposures retained or purchased by the Group by type of underlying asset, by region, by type of tranche, separately for the banking book and trading book. These tables only present the exposures with an impact on Group's regulatory capital.

#### TABLE 48: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES BY EXPOSURE CLASS

		Exposure securitised at 31st December 2015						
		Banking Book				Tradin	g Book	
(In EUR m)	Traditional t	ransactions	Synthethic t	ransactions	Traditional t	ransactions	Synthethic t	ransactions
Underlying assets	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor
Residential mortgages	0	92	0	0	0	0	0	0
Commercial mortgages	0	0	0	0	0	0	0	0
Credit card receivables	0	1,724	0	0	0	0	0	0
Leasing	0	1,229	0	0	0	0	0	0
Loans to corporates and SMEs	0	181	299	0	0	0	0	0
Consumer loans	0	5,812	0	0	0	0	0	0
Trade receivables	0	4,335	0	0	0	0	0	0
Other assets	0	1,081	0	0	0	0	0	0
Covered bonds	0	0	0	0	0	0	0	0
Other liabilites	0	0	0	0	0	0	0	0
Total	0	14,454	299	0	0	0	0	0

#### Exposure securitised at 31<sup>st</sup> December 2014

		Bankin	g Book		Trading Book				
(In EUR m) Underlying assets	Traditional t	Traditional transactions		Synthethic transactions		Traditional transactions		Synthethic transactions	
	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor	
Residential mortgages	0	428	0	0	0	0	0	0	
Commercial mortgages	0	29	0	0	0	0	0	0	
Credit card receivables	0	1,407	0	0	0	0	0	0	
Leasing	0	937	0	0	0	0	0	0	
Loans to corporates and SMEs	0	51	593	0	0	0	0	0	
Consumer loans	0	3,370	0	0	0	0	0	0	
Trade receivables	0	3,661	0	0	0	0	0	0	
Other assets	0	2,607	0	0	0	0	0	0	
Covered bonds	0	0	0	0	0	0	0	0	
Other liabilites	0	0	0	0	0	0	0	0	
Total	0	12,491	593	0	0	0	0	0	

	Exposure	securtised	at 31 <sup>st</sup> Decer	mber 2015	Exposure securtised at 31 <sup>st</sup> December 2014			
(In EUR m)	Past	due	Impa	aired	Past due		Impaired	
Underlying asssets	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor
Residential mortgages	0	0	0	0	0	0	0	0
Commercial mortgages	0	0	0	0	0	0	0	0
Credit card receivables	0	19	0	28	0	16	0	25
Leasing	0	5	0	1	0	4	0	1
Loans to corporates and SMEs	0	6	0	8	0	4	0	1
Consumer loans	0	76	0	25	0	84	0	27
Trade receivables	0	695	0	243	0	769	0	289
Other assets	0	1	0	1 (1)	0	3	0	<b>O</b> <sup>(1)</sup>
Covered bonds	0	0	0	0	0	0	0	0
Other liabilites	0	0	0	0	0	0	0	0
Total	0	802	0	306	0	880	0	343

#### TABLE 49: AMOUNTS PAST DUE OR IMPAIRED WITHIN THE EXPOSURES SECURITISED BY EXPOSURE TYPE

(1) In 2015, exposures have been reclassified from sponsor to investor for 911 of millions euros. 2014 exposures have been amended accordingly.

#### TABLE 50: ASSETS AWAITING SECURITISATION

	Bankin	g book	Trading book			
(In EUR m)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014		
Residential mortgages	0	0	0	0		
Commercial mortgages	0	0	0	0		
Credit card receivables	0	0	0	0		
Leasing	0	0	0	0		
Loans to corporates and SMEs	0	0	0	0		
Consumer loans	0	0	0	0		
Trade receivables	0	0	0	0		
Other assets	0	0	0	0		
Covered bonds	0	0	0	0		
Other liabilites	0	0	0	0		
Total	0	0	0	0		

			-			-	
(In EUR m)	31	st December 201	5	31 <sup>st</sup> December 2014			
Underlying assets	On-balance sheet	Off-balance sheet	Total	On-balance sheet	Off-balance sheet	Total	
Residential mortgages	533	106	639	619	44	663	
Commercial mortgages	163	28	191	235	29	264	
Credit card receivables	0	1,724	1,724	1	1,406	1,407	
Leasing	0	1,229	1,229	63	875	937	
Loans to corporates and SMEs	430	181	611	887	100	986	
Consumer loans	52	5,767	5,819	53	3,327	3,379	
Trade receivables	12	4,323	4,335	11	3,651	3,661	
Other assets	1,698	1,099	2,797	2,602	1,542	4,144	
Covered bonds	0	0	0	0	0	0	
Other liabilites	0	0	0	0	0	0	
Total	2,888	14,457	17,345	4,470	10,973	15,442	

#### TABLE 51: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES RETAINED OR PURCHASED IN THE BANKING BOOK

Aggregate amounts of securisited exposures retained or purchased in the banking book

At 31<sup>st</sup> December 2015, securisation exposures in the banking book amounted to 17,345 millions of euros, including 2,888 millions of euros recorded on the balance sheet, the rest consisting predominantly of liquidity lines linked to the Group's sponsor conduit activity.

The main underlying assets are securitisations, corporate loans, consumer loans and residential mortgages.

In 2015, banking book exposures increased by 1,903 millions of euros, up 12% year-on-year.

The volume of assets of conduits managed by the Groupe increased significantly mainly in consumer loans.

#### In 2015, the Group continued its legacy asset disposal programme. The portofolio of securisations in runoff was reduced by a third over the year, mainly the following underlyings: residential mortgages (RMBS), commercial mortgages (CMBS), re-securitisations (CDOs) and loans to corporates (CLOs).

#### TABLE 52: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES RETAINED OR PURCHASED IN THE TRADING BOOK

(In EUR m)	31 <sup>st</sup> Decerr	1ber 2015	31 <sup>st</sup> December 2014		
Underlying assets	Net long positions	Net short positions	Net long positions	Net short positions	
Residential mortgages	78	1	98	5	
Commercial mortgages	82	206	102	18	
Credit card receivables	8	0	0	0	
Leasing	0	0	0	0	
Loans to corporates and SMEs	133	0	77	3	
Consumer loans	18	0	1	0	
Trade receivables	0	0	0	0	
Other assets	67	12	36	17	
Covered bonds	0	0	0	0	
Other liabilites	0	0	0	0	
Total	386	219	313	43	

2015 was marked by a change in the calculation method, from the maximum method to the use the sum of short and long positions. Thus it explains the rise of the positions of the exposures.

#### TABLE 53: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES BY REGION

3	31 <sup>st</sup> December 2	015	31 <sup>st</sup> December 2014			
Banking book	Banking book Trading book			Tradir	ig book	
	Long positions	Short positions		Long positions	Short positions	
9,094	265	218	6,814	184	38	
55	5	0	37	9	0	
7,897	56	1	8,393	93	5	
299	60	0	199	27	0	
17,345	386	219	15,442	313	43	
	Banking book 9,094 55 7,897 299	Banking book         Tradin           Long positions         265           9,094         265           55         5           7,897         56           299         60	Long positions         Short positions           9,094         265         218           55         5         0           7,897         56         1           299         60         0	Banking book         Trading book         Banking book           Long positions         Short positions         6,814           9,094         265         218         6,814           55         5         0         37           7,897         56         1         8,393           299         60         0         199	Banking book         Trading book         Banking book         Trading book           Long positions         Short positions         Banking book         Trading book           9,094         265         218         6,814         184           55         5         0         37         9           7,897         56         1         8,393         93           299         60         0         199         27	

In the trading book, the rise of the exposures amounts in 2015 mainly concerned the America area.

Besides positions with North American underlying increased at  $31^{\text{st}}$  December 2015.

Banking book disposals mainly concerned positions with European underlyings.

#### TABLE 54: QUALITY OF SECURITISATION POSITIONS RETAINED OR PURCHASED

Banking book - (In EUR m)	31	<sup>st</sup> December 201	5			
		Nominal		Ехро	sure At Default (E	AD)
Underlying assets	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche
Residential mortgages	577	62	0	553	58	0
Commercial mortgages	116	76	0	105	29	0
Credit card receivables	1,715	9	0	1,715	9	0
Leasing	1,126	103	0	1,126	103	0
Loans to corporates and SMEs	535	47	29	535	45	29
Consumer loans	5,750	68	0	5,750	59	0
Trade receivables	4,301	34	0	4,287	34	0
Other assets	2,772	25	0	1,634	8	0
Covered bonds	0	0	0	0	0	0
Other liabilities	0	0	0	0	0	0
Total	16,892	424	29	15,705	345	29

Banking book -(In EUR m)

#### 31<sup>st</sup> December 2014

		Nominal		Exposure At Default (EAD)			
Underlying assets	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche	
Residential mortgages	572	91	0	551	88	0	
Commercial mortgages	154	110	0	149	48	0	
Credit card receivables	1,399	8	0	1,346	8	0	
Leasing	937	0	0	929	0	0	
Loans to corporates and SMEs	857	83	46	857	81	46	
Consumer loans	3,375	4	0	3,113	4	0	
Trade receivables	3,627	34	0	3,694	34	0	
Other assets	3,707	437	0	1,775	421	0	
Covered bonds	0	0	0	0	0	0	
Other liabilities	0	0	0	0	0	0	
Total	14,628	769	46	12,414	685	46	

In the banking book, senior tranches made up 97% of securitisation positions retained or purchased as of 31<sup>st</sup> December 2015. It mainly comes from trade receivables, consumer loans and re-securitisations underlying, thus reflecting the robust quality of the portfolio and the positive results of the legacy asset disposal program.

#### Quality of securitisation positions retained or purchased

Trading book - (In EUR m)		31 <sup>st</sup> December 2015 Trading book							
	N	let long positions		Ν	et short positions				
Underlying assets	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche			
Residential mortgages	23	55	0	0	1	0			
Commercial mortgages	43	39	0	177	29	0			
Credit card receivables	0	8	0	0	0	0			
Leasing	0	0	0	0	0	0			
Loans to corporates and SMEs	40	93	0	0	0	0			
Consumer loans	6	12	0	0	0	0			
Trade receivables	0	0	0	0	0	0			
Other assets	32	35	0	12	0	0			
Covered bonds	0	0	0	0	0	0			
Other liabilities	0	0	0	0	0	0			
Total	144	242	0	189	30	0			

#### Trading book - (In EUR m)

#### 31<sup>st</sup> December 2014

		Trading book							
	N	let long positions		N	Net short positions				
Underlying assets <sup>(1)</sup>	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche	Highest-ranking tranche	Mezzanine tranche	Initial loss tranche			
Residential mortgages	24	74	0	0	5	0			
Commercial mortgages	19	82	0	8	10	0			
Credit card receivables	0	0	0	0	0	0			
Leasing	0	0	0	0	0	0			
Loans to corporates and SMEs	4	72	0	3	0	0			
Consumer loans	1	0	0	0	0	0			
Trade receivables	0	0	0	0	0	0			
Other assets	21	15	0	17	0	0			
Covered bonds	0	0	0	0	0	0			
Other liabilities	0	0	0	0	0	0			
Total	69	244	0	28	15	0			

Positions in the securitisation trading book are exclusively high ranking and mezzanine tranches. This applies to long and short positions.

### 5.6. PRUDENTIAL TREATMENT OF SECURITISATION POSITIONS

# Approach for calculating risk-weighted exposures

Whenever traditional or synthetic securitisations, in whose sponsorship, origination, structuring or management Societe Generale is involved, achieve a substantial and documented risk transfer compliant with the regulatory framework, the underlying assets are excluded from the bank's calculation of risk-weighted exposures for traditional credit risk.

For the securitisation positions that Societe Generale decides to hold either on- or off-balance sheet, capital requirements are determined based on the bank's exposure, irrespective of its underlying strategy or role. For the trading book, long and short positions are offset within the limits specified by the regulation. Risk-weighted assets resulting from securitisation positions are calculated by applying the appropriate risk ratios to the amount of the exposures.

Most of the Group's positions in securitised receivables, both in the banking book and the trading book, are valued using the Internal Ratings Based (IRB) approach, for which there are three calculation methods:

- the external ratings based approach (RBA) must be applied to all rated exposures or those for which a rating can be inferred. Under this approach, risk weightings are calculated so as to also reflect the positions' seniority and granularity;
- the Supervisory Formula Approach (SFA) is a methodology for non-rated exposures, where the risk weight is based on five inputs associated with the nature and structure of the transaction. To use this approach, the capital charge must be calculated using the IRB approach for the portfolio of assets underlying the securitisation exposure;
- finally, the positions arising from the Asset Backed Commercial н. Paper (ABCP) programmes' off-balance sheet exposures (such as liquidity facilities) are determined using the Internal Assessment Approach (IAA). An equivalence table defined by the regulation is used to calculate risk weightings based on the internal rating determined by the model. For liquidity facilities issued by the Bank to the securitisation vehicles it sponsors, Societe Generale received approval in 2009 to use its internal ratings-based approach, in accordance with the CRR. Accordingly, Societe Generale has developed an Internal Assessment Approach (IAA), whereby an internal rating is assigned to the Group's securitisation exposures, with each rating automatically resulting in a capital weighting based on an equivalence table defined by the regulation. Like the Group's other internal models, the IAA meets the regulatory standards for the validation of internal models, as defined by the regulation. An annual review of the model is performed to ensure that the configuration is sufficiently conservative. Finally, the model is used to measure impacts in stress scenarios and as a transaction structuring tool.

# External credit assessment institutions used by Societe Generale

Assets securitised by Societe Generale are usually rated by one or more ECAI (External Credit Rating Agency) rating agencies, the list of which is established by the French prudential supervisory authority ACP (Autorité de Contrôle Prudentiel). The agencies used are DBRS, FitchRatings, Moody's Investors Service and Standard & Poor's. Since 31stt October 2011, these four rating agencies have been registered with and supervised by the European Securities and Market Authority (ESMA). For securitisation positions valued using the standardised method, capital requirements are calculated based on the lowest external rating of the securitisation exposure. An equivalence table (Table 11) between external ratings and Societe Generale's internal rating scale is provided hereunder.

The following table presents Societe Generale's internal rating scale and the corresponding scales of the main External Credit Assessment Institutions, as well as the corresponding mean estimated probability of default.

#### IDEM TABLE 19: SOCIETE GENERALE'S INTERNAL RATING SCALE AND CORRESPONDING SCALES OF RATING AGENCIES

Counterparty internal rating	DBRS	FitchRatings	Moody's	S&P	1 year probability
1	AAA	AAA	Aaa	AAA	0.01%
2	AA high to AA low	AA+ to AA-	Aa1 to Aa3	AA+ to AA-	0.02%
3	A high to A low	A+ to A-	A1 to A3	A+ to A-	0.04%
4	BBB high to BBB low	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	0.30%
5	BB high to BB low	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	2.16%
6	B high to B low	B+ to B-	B1 to B3	B+ to B-	7.93%
7	CCC high to CCC low	CCC+ to CCC-	Caa1 to Caa3	CCC+ to CCC-	20.67%
8, 9 and 10	CC and below	CC and below	Ca and below	CC and below	100.00%

#### **Regulatory capital requirements**

Table 51 and 52 shows the bank's securitisation exposures and corresponding regulatory capital requirements for the banking book at 31<sup>st</sup> December 2015 and 31<sup>st</sup> December 2014. These exposures cover the same scope as that of tables 47, 49 and 50.

# TABLE 55: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES RETAINED OR PURCHASED IN THE BANKING BOOK BY APPROACH AND BY RISK WEIGHT BAND

(In EUR m)		Exposure at D	Default (EAD)(1)		Capital requirements				
	Securi	tisation	Re-Secu	ritisation	Securi	tisation	Re-Securi	Re-Securitisation	
Risk Weight band	31 Dec.2015	31 Dec.2014	31 Dec.2015	31 Dec.2014	31 Dec.2015	31 Dec.2014 3	31 Dec. 2015 3	1 Dec. 2014	
6 to 10%	712	610	0	0	4	4	0	0	
12 to 18%	378	853	0	0	4	8	0	0	
20 to 35%	128	195	48	2	2	5	1	0	
40 to 75%	67	96	116	578	3	6	2	4	
100%	61	29	0	353	5	2	0	1	
150 to 250%	0	0	336	387	0	0	3	13	
>250 and <425%	12	0	0	0	3	0	0	0	
>425% and <850%	0	9	0	0	0	5	0	0	
RBA method	1,358	1,793	500	1,320	21	30	5	18	
IAA method	14,200	10,421	0	0	97	77	0	0	
Supervisory Formula Approach	270	593	0	0	3	5	0	0	
1,250%/Capital deductions	148	162	772	793	31	32	40	46	
Total IRB approach	14,618	12,969	772	2,113	131	114	40	46	
100% weighting	0	0	0	0	0	0	0	0	
RBA approach	0	0	0	0	0	0	0	0	
Transparency method	43	47	0	0	23	30	0	0	
Total standardised approach	43	47	0	0	23	30	0	0	
Total banking book	16,019	13,016	1,272	2,113	175	174	45	64	

(1) 1250%-weighted EAD, Re-securitisation EAD and EAD in RBA method correspond exclusively to fully impaired positions display here gross for 849 MEUR.

At 31<sup>st</sup> December 2015, 99% of banking book securitisation exposures were valued using the IRB method.

Under this method, 11% of exposures were weighted using the RBA method, 2% using the supervisory formula approach and 82% using the IAA method.

Regulatory capital requirements in respect of banking book securitisation positions fell by 18 millions of euros in 2015. This decrease predominantly reflected a decline in positions deducted from capital.

TABLE 56: AGGREGATE AMOUNTS OF SECURITISED EXPOSURES RETAINED OR PURCHASED IN THE TRADING BOOK BY RISK WEIGHT BAND

(In EUR m)	31 <sup>s</sup>	* December 20	15	31 <sup>st</sup> December 2014			
Risk weight band	Net long positions	Net short positions	Capital requirements <sup>(1)</sup>	Net long positions	Net short positions	Capital requirements	
6% - 10%	109	177	1.9	40	2	1	
12% - 18%	101	0	1.2	65	0	1	
20% - 35%	107	0	2.3	102	1	3	
40% - 75%	23	4	2.8	24	6	5	
100%	22	20	3.6	38	8	3	
>100% <= 250%	0	4	16.3	0	3	10	
>250% - <=425%	2	0	0.5	0	0	0	
>425% <=850%	0	0	0	1	0	1	
1,250%/Capital deductions <sup>(1)</sup>	2	9	8.8	0	0	0	
EAD subject to risk weight	366	214	37.4	270	21	23	
Supervisory formula method	0	0	0	4	0	2	
Transparency method	0	0	0	0	0	0	
IRB method	0	0	0	0	0	0	
Total, net of capital deductions	366	214	37.4	274	21	24	
Positions deducted from capital	19.9	4.3	24.2	39	22	39	
Total	386	219	61.6	313	43	63	

(1) Since January 2015, Societe Generale do not benefit from the excemption provided by the regulator to calculate its capital requirements based on the maximum amounts between long and short positions. It now calculate the capital requirements by summing both positions.

Securitisation exposures related to the trading book are evaluated using the internal approach.

#### TABLE 57: REGULATORY CAPITAL REQUIREMENTS FOR SECURITISATIONS HELD OR ACQUIRED IN THE TRADING BOOK

(In EUR m)	31 <sup>st</sup> December 2015				- 31 <sup>st</sup> December 2014			
	Net long positions	Net short positions	Total risk- weighted positions <sup>(2)</sup>	Capital <sup>(2)</sup>	Net long positions	Net short positions	Total risk- weighted positions	Capital
Securitisation	364	211	263	21	272	21	205	16
Re-securitisation	2	4	204	16.3	2	0	95	8
Positions deducted from capital	19.9	4.3	0	24.2	39	22	-	39
Total	386	219	467	61.6	313	43	300	63

(2) Since January 2015, Societe Generale do not benefit from the excemption provided by the regulator to calculate its capital requirements based on the maximum amounts between long and short positions. It now calculate the capital requirements by summing both positions.

Since 1<sup>st</sup> January 2015, Societe Generale calculates its capital requirement by summing the capital requirements on long positions for which the Group directly bears the credit risk and short positions for which the Group is hedged for credit risk, even on deducted positions.

Trading book capital requirement has decreased of 2% going from 63 millions of euros in 2014 to 61.6 millions of euros in 2015, including deductions.

#### TABLE 58: SECURITISATION EXPOSURES DEDUCTED FROM CAPITAL BY EXPOSURE CATEGORY

(In EUR m)	Bankin	g book	Trading book			
Underlying assets	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014		
Residential mortgages	15	0	7	6		
Commercial mortgages	13	9	0	12		
Credit card receivables	0	20	0	0		
Leasing	0	0	0	0		
Loans to corporates and SMEs	1	0	0	4		
Consumer loans	3	1	0	0		
Trade receivables	0	0	0	0		
Other assets	39	47	17	17		
Covered bonds	0	0	0	0		
Other liabilities	0	0	0	0		
Total	71	78	24	39		

In 2015 the deducted exposures on securitisation trading book has decreased by 38%.

# IN BRIEF

Market risk corresponds to the risk of a loss of value on financial instruments arising from changes in market parameters, the volatility of these parameters and correlations between them. These parameters include but are not limited to exchange rates, interest rates, and the price of securities (equity, bonds), commodities, derivatives and other assets, including real estate assets.

This section contains key information on the Group's market risk profile. It details both the internal indicators used to measure market risks and the corresponding regulatory information (RWA, VaR).

#### DISTRIBUTION OF MARKET RISKS (RWA) BY RISK TYPE



Market risk RWA at end-2015: EUR 19.3 bn

#### MARKET RISKS (RWA IN EUR BN)



Market risk RWA EUR 19,3 bn

(Amount at end-2014: EUR 24.2 bn)

Annual average Var (1 day, 99%) - 2015

EUR 21.5 m (Annual average VaR 2014: EUR 24 m)

Share of RWA calculated by the internal model

# 6. MARKET RISKS

Market risks are the risks of losses resulting from unfavourable changes in market parameters. They concern all the trading book transactions as well as some of the banking book portfolios.

#### **6.1. ORGANISATION**

Although primary responsibility for managing risk exposure lies with the front office managers, the supervision system is based on an independent structure, the Market Risk Department of the Risk Division.

The Department assignment includes:

- ensuring the existence and the implementation of an effective market risks framework based on suitable limits;
- approval of the limit requests submitted by the different businesses within the framework of the overall limits set by the Board of Directors and the General Management, and based on the use of these limits;
- proposal to the Group Risk Committee of appropriate market risk limits by Group activity;
- definition of internal models used to compute capital requirements related to market risk;
- definition of risk measurement methods, approval of the valuation models used to calculate risks and results, and definition of provisions for market risks (reserves and adjustments to earnings).

To carry out these different duties, the Market Risk Department relies on the data and analysis provided by the Finance Department of Global Banking and Investor Solutions, which monitors the Group's market positions on a permanent, daily and independent basis, notably via:

- daily calculation and certification of market risk indicators based on formal and secure procedures;
- reporting and first-level analysis of these indicators;
- daily monitoring of the limits set for each activity, in conjunction with the Market Risk Department;
- verification of the market parameters used to calculate risks and results in line with the methodologies defined by the Market Risk Department;
- monitoring and control of the gross nominal value of positions. This monitoring is based on alert levels applied to all instruments and desks, and contributes to the detection of possible rogue trading operations.

Accordingly, the Finance Department of Global Banking and Investor Solutions, in conjunction with the Market Risk Department, defines the architecture and functionalities of the information system used to produce the risk indicators for market transactions to ensure it meets the needs of the different business lines.

A daily report on use of limits on VaR (Value at Risk), stress tests (extreme scenarios) and other major market risks metrics (sensitivity, nominal, etc.) at various levels (Societe Generale, Global Banking and Investors Solutions, or Global Market) is submitted to the General Management and the managers of the business lines, in addition to a monthly report which summarises the key events in the area of market risk management.

#### **6.2. INDEPENDENT PRICING VERIFICATION**

Market products are marked to market, when such market prices exist. Otherwise, they are valued using parameter-based models.

Firstly, each valuation model is independently validated by the Market Risk Department.

Secondly, the parameters used in the valuation models, whether derived from observable market data or not, are checked by the Finance Division in accordance with the methodologies defined by the Market Risks Department (Independent Pricing Verification). If necessary, the valuations obtained are supplemented by additional reserves (such as bid-ask spreads and liquidity) determined reasonably and appropriately after an analysis of available data, based on methodologies validated by the Market Risk Department.

Valuation governance is enforced through two valuation committees, both attended by the Global Markets Division, Market Risk department and Finance representatives:

- The Global Valuation Committee is convened whenever necessary, at least every quarter, to discuss and validate financial instrument valuation methodologies (model refinements, reserve methodologies, parameter marking methods, etc.). This committee, chaired by the Finance Division and organised by its valuation expert team (Valuation Group) has worldwide accountability, and is the only body empowered to approve the valuation policies concerning financial instruments on market activities.
- On a quarterly basis, the Global Valuation Review Committee reviews changes in reserves, valuation adjustment figures, and related accounting impacts. This analytical review is performed by the Valuation Group.

A corpus of Valuation Policies describes the valuation framework and its governance, specifying the breakdown of responsibilities between the stakeholders.

### 6.3. METHODS FOR MEASURING MARKET RISK AND DEFINING LIMITS

The Group's market risk assessment is based on three main indicators, which are monitored through limits:

- the 99% Value-at-Risk (VaR) method: in accordance with the regulatory internal model, this global indicator is used for the day-to-day monitoring of the market risks incurred by the Group within the scope of its trading activities;
- a stress test measurement, based on a decennial shocktype indicator. Stress test measurements make it possible to restrict and monitor the Group's exposure to systemic risk and exceptional market shocks;
- complementary metrics (sensitivity, nominal, concentration or holding period, etc.), which ensure consistency between the overall risk limits and the operational thresholds used by the front office.

The following indicators are also calculated on a weekly basis: stressed VaR, IRC (Incremental Risk Charge) and CRM (Comprehensive Risk Measure). The capital charges arising from these internal models complement the VaR by taking into account the rating migration risks and the default risks, and by limiting the procyclical nature of capital requirements .

#### 6.4. 99% VALUE AT RISK (VAR)

The Internal VaR Model was introduced at the end of 1996 and has been approved by the French regulator within the scope of the regulatory capital requirements.

The method used is the "historical simulation" method, which implicitly takes into account the correlation between all risk factors and is based on the following principles:

- storage in a database of the risk factors that are representative of Societe Generale's positions (i.e. interest rates, share prices, exchange rates, commodity prices, volatility, credit spreads, etc.);
- definition of 260 scenarios corresponding to one-day variations in these market parameters over a rolling one-year period;
- application of these 260 scenarios to the market parameters of the day;
- revaluation of daily positions, on the basis of the 260 sets of adjusted daily market parameters

The 99% Value-at-Risk is the largest loss that would occur after eliminating the top 1% of the most adverse occurrences over a one-year historical period. Within the framework described above, it corresponds to the average of the second and third largest losses computed. The VaR assessment is based on a model and a certain number of conventional assumptions whose main limitations are as follows:

by definition, the use of a 99% confidence interval does not take into account losses arising beyond this point; VaR is therefore an indicator of losses under normal market conditions and does not take into account exceptionally large fluctuations;  VaR is computed using closing prices, so intra-day fluctuations are not taken into account.

The Market Risk Department of the Risk Division mitigates the limitations of the VaR model by performing stress tests and other additional measurements.

Moreover, the relevance of the model is checked through ongoing back-testing in order to verify whether the number of days for which the negative result exceeds the VaR complies with the 99% confidence interval.

Daily profit and loss used for back-testing includes in particular the change in value of the portfolio (book value) and the impact of new transactions and of transactions modified during the day (including their sales margins), refinancing costs, the various related commissions (brokerage fees, custody fees, etc.), as well as provisions and parameter adjustments made for market risk.

The following histograms show the distribution of this daily P&L over the last year, as well as the difference between daily P&L and VaR (negative values corresponding to any back-testing breaches). In 2015, at Societe General level, daily losses were observed 15 times, and 2 back-testing breaches occurred: the first one on 15<sup>th</sup> January 2015 following the Swiss National Bank's announcement to remove the CHF floor against EUR, and the second one on 7<sup>th</sup> September 2015 stemming from a strong market move on Eurostoxx implied volatility which impacted equity structured products.

#### **BREAKDOWN OF THE DAILY P&L (TRADING PORTFOLIOS)**



Today, the market risks for almost all of Corporate and Investment Banking's activities are monitored using the VaR method, including those related to the most complex products, as well as the main market activities of Retail Banking and Private Banking. The few activities not covered by the VaR method, either for technical reasons or because the stakes are too low, are monitored using stress tests and give rise to capital charges calculated using the standard method or through alternative in-house methods.

### Number of trading days 120 80 40



**DIFFERENCE BETWEEN VAR AND DAILY P&L** 

The changes in the Group's trading VaR in 2015 are presented below:



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BREAKDOWN BY RISK FACTOR OF TRADING VAR – CHANGES IN QUARTERLY AVERAGE OVER THE 2014-2015 PERIOD (IN MILLIONS OF EUROS)

Quarterly average Trading VaR, 1 day, 99% (in millions of euros)

VaR levels remained globally low (EUR 21 million on average in 2015 compared to EUR 24 million in 2014) due to the defensive risk profile, in a volatile market environment:

- the two peaks observed in January and March are respectively due to significant Forex market moves (removal of the CHF floor against EUR) and a large corporate deal on the equity perimeter, which has since been closed;
- the increase observed occasionally during the summer mainly stems i) from the entry of more volatile scenarios in the VaR computation window amid tight market conditions in July/August, impacting equity positions in particular, and ii) from a greater contribution of the EUR interest rate perimeter.

#### **STRESSED VAR (SVAR)**

At end-2011, Societe Generale was authorised by the Autorité de Contrôle Prudentiel et de Résolution (ACPR - French Prudential and Resolution Supervisory Authority) to supplement its internal models with the CRD3 measurements, in particular Stressed VaR, for the same scope as VaR.

The calculation method used is the same as under the VaR approach. It consists of carrying out a historical simulation with one-day shocks and a 99% confidence interval. Contrary to VaR, which uses 260

scenarios for one-day fluctuations over a rolling one-year period, Stressed VaR uses a fixed one-year historical window corresponding to a period of significant financial tension.

The historical stress window, which is determined using a method approved by the regulator, captures significant shocks on all risk factors (risks related to equity, interest rates, foreign exchange rates and commodities). It is subject to an annual review.

SVAR 2015 (1 DAY, 99%)								
(In EUR m)	Beginning of the year	End of the year	Minimum	Average	Maximum			
SVaR	70.9	38.5	27.1	49.4	81.8			

In 2015, SVaR amounted to EUR 49 million on average, compared to EUR 72 million in 2014. This decrease is mainly due to a more defensive risk profile, notably on interest rate and equity perimeters, two risk factors for which the shocks applied in the SVaR computation window are particularly severe.
# 6.5. STRESS TEST ASSESSMENT

#### Methodology

Alongside the internal VaR model, Societe Generale monitors its exposure using stress test simulations to take into account exceptional market occurrences.

A stress test estimates the loss resulting from an extreme change in market parameters over a period corresponding to the time required to unwind or hedge the positions affected (5 to 20 days for most trading positions).

This stress test risk assessment is applied to all of the Bank's market activities. It is based on a set of historical and theoretical scenarios that include the "Societe Generale Hypothetical Financial Crisis *Scenario*" (or "Generalised" *scenario*) based on the events observed in 2008. These scenarios apply shocks to all substantial risk factors, including exotic parameters.

Together with the VaR model, this stress test risk assessment methodology is one of the main pillars of the risk management framework. The underlying principles are as follows:

- risks are calculated every day for each of the Bank's market activities (all products together), using the historical and hypothetical scenarios;
- stress test limits are established for Societe Generale's activity as a whole, and then for the Group's various business lines. They frame the most adverse result arising from the set of historical and hypothetical scenarios.

The various stress test scenarios are revised and improved by the Risk Division on a regular basis, in conjunction with the Group's teams of economists and specialists. Since 2014, the stress test assessment is based on 18 scenarios: 3 historical scenarios and 15 hypothetical scenarios. In 2015, in order to take into account a potential lower liquidity and increased dislocation risks, we strengthened the shocks on credit spreads widening on the hypothetical "bond crisis" *scenario* (see below for details).

## HISTORICAL STRESS TESTS

This method consists of an analysis of the major economic crises that have affected the financial markets since 1995 (a date from which the financial markets have become global and subject to increased regulatory requirements): the changes in the prices of financial assets (equities, interest rates, exchange rates, credit spreads, etc.) during each of these crises have been analysed in order to define scenarios for potential variations in these risk factors which, when applied to the bank's trading positions, could generate significant losses. Therefore, Societe Generale uses 3 historical scenarios related to the period from October to December 2008.

#### HYPOTHETICAL STRESS TESTS

The hypothetical scenarios are defined with the Group's economists and are designed to identify the possible sequences of events that could lead to a major crisis in the financial markets (e.g. a major terrorist attack, political instability in the main oil-producing countries, etc.). The Group's aim is to select extreme but plausible events which would have major repercussions on all the international markets. Accordingly, Societe Generale has adopted the 15 hypothetical scenarios described below:

- Generalised scenario (Societe Generale's hypothetical financial crisis scenario): considerable mistrust of financial institutions after the Lehman Brothers' bankruptcy; collapse of equity markets, sharp decline in implied dividends, significant widening of credit spreads, pivoting of yield curves (rise in short-term interest rates and decline in long-term interest rates), substantial flight to quality;
- GIIPS crisis: mistrust in risky sovereign issuers and increased interest in higher-rated sovereign issuers such as Germany, followed by the spreading of fears to other markets (equities, etc.);
- Middle East crisis: instability in the Middle East leading to a significant shock in oil prices and other energy sources, a stock market crash, and a steepening of the yield curve;
- terrorist attack: major terrorist attack on the United States leading to a stock market crash, strong decline in interest rates, widening of credit spreads and sharp decline of the US dollar;
- bond crisis: crisis in the global bond markets inducing the decoupling of bond and equity yields, strong rise in US interest rates (and a more modest rise for other international rates), moderate decline on the equity markets, flight to quality with strong widening of credit spreads, rise in the US dollar;
- US dollar crisis: collapse of the US dollar against major international currencies due to the deterioration of the US trade balance and budget deficit, rise of interest rates and narrowing of US credit spreads;
- Eurozone crisis: decline in euro exchange rates, sharp rise in Eurozone interest rates, sharp fall in euro equities and rise in US equities, significant widening of euro credit spreads;
- Yen carry trade unwinding: change in monetary policy in Japan leading to yen carry trade strategies being abandoned: significant widening of credit spreads, decline in JPY interest rates, rise in US and Eurozone long-term interest rates and flight to quality;
- assets drop: unexpected stop of Central Bank Quantitative Easing policies leading to a generalised drop in all financial assets (equity, credit, emerging) combined with a significant increase of worldwide interest rates;
- two new Eurozone crisis scenarios: exit of Greece from the Eurozone, triggering a widespread drop in risky assets (equity, credit, emerging), more particularly in Europe, and a tightening of the US and Japanese sovereign spreads, declined with ECB support (activation of the OMT programme resulting in a decrease of interest rates in the Eurozone) or without ECB support (dislocation of the basis rates reflecting the freeze of the interbank market);
- Russian crisis: significant depreciation of the Russian currency, default of the Russian government, crisis in the bond markets and drop in equities, more particularly in emerging markets (see Russian crisis in September 1998);

- major hedge fund crisis: risk of dislocation of the international financial system stemming from the near-bankruptcy of a major hedge fund, notably due to a crisis in the bond markets (see nearbankruptcy of Long Term Capital Management in October 1998)
- sudden economic rebound: sharp rise in equity markets and in US and Eurozone interest rates (see anticipation of the beginning of the Iraq war in March 2003);
- bursting of an equity bubble: significant drop in the equity markets following the bursting of an equity bubble in a specific business sector (see Worldcom bankruptcy in July 2002).

#### Average stress tests in 2015<sup>(1)</sup>

in commodities prices, increased geopolitical tensions, and a divergence in terms of American and European monetary policies at the end of the year. Local dislocations were observed on the market: the removal of the CHF floor against EUR in January, the long-term EUR interest rate increases in May, the sudden devaluation of CNY in August, and the worldwide market corrections on equity at end-August.

In this context, five scenarios, among the most frequent contributors to the Group's global stress test, have relatively similar yearly average levels (1 historical scenario and 4 hypothetical scenarios, see the chart below). On average, the Group's global stress test decreased compared to 2014, mainly due to a more defensive risk profile on the equity perimeter, and a lower exposure on the credit perimeter during the second half-year.



#### Market risk capital requirements

Societe Generale's capital requirements related to market risk (excluding securitisation) are mainly determined using an internal model approach (92% in 2015). Risk-weighted assets used to calculate capital requirements for market transactions are detailed hereafter.

At end-2011, Societe Generale received approval from the ACPR to expand its internal market risk modelling system and in particular to include Stressed VaR (VaR on one-year historical window corresponding to a period of significant financial tensions), IRC (Incremental Risk Charge) and CRM (Comprehensive Risk Measure), for the same scope as VaR. These last two measurements estimate the capital charge on debt instruments that is related to rating migration and issuer default risks. A constant one-year liquidity horizon is used to calculate these two metrics. Capital charges are incremental, meaning they are added to charges calculated based on VaR and stressed VaR.

#### Governance

These internal models are subject to the same governance as other internal models that meet the regulatory Pillar 1 requirements. In particular:

- a weekly analysis is performed on these metrics;
- these metrics are then compared with standard stress tests as defined by the regulator (25 historical scenaros);
- a review of model assumptions at least once a year and an ex-post consistency control are carried out;

Societe Generale estimates these capital charges using a simulation model that distributes the various risk factors covered by regulatory requirements, while taking into account the relationships between these factors. IRC and CRM are 99.9% risk factors, which is the highest risk obtained after eliminating the 0.1% of most adverse occurrences.

<sup>(1)</sup> Excluding legacy assets which are subject to specific risk monitoring.

the methodology and its implementation were approved by the Group Internal Audit Division and the ACPR

In accordance with the regulations, IRC is applied to debt instruments already measured using internal models other than securitisation and the correlation portfolio. In particular, this includes bonds, CDS and related derivative products. CRM exclusively covers the correlation portfolio, i.e. CDO tranches for liquid issuers and "first-to-default" products as well as their hedging using CDS and indices. Aside from the credit-migration and default risk, CRM also covers any other pricing risks (for example, spread, recovery and correlation risks). Ultimately, the capital charge corresponds to the largest value between the charge calculated by the internal model and 8% of the charge calculated using the standard method for market risks.

#### IRC (99.9%) AND CRM (99.9%)

(In EUR m)	Beginning of the year 2015	End of the year 2015	Minimum	Average	Maximum
IRC	338	403	276	383	619
CRM	172	147	115	150	295

# 6.6. MARKET RISK CAPITAL REQUIREMENTS

#### TABLE 59: CAPITAL REQUIREMENTS BY RISK FACTOR (MARKET RISK)

	Capital re	quirement	Risk weighted assets		
(In EUR m)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	
VaR	311	319	3,892	3,983	
Stressed VaR	510	828	6,379	10,349	
Incremental Risk Charge (IRC)	403	422	5,038	5,276	
Correlation portfolio (CRM)	163	173	2,031	2,160	
Market risks assessed by internal model	1,387	1,741	17,340	21,769	
Specific risk related to securisation positions	37	24	467	300	
Market risk assessed for currency positions	41	101	513	1,268	
General risk and specific risk related to interest rates (excluding securisation)	33	26	414	323	
Market risk assessed using the standard approach for ownership interests	41	36	510	445	
Market risk assessed using the standard approach for commodities	7	5	83	64	
Market risks assessed by standard approach	159	192	1,987	2,401	
Total	1,546	1,934	19,327	24,170	

#### TABLE 60: CAPITAL REQUIREMENTS BY TYPE OF MARKET RISK

	Capital re	quirement	Risk weighted assets		
(In EUR m)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014	
Risk assessed for currency positions	75	147	941	1,834	
Risk related to credit (excl. deduction)	793	831	9,912	10,389	
Risk assessed for commodities	18	35	227	439	
Risk assessed for ownership interests	306	483	3,821	6,034	
Risk related to interest rates	354	438	4,426	5,475	
Total	1,546	1,934	19,327	24,170	

### TABLE 61: INTERNAL MODEL VALUES FOR TRADING PORTFOLIOS

(In EUR m)	31 <sup>st</sup> December 2015	31 <sup>st</sup> December 2014
VaR (10 days, 99%) <sup>(1)</sup>		
Period start	66	125
Maximum value	99	131
	68	75
 Minimum value	43	45
Period end	59	65
Stressed VaR (10 days, 99%) <sup>(1)</sup>		
Period start	243	252
Maximum value	299	336
Average value	172	227
Minimum value	86	130
Period end	129	258
Incremental Risk Charge (99.9%)		
Period start	338	319
Maximum value	619	553
Average value	383	430
 Minimum value	276	271
Period end	403	346
Comprehensive Risk capital charge (99.9%)		
Period start	172	126
Maximum value	295	137
Average value	150	119
Minimum value	115	110
Period end	147	111
Floor (standardised measurement method)	132	173

(1) On the perimeter for which the capital requirements are assessed by internal model.

# IN BRIEF

Operational risks (including accounting and environmental risks) correspond to the risk of losses arising from inadequacies or failures in internal procedures, systems or staff, or from external events, including low-probability events that entail a high risk of loss.

This section describes the monitoring of the Group's operational risk, including events that had a significant impact in 2015. In addition, it provides an analysis of the Group's operational risk profile and regulatory capital requirements.

#### **OPERATIONAL RISKS (RWA IN EUR BN)**



#### **DISTRIBUTION OF OPERATIONAL RISKS (RWA) BY METHOD**



# JR 43.9 bn

(Amount at end-2014: EUR 43.9 bn)

**Operational risks RWA** 

#### Share of RWA calculated by the internal model



#### DISTRIBUTION OF OPERATIONAL RISKS LOSSES BY AMOUNT AND BY NUMBER



#### DISTRIBUTION OF OPERATIONAL RISKS RWA BY PILLAR



# 7. OPERATIONAL RISKS

# 7.1. OPERATIONAL RISK MANAGEMENT: ORGANISATION AND GOVERNANCE

Societe Generale has developed processes, management tools and a control infrastructure to enhance the Group-wide control and management of the operational risks that are inherent in its various activities. These include, among others, general and specific procedures, permanent supervision, business continuity plans<sup>(1)</sup>, New Product Committees<sup>(2)</sup> and functions dedicated to the oversight and management of specific types of operational risks, such as fraud, risks related to external service providers, legal risks<sup>(3)</sup>, information system security risks<sup>(4)</sup> and non-compliance risks<sup>(5)</sup>.

## The Operational Risk Department

The Operational Risk Department within the Group's Risk Division works in close cooperation with operational risk staff in the Core Businesses and Corporate Divisions.

The Operational Risk Department is notably responsible for:

- running the Operational Risk function
- devising and implementing Societe Generale's operational risk control strategy, in cooperation with the Core Businesses and Corporate Divisions
- promoting an operational risk culture throughout the Group
- defining, at Group level, methods for identifying, measuring, monitoring, reducing and/or transferring operational risk, in cooperation with the Core Businesses and Corporate Divisions, in order to ensure consistency across the Group

- permanent level 2 control on operational risks covering the risks specific to the different businesses and the risks associated with purchasing, communication, real estate, human resources, and information systems
- preparing a global Group business continuity plan and crisis management policy, managing the policy and coordinating its implementation
- the safety of people (expatriates and business travellers) internationally.

### The Operational Risk function

In addition to the Operational Risk Department, the Operational Risk function includes Operational Risk Managers (ORMs) in the Core Businesses and Corporate Divisions, who are under the operational authority of the Group's Chief Operational Risk Officer.

ORMs operate throughout the Group's entities and are responsible for implementing the Group's procedures, instructions and guidelines, and for monitoring and managing operational risks, with the support of dedicated operational risk staff in the business lines and entities and in close collaboration with the respective entities'line management.

Operational Risk Committees have been set up at Group level, as well as at Core Business, Corporate Division and subsidiary levels.

# 7.2. OPERATIONAL RISK MEASUREMENT

SSince 2004, Societe Generale has used the Advanced Measurement Approach (AMA), as proposed by the Capital Requirements Directive, to measure operational risk. This approach, deployed across the main Group entities, notably makes it possible to:

- identify the businesses that have the greatest risk exposures ;
- identify the types of risk that have the greatest impact on the Group's risk profile and overall capital requirements
- enhance the Group's operational risk culture and overall management;
- in 2007, the Autorité de Contrôle Prudentiel (ACP French Prudential Supervisory Authority) conducted an in-depth review of
- (1) See Chapter 3, page 122 and Chapter 4, page 185 of the Registration Document.
- (2) See Chapter 3, page 124 of the Registration Document.
- (3) See Chapter 4, page 198 and following of the Registration Document.
- (4) See Chapter 3, page 123 of the Registration Document.
- (5) See Chapter 4, page 198 and following of this Risk Report.

the system in place at Societe Generale. As a result, it authorised the Group to use the most advanced measurement approach, as defined by the Basel 2 Accord (i.e. the AMA or Advanced Measurement Approach) to calculate the Group's capital requirements for operational risks, starting from 1<sup>st</sup> January 2008. This authorisation covers more than 90% of the Societe Generale Group's total net banking income.

# 7.3. OPERATIONAL RISK MONITORING PROCESS

The frameworks specifically established by regulations<sup>(1)</sup> have been implemented, on the basis of existing procedures wherever possible. They notably include:

- gathering of internal data on operational risk losses
- Risk and Control Self-Assessment (RCSA) processes
- Key Risk Indicators (KRI)
- analysis of external loss data

- analysis of scenarios
- permanent level 2 control
- crisis management and business continuity planning
- combating fraud
- New Product Committees
- monitoring of external service providers.



Societe Generale's classification of operational risks in eight event categories and 49 mutually exclusive sub-categories is the cornerstone of its risk modelling, ensuring consistency throughout the system and enabling transversal analyses across the Group.

The eight event categories are the following:

- commercial disputes;
- disputes with authorities;
- pricing or risk valuation errors;
- execution errors;

- fraud and other criminal activities;
- rogue trading;
- loss of operating resources;
- IT system interruptions.

<sup>(1)</sup> Regulatory reference texts:

<sup>-</sup> Decree of 20th February 2007 relating to capital requirements for credit institutions and investment firms - Article 370 on internal control factors and the environment ,

<sup>-</sup> International Convergence of Capital Measurement and Capital Standards - Basel Committee on Banking Supervision - June 2004

<sup>-</sup> Sound Practices for the Management and Supervision of Operational Risk - Basel Committee on Banking Supervision - February 2003

<sup>-</sup> Decree of 3rd November 2014 relating to internal control of credit institutions and investment firms, replacing the CRBF (French Banking and Financial Regulation Committee) regulation No. 97-02

#### Internal loss data collection

Internal loss (but also gains and near loss) data has been compiled throughout the Group since 2003, enabling operational staff to:

- define and implement the appropriate corrective actions
- achieve a deeper understanding of their risk areas
- help foster an operational risk culture throughout the Group.

The minimum threshold above which a loss (or a gain or a near loss) is recorded is EUR 10,000 throughout the Group, except for market activities, where this threshold is EUR 20,000 due to the scope of its activity and the volumes involved.

Below these thresholds, the losses representing weak-signal risks are collected by the Group's various businesses and reported as an aggregation if they concern the same risk event and the total exceeds the reporting threshold.

## Risk and Control Self-Assessment (RCSA)

The purpose of Risk and Control Self-Assessment (RCSA) is to assess the Group's exposure to operational risks in order to improve their monitoring. Based on the results of other operational risk management frameworks (internal losses, KRI, etc.), risk areas are identified by the functions for their respective fields of expertise, and interviews are conducted with Group experts.

The objectives are as follows:

- identifying and assessing the major operational risks to which each business is exposed (the "intrinsic" risks inherent in the nature of a business, while disregarding prevention and control systems). Where necessary, risk mapping established by the functions (e.g. Compliance, Information Systems Security, etc.) contribute to the evaluation of intrinsic risks
- assessing the quality of major risk prevention and mitigation measures (including their existence and effectiveness in detecting and preventing major risks and/or their capacity to reduce their financial impact)
- assessing the risk exposure of each business that remains once the risk prevention and mitigation measures are taken into account (the "residual risk"), while disregarding insurance coverage
- correcting any deficiencies in risk prevention and mitigation measures and implementing corrective action plans
- facilitating and/or supporting the implementation of key risk indicators
- adapting the risk insurance strategy, if necessary. As part of this exercise, the risks within a given scope are described using a double scale of severity and frequency.

# Key risk indicators (KRI)

KRIs supplement the overall operational risk management system by providing a dynamic view (warning system) of changes in business line risk profiles. Regular KRI monitoring assists managers of the business entities in their assessment of the Group's operational risk exposure *via* risk & control self-assessment (the RCSA), and the analysis of internal losses and of scenarios, thereby providing them with:

- a quantitative, verifiable risk measurement
- a regular assessment of the improvements or deteriorations in the risk profile and the control and prevention environment which require particular attention or an action plan.

KRIs that may have a significant impact on all or part of the Group are reported to the Group's Executive Committee on a quarterly basis *via* a specific KRI dashboard.

# Analysis of scenarios

The analysis of scenarios serves two purposes: informing the Group of potential significant areas of risk and contributing to the calculation of the capital required to cover operational risks.

For the calculation of capital requirements, the Group uses *scenario* analyses to:

- measure its exposure to potential losses arising from low frequency/very high severity events
- provide an expert's opinion of loss distribution for event categories whose internal loss data history is insufficient.

In practice, various scenarios are reviewed by experts, who gauge severity and frequency of the potential impacts for the Group by factoring in internal and external loss data as well as the internal framework (controls and prevention systems) and the external environment (regulatory, business, etc.).

Analyses are undertaken for two types of scenarios:

- major Group stress scenarios, involving very severe events that cut across businesses and departments, having an external cause in most cases and requiring, if necessary, a business continuity plan (BCP)
- business line scenarios that do not, strictly speaking, fall into the category of business continuity, but are used to measure the unexpected losses to which the businesses may be exposed. Specific actions are performed in order to prevent the portfolio from being diluted over too many scenarios and to maintain the system's focus on risks that could severely impact the Group

Governance is established in order to, notably:

- to allow the approval of the annual scenario update programme by the Risk Committee (CORISQ)
- to allow validation of the internal loss scenarios by the senior management of Core Businesses and Corporate Divisions, through internal control coordination committees (CCCI) for the departments involved or through *ad hoc* meetings
- to conduct an overall review of the Group's risk hierarchy and the appropriateness of the scenarios through the "Expert Committees", chaired by the Group Chief Risk Officer.

#### Analysis of external losses

External losses are the data of operational losses suffered by the banking and financial sector, coming from databases managed by external providers, as well as data shared by the banking industry as part of consortia.

This data is used to enhance the identification and evaluation of the Group's exposure to operational risks by benchmarking internal loss records against industry-wide data.

# Permanent level 2 control

The permanent level 2 control in the Operational Risk Department was reinforced in 2015 with the recruitment of new controllers dedicated exclusively to this function, and the performance of control reviews within the scope of SGPM.

Those level 2 controls cover the operational risks specific to these business lines and risks related to purchases, communication, real estate, human resources and information systems.

They are intended to ensure that the first level controls are defined, executed and effective, and that corrective measures are implemented for any anomalies.

Verifications made by the level 2 control teams concern all the Group's business activities. They are applied first and foremost to controls covering the major risks and to controls selected randomly.

# Crisis management and business continuity

The crisis management and business continuity systems aim to mitigate as much as possible the impacts of potential damages on clients, staff and infrastructure, thus protecting the Group's reputation, its brands'image and its financial resiliency. The systems also meet regulatory requirements.

The approach used to implement and optimise the business continuity systems of each Group entity is based on a methodology that meets international standards. It consists primarily in identifying risks to which the company is exposed as well as their possible impacts, implementing an effective response capability to withstand various crisis scenarios (including extreme shocks), and maintaining these systems to ensure they remain effective.

## **Combating fraud**

The Group pays particular attention to preventing and detecting fraud. Losses due to fraud are contained after dropping remarkably from 2010 to 2014, notably due to the implementation of effective systems in all Core Businesses and Corporate Divisions. Since the end of 2009, an anti-fraud coordination unit within the Operational Risk Department has supplemented these specific systems. This unit is intended primarily to serve as a centre of expertise in order to strengthen fraud prevention through Group-wide initiatives (training and awareness-raising), as well as to disseminate best practices based on lessons learned from established or prevented cases of fraud.

# 7.4. OPERATIONAL RISK MODELLING

The method used by the Group for operational risk modelling is based on the Loss Distribution Approach (LDA).

Under this approach, operational risks are modelled using segments, each segment representing a type of risk and a Group Core Business. The frequency and severity of operational risks, based on past internal losses, external losses or *scenario* analyses, are estimated and the distribution of annual losses is calculated for each segment. This approach is supplemented by cross-business *scenario* analyses that measure cross-business risks for Core Businesses, such as, for example, property destruction and pandemic risks.

Aside from the individual risks associated with each segment or cross-business *scenario* analysis, the model takes into account the diversification between various types of risks and Core Businesses, as well as the effect of insurance policies underwritten by the Group.

The Group's regulatory capital requirements for operational risks within the scope eligible for the AMA (Advanced Measurement Approach) internal model are then defined as the 99.9% quantile of the Group's annual loss distribution.

Societe Generale's capital requirements for operational risks were EUR 3.5 billion at the end of 2015, representing EUR 43.9 billion in risk-weighted assets. This assessment integrates capital requirements on both the AMA and Standard scopes.

## Insurance cover in risk modelling

In accordance with regulations, Societe Generale incorporates risk cover provided by insurance policies when calculating regulatory capital requirements for operational risks, within the limit of 20% of said requirements.

These insurance policies cover part of the Group's major risks, i.e. civil liability, fraud, fire and theft, as well as systems interruptions and operating losses due to a loss of operating resources.

Risk reduction through insurance policies results in a 7.2% decrease in total capital requirements for operational risks.

#### **Quantitative data**

The following chart breaks down operating losses by risk category for the 2011-2015 period.

#### OPERATIONAL RISK LOSSES : BREAKDOWN BY SOCIETE GENRALE RISK EVENT TYPE (2011 TO 2015) - AMOUNTS



OPERATIONAL RISK LOSSES : BREAKDOWN BY SOCIETE GENRALE RISK EVENT TYPE (2011 TO 2015) - NUMBER OF EVENTS



Over the past five years, Societe Generale's operational risks were concentrated on average on four types, accounting for 96% of the Group's total operating losses:

- disputes with authorities represented 46% of the Group's operating losses over the period. Losses incurred through this type of litigation are relatively high unit amounts, so that this category represents only 8% of the total number of losses. The Euribor transaction, a loss in 2013, alone accounted for 40% of total losses within this category over the period. Other disputes with authorities were largely related to tax reassessments.
- fraud and other criminal activity accounted for 23% of operational losses incurred by the Group between 2011 and 2015 (in terms of amount), representing the second largest category. 2011 losses subsequent to fraudulent loans granted by BRD alone represented 40% of total losses in that category over the period. Major losses observed in 2014 and 2015 resulted from electronic payment fraud or the production of false documents relating to guarantees to obtain financing.
- execution errors represented 15% of operating losses, the third cause of loss for the Group. This category was the second cause of loss in 2014 (19% of the total that year) and became the leading cause in 2015, representing a third of the total losses for the year. Losses of this type gradually increased in amount and in number over the last three years, increased by the volatility and volume of transactions on financial markets.
- commercial disputes represented 12% of losses over the 2011-2015 period. The downward trend that began in 2012 continues: a 53% decrease between 2012 and 2015 in total losses within that category. Given the disputes involving large amounts observed in 2014 and 2015, however, especially for our American and British peers, we should be careful to remain vigilant, in particular regarding the selection of sold products, their compliance, the quality of their documentation and the quality of service expected by customers.

The other categories of Group operational risks (rogue trading, IT system interruptions, pricing or risk valuation errors and loss of operating resources) were still fairly insignificant, representing barely 4% of the Group's losses on average over the 2011 to 2015 period.

# 7.5. OPERATIONAL RISK INSURANCE

### Policies of the insurance subscription

#### **GENERAL POLICY**

Since 1993, Societe Generale has implemented a global policy of hedging Group operational risks through insurance.

This consists in searching the market for the broadest and highest levels of guarantee with regard to the risks incurred and enabling all entities to benefit from these guarantees wherever possible. Coverage is taken out with leading insurers. Where required by local legislation, local policies are taken out, which are then reinsured by insurers that are part of the global programme.

In addition, special insurance policies may be taken out by entities which perform specific activities.

A Group internal reinsurance company intervenes in several policies in order to pool high-frequency, low-level risks between entities. This approach contributes to the improvement of the Group's knowledge and management of its risks.

# **Description of main coverages**

#### GENERAL RISKS

Buildings and their content, including IT equipment, are insured at their replacement value. The guarantee covering acts of terrorism abroad has been renewed.

Liability other than professional liability (i.e. relating to operations, Chief Executive Officers and Directors, vehicles, etc.) is covered by insurance policies around the world. The amounts insured vary from country to country to meet operating requirements.

#### RISQUES PROPRES À L'ACTIVITÉ

L'assurance ne constitue qu'un des moyens de prévention des conséquences des risques propres à l'activité. Elle vient en complément de la politique de maîtrise des risques menée par le Groupe.

#### **RISKS ARISING FROM OPERATIONS**

Insurance is only one of the measures to offset the consequences of the risks inherent in the Group's activity. It complements the risk monitoring policy led by the Group.

#### THEFT/FRAUD

These risks are included in the "Banker's Blanket Bond" policy that insures all the Group's financial activities around the world.

Internal frauds (committed by an employee or by a third party acting with the aid of an employee) and external frauds (committed by a third party acting on its own), with the intent to obtain illicit personal gain or to harm the Group, are covered.

#### **PROFESSIONAL LIABILITY**

The consequences of any legal action against staff or managers as a result of their professional activity are insured under a global policy.

#### **OPERATING LOSSES**

The consequences of any accidental interruption to activity are insured under a global policy. This policy supplements the business continuity plans. The amounts insured are designed to cover losses incurred between the time of the event and the implementation of an emergency solution.

# 7.6. CAPITAL REQUIREMENTS

Societe Generale's capital requirements related to operational risk are calculated mainly under the internal model (93% in 2015). The

following table presents the Group's exposure and the corresponding capital requirements at 31<sup>st</sup> December 2015.

#### TABLE 62: CAPITAL REQUIREMENTS FOR OPERATIONAL RISK

	31 <sup>st</sup> December 2015				31 <sup>st</sup> December 2014	
(In EUR m)	Risk weighted assets under Standardised approach	Risk weighted assets under Advanced Measurement Approach (AMA)	Total Risk weighted assets	Capital requirements	Total Risk weighted assets	Capital requirements
Global Banking and Investor Solutions	314	27,950	28,263	2,261	28,560	2,284
Corporate centre	354	2,988	3,343	267	5,411	433
International Retail Banking & Financial Services	2,431	5,070	7,501	600	6,222	498
French Retail Banking	38	4,709	4,747	380	3,738	299
Total	3,137	40,717	43,854	3,508	43,931	3,514

# IN BRIEF

Structural interest and exchange rate risk correspond the risk of losses of interest margin or value of the fixed rate structural position arising from variations in interest or exchange rates. Structural interest and exchange rate risk arises from commercial activities and from transactions entered into by the Corporate Centre.

This section describes the monitoring of structural risks and provides information on structural interest rate and exchange rate risks.

> Overall sensitivity to the Group's structural interest rate risk (in % of regulatory capital)



Group net interest margin sensitivity over the full year 2016, in the event of parallel shift in the yield curves of +200bp (in % of the net banking income)



Maximum sensitivity of the Group Common Equity Tier 1 ratio to a 10% change in the currency (in basis points)

+/- 2pb

# 8. STRUCTURAL INTEREST RATE AND EXCHANGE RATE RISKS

Structural exposure to interest rate and exchange rate risks encompasses exposures resulting from commercial transactions, the associated hedging transactions and corporate centre transactions for each of the Group's consolidated entities.

The interest rate and exchange rate risks linked to trading activities are excluded from the structural risk measurement scope as they belong to the category of market risks. Structural and market exposures constitute the Group's total interest rate and exchange rate exposure. The general principle is to reduce structural interest rate and exchange rate risks to the greatest extent possible within the consolidated entities. Wherever possible, commercial transactions and corporate centre operations within entities are hedged against interest rate and exchange rate risks, either through micro-hedging (individual hedging of each commercial transaction) or macro-hedging techniques (hedging of portfolios of similar commercial transactions within a treasury department). At a consolidated level, some foreign exchange positions are kept in order to minimise the sensitivity of the Group Common Equity Tier 1 ratio to currency fluctuations.

# 8.1. ORGANISATION OF THE MANAGEMENT OF STRUCTURAL INTEREST RATE AND EXCHANGE RATE RISKS

Les principes et les normes de gestion de ces risques sont définis au niveau du Groupe. Les entités sont responsables en premier lieu de la gestion de ces risques. Des Départements ALM (Asset and Liability Management), au sein des Directions financières du Groupe, complètent ce dispositif de contrôle.

The principles and standards for managing these risks are defined at the Group level. The entities are first and foremost responsible for managing these risks. The ALM (Asset and Liability Management) Departments within the Group's Finance Divisions supplement the control framework.

# The Group Finance Committee, a General Management body

The Group Finance Committee:

- validates and oversees the structural risk monitoring, management and supervision system;
- reviews changes in the Group's structural risks through consolidated reporting by the Finance Division;
- examines and validates the measures proposed by the Group Finance Division.

# The ALM Department within the Finance Division

The ALM (Asset and Liability Management) Department is responsible for:

- defining the structural risk policies for the Group and formalising risk appetite to structural risks;
- defining the steering indicators and overall stress test scenarios of the different types of structural risks and setting the main limits for the business divisions and the entities;
- analysing the Group's structural risk exposure and defining hedging strategies;
- monitoring the regulatory environment concerning structural risk;

- defining the ALM principles for the Group;
- defining the normative environment of the structural risk metrics, modelling and framing methods;
- validating the models used by the Group entities with regard to structural risks, validated together with the Risk Department and the business lines;
- inventorying, consolidating and reporting on Group structural risks;
- monitoring compliance with structural risk limits.

In September 2015, the Group's ALM system was centralised and strengthened.

The main changes are the following:

- fusion within the Finance Division of teams dedicated to monitoring the business lines' structural risks and of the team dedicated to the operational management of the ALM risks associated with French Retail Banking, in order to more effectively apply the changes requested by regulators,
- a system better suited to the novel economic environment and that can be used to streamline a certain number of normative and modelling works within the Group.

# The ALM Risk Control Department within the Risk Division

In 2015, a new department was created within the Market Risk Department to conduct second-level supervision of the ALM models used within the Group and of the associated framework. Accordingly, this department provides an opinion on the methodological principles, feeding parameters and backtests of ALM models. It analyses proposals from the ALM Department regarding the risk indicators, stress test scenarios and structural risk frameworks. It also conducts second-level controls of risk limits in coordination with the first-level control teams.

# The entities are responsible for structural risk management

In this respect, entities apply the standards defined at the Group level, develop their models, measure their risk exposure and implement the required hedges.

Each entity has its own structural risk manager, who reports to the entity's Finance Division and is responsible for conducting first-level controls and for reporting the entity's structural risk exposure to the Group Finance Division *via* a shared IT system.

Retail Banking entities both in France and abroad generally have an *ad hoc* ALM (Asset Liability Management) Committee responsible for applying the validated models, managing exposures to interest rate and exchange rate risks, and implementing the hedging programs in compliance with the principles set out by the Group and the limits validated by the Finance Committee and the business lines' ALM committees.

# 8.2. STRUCTURAL INTEREST RATE RISK

Structural interest rate risk is measured within the scope of structural activities (commercial transactions, the associated hedging transactions and corporate centre transactions) for each of the Group's entities.

Structural interest rate risk arises mainly from the residual gaps (surplus or deficit) in each entity's fixed-rate forecasted positions.

### **Objective of the Group**

When steering structural interest rate risk, the main aim is to ensure the risk is managed by reducing each Group entity's exposure to structural interest rate risk as far as possible.

To this end, each entity as well as the Group as a whole are subject to sensitivity limits validated by the Finance Committee. Sensitivity is defined as the variation in the net present value of future (maturities of up to 20 years) residual fixed-rate positions (surplus or deficit) for a 1% parallel increase in the yield curve (i.e. this sensitivity does not relate to the sensitivity of the annual net interest margin). The limit set at Group level is EUR 1 billion.

### Measurement and monitoring of structural interest rate risks

Societe Generale uses several indicators to measure the Group's overall interest rate risk. The three most important indicators are:

- interest rate gap analysis (the difference between outstanding fixed-rate assets and liabilities by maturity): the schedule of fixedrate positions is the main indicator for assessing the characteristics of the necessary hedging operations. It is calculated on a static basis;
- the net actual value sensitivity is a supplementary and synthetic indicator used to set limits for the entities. It is calculated as the sensitivity of the economic value of the balance sheet to variations in interest rates. This measurement is calculated for all currencies to which the Group is exposed;
- the net interest margin sensitivity to variations in interest rates in various stress scenarios takes into account the sensitivity which is generated by future commercial productions over a three-year rolling horizon. It is calculated on a dynamic basis.

In order to quantify its exposure to structural interest rate risks, the Group analyses all fixed-rate assets and liabilities in the future. These positions come from transactions remunerated or charged at fixed rates and from their maturities.

Assets and liabilities are analysed independently, without any *a priori* matching. The maturities of outstanding assets and liabilities are determined on the basis of the contractual terms of transactions, conventional assumptions and models based on customers' historic behaviour patterns (particularly for sight deposits, regulated savings accounts, early loan repayments, and shareholders' equity).

Once the Group has identified its fixed-rate positions (surplus or deficit), it calculates the sensitivity (as defined above) to interest rate variations. This sensitivity is defined as the variation of the net present value of the fixed-rate positions for a 1% instantaneous parallel increase in the yield curve.

In addition to this analysis, the Group analyses the sensitivity to different yield curve configurations of its fixed-rate position (steepening and flattening of the yield curve) and in the event of changes in the balance sheet structure. The measurement of the net interest income sensitivity over a three-year rolling horizon is also used by the Group to quantify the structural interest rate risk of significant entities.

Throughout 2015, the Group maintained overall sensitivity to interest rate risk below 1.5% of Group regulatory capital and below the EUR 1 billion limit.

The following observations can be made with regard to the business lines' structural interest rate risk:

- within French Retail Banking, the outstanding amounts of customer deposits are generally considered to be fixed-rate. Macro-hedging is set up mainly through the use of interest rate swaps, in order to limit French Retail Banking's net actual value and net interest margin sensitivities to interest rate risk (on the basis of the adopted scenarios) within its limits. At 31<sup>st</sup> December 2015, the sensitivity of French Retail Banking's economic value, based on its essentially euro-denominated assets and liabilities, was EUR -127 million;
- transactions with large corporates are generally micro-hedged and therefore present no residual interest rate risk;
- transactions with customers of the Specialised Financial Services subsidiaries are generally macro-hedged and therefore present only a very low interest rate risk;

- commercial transactions at the Group's subsidiaries and branches located in countries with weak currencies can generate structural interest rate risk, which remains limited at the Group level. These entities may have problems in optimally hedging interest rate risk due to the weak development of the financial markets in some countries;
- corporate centre transactions are subject to hedging.

Sensitivity to interest rate variations within the Group's main entities, accounting for 90% of the Group's outstanding loans and the corporate centre, represented EUR 45 million as at 31<sup>st</sup> December 2015 (for a 1% parallel and instantaneous rise in the yield curve).

#### TABLE 63: MEASUREMENT OF THE ENTITIES' SENSITIVITY TO A 1% INTEREST RATE SHIFT, INDICATED BY MATURITY

	31 <sup>st</sup> December 2015				
(In EUR m)	Less than one year	between 1 and 5 years	More than 5 years	Total sen- sitivity	
Amount of sensitivity	(36)	(10)	91	45	

The results of the gap measurements (difference between liability and asset outstandings, at a fixed rate, by maturity) for the same entities are as follows (liabilities minus assets/figures in millions of euros):

#### TABLE 64: INTEREST RATE GAPS BY MATURITY AT 31<sup>st</sup> DECEMBER 2015

(In EUR m)

Maturities	1 year	3 years	5 years	7 years
Amount of gap	(6,340)	1,369	3,336	66

The Group analyses the sensitivity of earnings to variations in market interest rates using stress tests on the net interest margin.

At 31<sup>st</sup> December 2015, the Group's net interest margin sensitivity for 2016 was as follows:

# TABLE 65: SENSITIVITY OF THE GROUP'S INTEREST MARGIN

31 <sup>st</sup> Dec. 2015	31 <sup>st</sup> Dec. 2014
81	142
(145)	(207)
43	58
(85)	(108)
(48)	27
(87)	16
	81 (145) 43 (85) (48)

Calculations are based on aggregated estimates at 31<sup>st</sup> December of a scope of Group consolidated entities representing more than 80% of outstanding loans, monitored in terms of economic value sensitivity, and of the corporate centre.

The dynamic vision of the balance sheet varies according to the amortisation of outstanding transactions and transaction renewals based on outstanding amounts budgeted for 2016. The steepening assumptions used allow for a 100bp increase in long-term rates with short-term rates remaining constant. The flattening *scenario* used for the simulation allows for a 100bp increase in short-term rates with long-term rates remaining constant.

The Societe Generale Group's interest margin sensitivity over the full year 2016 is relatively low. In the event of a parallel shift in the yield curves of +200bp, the sensitivity is positive and represents less than 1% of net banking income.

The net interest margin sensitivity mainly stems from the impact on:

- customer deposits: generally little or no interest is paid on deposits, and pricing is only partly impacted by fluctuations in interest rates, as the margin on deposits is mainly derived from reinvestment rates;
- new loan production, for which pricing is not adjusted as quickly as market rates.

The margin sensitivity on outstanding customer transactions results from the renewal of amounts due on reinvested deposits, and from the residual sensitivity to interest rate variations, which is low thanks to the hedging policy and the use of variable-rate positions (this is the case for the majority of Private Banking commitments).

The French and International Retail Banking activities are favourably exposed to a rise in interest rates, as deposits can then be reinvested at higher rates, while margins on outstanding loans remain stable. This increase in margin is, however, partially offset by the fall in margins on new loan production (loan rates do not adjust as quickly as market rates) and by an increase in funding costs. Conversely, retail banking activities are unfavourably exposed to a fall in interest rates as deposits are then reinvested at lower rates and the margin on outstanding loans falls due to prepayments. This fall in margin is partially offset by the rise in margins on new loan production (customer loan rates do not fall as quickly as market rates) and by a reduction in funding costs.

# 8.3. STRUCTURAL EXCHANGE RATE RISK

Structural exchange rate risk is mainly caused by:

- foreign currency denominated capital contributions and equity investments financed through the purchase of foreign currencies;
- retained earnings in foreign subsidiaries;
- investments made by some subsidiaries in a currency other than the one used for their equity funding for regulatory reasons.

## **Objective of the Group**

The Group's policy is to reduce the sensitivity of its Common Equity Tier 1 ratio against fluctuations in the currencies it operates. To this end, it may decide to purchase currencies to finance very long-term foreign currency denominated investments, thus creating structural foreign exchange positions. Any differences in the valuation of these structural positions are subsequently booked as translation differences.

#### Measurement and monitoring of structural foreign exchange rate risks

The Group quantifies its exposure to structural foreign exchange rate risks by analysing all assets and liabilities denominated in foreign currencies, arising from commercial transactions and the corporate centre for each of the Group's entities.

Foreign exchange risk resulting from trading activities is not included in the scope of structural foreign exchange risk measurement. It falls within the scope of market risks. Structural foreign exchange positions thus represent only a part of the overall currency transactions of the Societe Generale Group. The foreign exchange transactions of the Societe Generale Group, as of 31<sup>st</sup> December 2015, are presented in table 25.

# TABLE 66: SENSITIVITY OF THE COMMON EQUITY TIER 1 RATIO OF THE GROUP TO A 10% CHANGE IN THE CURRENCY (IN BASIS POINTS)

Currency	Impact on the Common Equity Tier 1 ratio of a 10% currency depreciation	Impact on the Common Equity Tier 1 ratio of a 10% currency appreciation
USD	(2)	2
GBP	(1)	1
JPY	(1)	1
AUD	0	0
CZK	(1)	1
RUB	0	0
RON	0	0
OTHERS	(3)	3

In 2015, structural positions monitoring reduced the Common Equity Tier 1 ratio sensitivity to currency fluctuations (sensitivity of the Common Equity Tier 1 ratio is managed within limits per currency set according to the Group's risk appetite in these currencies).

# IN BRIEF

Liquidity risk corresponds to the risk of the Group not being able to meet its cash or collateral requirements as they arise and at a reasonable cost.

This section details the monitoring of liquidity and the management of this risk.

LCR RATIO<sup>(1)</sup>



#### Liquidity reserve at end-2015

EUR 169 bn (Amount at end-2014: EUR 140 bn)

Fully loaded proforma based on CRR/CRD4 rules as published on 26<sup>th</sup> June 2013, including Danish compromise for insurance.

# 9. LIQUIDITY RISK

Liquidity risk is defined as the risk of not being able to meet cash flow or collateral requirements when they fall due and at a reasonable price.

# 9.1. GOVERNANCE AND ORGANISATION

The principles and standards applicable to the management of liquidity risks are defined by the Group's governing bodies, whose duties in the area of liquidity are listed below:

- The Group's Board of Directors:
  - establishes the level of liquidity risk tolerance as part of the Risk Appetite exercise, including the time period during which the Group can operate under conditions of stress ("survival horizon"),
  - meets regularly to examine the Group's liquidity risk situation, at least on a quarterly basis;
- the Executive Committee:
  - sets budget targets in terms of liquidity based on proposals from the Group's Finance Division,
  - allocates liquidity to the pillars and Group Treasury based on proposals by the Group's Finance Division;
- the Finance Committee is the body monitoring structural risks and the management of scarce resources. As such, the Finance Committee:
  - meets every six weeks under the chairmanship of the Chairman and Chief Executive Officer or a Deputy Chief Executive Officer with the representatives from the Finance Division's Risk Department and pillars,
  - oversees and validates the limits set for structural liquidity risk,
  - regularly monitors compliance with the budget and liquidity trajectory,
  - takes decisions, if necessary, on the implementation of corrective measures,
  - takes decisions, if necessary, on methodology issues regarding liquidity risk management,
  - examines regulatory changes and their impact.

The pillars are responsible for managing liquidity risk within their scope and are directly supervised by the Group Finance Division. The businesses must ensure compliance with the regulatory requirements applicable to the entities falling within their scope of supervision.

The Group Finance Division manages and monitors liquidity risk through three separate departments, in compliance with the principle of ensuring a separation between risk steering, execution and control functions:

- the Strategic and Financial Steering Department, responsible for:
  - establishing the Group's financial trajectory, in line with its strategic targets, regulatory requirements, and market expectations,
  - ensuring that liquidity steering is in line with the Group's other

objectives in terms of profitability and scarce resources,

- proposing and monitoring the businesses' budget trajectory,
- monitoring the regulatory environment and developing liquidity steering standards for the pillars;
- the Balance Sheet and Global Treasury Management Department, responsible for:
  - execution of the Group's short-term and long-term funding plan,
  - supervising and coordinating the Group's Treasury functions,
  - monitoring the market and contributing its operational expertise to the establishment of liquidity steering objectives and liquidity allocation to businesses,
  - managing the collateral used in refinancing operations (Central Banks, covered bonds, securitisation, secured funding), and monitoring the liquidity reserve,
  - managing the Group's central funding department (management of liquidity and equity within the Group), including the internal liquidity grids,
  - developing and implementing the emergency plan in the event of liquidity shortage for the Group.
- The ALM department, which reports to the Chief Financial Officer, is in charge of, in particular:
  - the supervision and control of structural risks (liquidity, interest rates and exchange rates) incurred by the Group,
  - the control of structural risk models and their compliance with the rules and methodologies of the Group, the monitoring of compliance with risk limits and management practices within the Group's divisions, business lines and entities.

In 2015, a new department was created within the Market Risk Department to conduct second-level supervision of the ALM models used within the Group and of the associated framework. Accordingly, this department provides an opinion on the methodological principles, feeding parameters and backtests of ALM models. It analyses proposals from the ALM Department regarding the risk indicators, stress test scenarios and structural risk frameworks. It also conducts second-level controls of risk limits in coordination with the first-level control teams.

# 9.2. THE GROUP'S APPROACH TO LIQUIDITY RISK MANAGEMENT

The Group's primary objective is to ensure the funding of its activities in the most cost-effective way by managing liquidity risk and adhering to regulatory constraints. The liquidity steering system aims at providing a balance sheet framework with an assets and liabilities target structure that is consistent with the risk appetite defined by the Board of Directors:

- the assets structure should allow the businesses to develop their activities in a way that is liquidity-efficient and compatible with the target liabilities structure. This development must comply with the liquidity gaps defined at Group level (under static and stress scenarios) as well as regulatory requirements;
- the liabilities structure is based on the ability of the businesses to collect financial resources from customers and the ability of the Group to sustainably raise financial resources on the markets, in accordance with its risk appetite.

This steering system is based on a measurement and supervision of the businesses' liquidity gaps under reference and stress scenarios, their Group funding needs, the funds raised by the Group on the market, the eligible assets and the businesses' contribution to regulatory ratios. Accordingly, the principles of liquidity management are as follows:

- 1. The businesses must observe low to nil static liquidity gaps within the operating limits of their activities by using to the Group's Central Treasury, which can, if needed, run an (anti) transformation position and manage it within the framework of the established risk limits.
- 2. Internal liquidity stress tests, established on the basis of the systemic, specific or combined scenarios are controlled at Group level. They are used to ensure compliance with the survival horizon established by the Board of Directors and to calibrate liquidity reserves. They are accompanied by a Contingency Funding Plan that foresees measures to be taken in the event of a liquidity crisis.

- 3. The businesses' funding needs (short-term and long-term) are determined on the basis of the development objectives for the franchise and in line with the Group's fund-raising targets and capabilities.
- 4. A plan for long-term funding, which complements the resources raised by the pillars, is designed to ensure the repayments of upcoming maturities and finance the growth of the businesses. It takes into account the Group's investment capabilities and aims to optimise the cost of fund-raising while complying with limits in terms of market concentration. Diversification in terms of issuers and investor pools is also examined and managed.
- 5. The Group's short-term resources are sized to finance the short-term needs of the businesses over periods appropriate to their management and in line with market concentration limits. As outlined above, they are proportioned with respect to the liquidity reserve on the assets side based on the established stress survival horizon as well as the Group's LCR target (Liquidity Coverage Ratio, see Regulatory Ratios section).
- 6. The Group's liquidity steering takes into account compliance with the target regulatory ratios (LCR, standard ratio), as the businesses are supervised regarding their contribution to these ratios.

Finally, liquidity is governed in terms of cost *via* the Group's internal transfer pricing scheme. Funding allocated to the businesses is charged to them based on scales that must reflect the liquidity cost for the Group. This system is aimed at optimising the use of external financing sources by businesses and is used to monitor the balance of funding on the balance sheet.

Societe Generale has undertaken a specific review of its liquidity risks and believes that it is able to meet its upcoming maturities.

# 9.3. REFINANCING STRATEGY

The Group's financing strategy is based on the following principles:

- the Group's stable funding resources (including shareholders' equity, customer deposits and medium/long-term market resources) finance the long-term needs of the businesses (including tangible and intangible assets, customer loans and the portfolio of available-for-sale or held-to-maturity securities);
- short-term market resources finance the Group's short-term assets, which are predominantly carried by Global Banking and Investor Solutions' Global Markets pillar;
- the Group maintains a liquidity reserve to cover outflows in situations of stress.

#### Market financing

The Group's market resources totalled EUR 209 billion at 31<sup>st</sup> December 2015. Of this total, EUR 82 billion have a remaining maturity of less than one year, of which EUR 27 billion correspond to debt securities issued with an initial medium/long-term maturity (more than one year) and EUR 55 billion to short-term market resources.

Group short-term market resources consist of unsecured notes issued under the Group's short-term programmes (mainly Certificates of Deposit, promissory notes and commercial paper), and deposits from banks and financial customers. The majority of the short-term market resources are issued by the Group's Central Treasury to international institutional investors under its short-term programme. The Group's Central Treasury adheres to diversification thresholds on its funding sources by counterparty and by currency. Asset-Backed Commercial Paper vehicles contribute to the Group short-term market resources since 1<sup>st</sup> January 2014, following their inclusion in the consolidation scope with the application of IFRS 10.

The amount of group short-term market resources totalled EUR 55 billion at 31<sup>st</sup> December 2015, against 58 billion at 31<sup>st</sup> December 2014, and has been stabilised in 2015, after a significant reduction during 2014 (EUR -38 billion) according to the Group strategy to reduce the short-term funding in the balance sheet funding structure.

Medium/long-term market resources (including the portion of securities originally issued with a maturity of more than one year and maturing within the year) totalled EUR 155 billion at 31<sup>st</sup> December 2015, against 136 billion at 31<sup>st</sup> December 2014. These consist of long-term interbank liabilities (long-term credit lines granted by central banks, banks and international financial institutions, etc.), and medium/long-term debt securities, the breakdown of which reflects the Group's policy concerning the diversification of funding sources. The Group has access to large and complementary investor pools *via*:

- senior vanilla issues in the form of public issues or private placements;
- mortgage bonds issued by SG SFH vehicles; and
- SG SCF as well as by the Caisse du Refinancement et de l'Habitat;
- senior structured issues issued by Societe Generale SA and distributed to institutional investors and, to a large extent, to individual customers (*via* retail and private banking networks belonging to the Group or its partners);
- subordinated debt (Tier 2 debt instruments) issued by Societe Generale SA, in addition to Group Tier 2 and Tier 1 issues booked to equity.

Furthermore, access to diversified investor pools is ensured by a wide array of Group issuers: Societe Generale SA, Crédit du Nord and the IBFS subsidiaries issuing secured (securitisations, mortgage bonds) and unsecured notes. IBFS issues, along with its deposit inflows and bilateral borrowings, are aimed specifically at increasing the financing independence of its subsidiaries.

# 9.4. DISCLOSURE ON ASSET ENCUMBRANCE

An asset shall be treated as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralize or credit enhance any transaction from which it cannot be freely withdrawn.

#### **TEMPLATE A - ASSETS**

	Carrying amounts of encumbered assets	Fair value of encumbered assets	Carrying amounts of unencumbered assets	Fair value of un encumbered assets
(In EUR m)	010	040	060	090
010 Assets of the reporting institution	144,642	0	1,083,840	0
030 Equity instruments	44,603	44,603	37,797	37,797
040 Debt securities	46,689	46,689	71,761	71,761
120 Other assets	2,463	0	311,100	0

#### **TEMPLATE B – COLLATERAL RECEIVED**

	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
(In EUR m)	010	040
130 Collateral received by the reporting institution	251,695	79,466
150 Equity instruments	52,092	12,526
160 Debt securities	199,604	66,937
230 Other collateral received	-	-
240 Own debt securities issued other than own covered bonds or ABSs	73	448

#### TEMPLATE C - ENCUMBERED ASSETS/COLLATERAL RECEIVED AND ASSOCIATED LIABILITIES

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
(In EUR m)	010	030
010 Carrying amount of selected financial liabilities	311,775	307,155

#### **TEMPLATE D – INFORMATION ON IMPORTANCE OF ENCUMBRANCE**

Securities (equities, debt securities) held within the banks' portfolios or borrowed **represent the vast majority of the Group's encumbered assets**, due to the size of Global Markets' activities in the Bank, one of the main actors in this business inter nationally:

- A repurchase agreement activity (repo/reverse repurchase agreements (reverse repos) leads to securities received as collateral being used and lent in turn as part of a new transaction, or the sale of the asset, with a significant portfolio of repo/reverse repos and securities lent and borrowed within the businesses of Global Banking and Investor Solutions, notably Global Markets and Securities Services and Brokerage, acting as intermediaries on behalf of their clients;
- A Primary Dealer activity on the debt issued by governments as part of auction processes and partially reinvested in the form of repos and securities lent to and borrowed from investors on the market;
- A securities lending and borrowing activity (collateral swaps) in the Global Markets and Securities Services and Brokerage businesses (acting as agents on behalf of their clients).

The use of loans (loans to corporate clients or individual customers) deposited as collateral as part of the refinancing process constitutes another source of liquidity funding on top of deposits and market resources that are essentially obtained through subordinated and unsecured issuances. This enables **debt securities to be issued**, as part of specific legal frameworks (covered bonds issued through vehicles such as Société Foncière à l'Habitat and Société de Crédit Foncier) or *via* conduits and securitisations. These assets can also be collateralised when the Group resorts to secured funding - domestic or international (CRH, European Investment Bank), or bilaterally. Finally, collateralisation may occur as part of the ECB monetary policy.

# 9.5. LIQUIDITY RESERVE

The Group's liquidity reserve encompasses cash at central banks and assets that can be used to cover liquidity outflows under a stress *scenario*. The reserve assets are available, i.e. not used as a guarantee or as collateral on any transaction. They are included in the reserve after applying a haircut to reflect their expected valuation under stress. The Group's liquidity reserve contains assets that can be freely transferred within the Group or used to cover subsidiaries' liquidity outflows in the event of a crisis: non transferrable excess cash (according to regulatory ratio definition) in subsidiaries is therefore not included in the Group liquidity reserve.

The liquidity reserve includes:

- central bank deposits, excluding mandatory reserves;
- High-Quality Liquid Assets (HQLAs), which are securities that are quickly transferable on the market via sale or repurchase transactions; these include government bonds, corporate bonds and equities listed on major indices (after haircuts). These HQLAs essentially meet the eligibility criteria for the LCR, according to the most recent standards known and published by regulators. The haircuts applied to HQLA securities are in line with those indicated in the most recent known texts on determining the numerator of the LCR;

non-HQLA Group assets that are central bank-eligible, including receivables as well as covered bonds and securitisations of Group receivables held by the Group.

The composition of the liquidity reserve is reviewed regularly by a special committee comprising the Finance Division, the Risk Division and the Management of the GBIS pillar, and is adjusted by authorisation of the Finance Committee.

(in billions of euros)	31 <sup>st</sup> Dec. 2015 31 <sup>st</sup> Dec. 2014				
Central bank deposits (excluding mandatory reserves)	64	48			
HQLA securities available and on the market (after haircut)	92	75			
Other available central bank- eligible assets (after haircut)	13	17			
Total	169	140			

# 9.6. REGULATORY RATIOS

The Basel Committee recommends the international implementation of two standard ratios with harmonised parameters which are intended to regulate bank liquidity risk profiles:

- The Liquidity Coverage Ratio (LCR) aims to ensure that banks hold enough liquid assets or cash to survive a significant stress combining a market crisis and specific stress lasting for one month. This ratio is scheduled to come into force on 1<sup>st</sup> January 2015.
- The Net Stable Funding Ratio (NSFR) is a transformation ratio and compares funding needs with stable resources over a one-year period. This ratio is scheduled to come into force on 1<sup>st</sup> January 2018.

The Basel Committee stabilised its final version of the texts dedicated to (respectively) LCR in January 2013 and NSFR on 31<sup>st</sup> October 2014.

The transposition of Basel 3 in European Union law, CRD4 and CRR1 was published on 27<sup>th</sup> June 2013, and is to be implemented by 1<sup>st</sup> January 2014.

The French transposition was published in the French Official Journal (Journal Officiel) on 5<sup>th</sup> November 2014.

The LCR definition was finalised on the basis of technical standards issued by EBA, through a Delegated Act set by the European Commission on 10<sup>th</sup> October 2014. The LCR entered into force at European level on 1<sup>st</sup> October 2015. The minimal requirement was fixed at 60% from 1<sup>st</sup> October 2015 onwards to 100% fully implemented by 1<sup>st</sup> January 2018.

Regarding the NSFR, subsequent to an EBA opinion, the European Commission will submit new regulations to the European Parliament and Council by end-2016.

Societe Generale actively continued its work aimed at transposing the Basel/European legislation and adapting them into management standards within the Group. At the Group level, the LCR is currently managed based on European standards. Pending the stabilisation of the European legislation, the NSFR will be managed according to the Basel standard.

Since the implementation of the LCR European regulatory constraint in October 2015, with a 60% minimum requirement, followed by a 70% requirement on 1<sup>st</sup> January 2016, Societe Generale's LCR ratio has always stood at a level comfortably exceeding 100%.

The LCR was higher than at end-2014 and was well above regulatory requirements at 124% at end-2015 (vs. 118% at end-2014).

The Group's solid liquidity position in terms of the ACP ratio (former French regulatory ratio) was also well in excess of the 100% minimum requirement until it was replaced by the European LCR (1<sup>st</sup> October 2015).

This situation is the consequence of significant efforts made since the crisis to reinforce the Group's liquidity reserves, to extend the average maturity of the Group's short-term liabilities, and to reduce reliance on short-term wholesale funding. It also demonstrates the Group's ability to withstand a severe combined, specific and widespread liquidity crisis.

# 9.7. BALANCE SHEET SCHEDULE

The balance sheet broken down by contractual maturity is presented in this section.

#### FINANCIAL LIABILITIES (EXCLUDING DERIVATIVES)

(In EUR m)	31 <sup>st</sup> December 2015							
	Note to the consolidated financial statements	0-3 M	3M-1YR	1-5 YRS	> 5 YRS	Total		
Due to central banks		6,907	3	41		6,951		
Financial liabilities at fair value through profit or loss, excluding derivatives	Note 3.1	189,718	17,101	22,946	34,989	264,753		
Due to banks	Note 3.6	63,952	6,306	22,323	2,871	95,452		
Customer deposits	Note 3.6	297,297	29,249	28,974	24,112	379,631		
Securitised debt payables	Note 3.6	25,126	25,095	41,542	14,649	106,412		
Subordinated debt	Note 3.9	319	1,155	2,613	8,959	13,046		

Note: the scaling assumptions of these liabilities are described in Note 3.13 of the consolidated financial statements.

Symmetrically, the main lines comprising the corresponding financial assets are presented below.

#### FINANCIAL ASSETS

(In EUR m)	31 <sup>st</sup> December 2015								
	Note to the consolidated financial statements	0-3 M	3M-1YR	1-5 YRS	> 5 YRS	Total			
Cash, due from central banks		75,786	636	1,319	824	78,565			
Financial assets at fair value through profit or loss, excluding derivatives	Note 3.4	328,013	2,991			331,004			
Available-for-sale financial assets	Note 3.4	123,718	5,983		4,486	134,187			
Due from banks	Note 3.5	57,178	5,578	7,969	957	71,682			
Customer loans	Note 3.5	79,183	52,527	144,103	102,234	378,047			
Lease financing and similar agreements	Note 3.5	2,506	5,460	14,153	5,085	27,204			

It should be noted that, due to the nature of its activities, Societe Generale holds derivative products and securities whose residual contractual maturities are not representative of its activities or risks.

By convention, the following residual maturities were used for the classification of financial assets:

- 1. Assets measured at fair value through profit or loss, excluding derivatives (customer-related trading assets)
  - Positions measured using prices quoted on active markets (L1 accounting classification): maturity of less than 3 months.
  - Positions measured using observable data other than quoted prices (L2 accounting classification): maturity of less than 3 months.
  - Positions measured mainly using unobservable market data (L3): maturity of 3 months to 1 year.
- 2. Available-for-sale assets (insurance company assets and Group liquidity reserve assets in particular)
  - Available-for-sale assets measured using prices quoted on active markets: maturity of less than 3 months.
  - Bonds measured using observable data other than quoted prices (L2): maturity of 3 months to 1 year.
  - Finally, other securities (shares held long-term in particular): maturity of more than five years.

As regards the other lines comprising the balance sheet, other assets and liabilities and their associated conventions can be broken down as follows:

#### OTHER LIABILITIES

(In EUR m)		31 <sup>st</sup> December 2015							
	Note to the consolidated financial statements	Not scheduled	0-3 M	3M-1YR	1-5 YRS	> 5 YRS	Total		
Revaluation difference on portfolios hedged against		0.055					0.055		
interest rate risk		8,055					8,055		
Tax liabilities	Note 6			1,108		463	1,571		
Other liabilities	Note 4.4		83,083				83,083		
Non-current liabilities held for sale				526			526		
Underwriting reserves of insurance companies	Note 4.3		11,199	7,710	29,195	59,153	107,257		
Provisions	Note 8.5	5,218					5,218		
Shareholders' equity		59,037					59,037		

#### OTHER ASSETS

(In EUR m)	·	31 <sup>st</sup> December 2015							
	Note to the consolidated financial statements	Not scheduled	0-3 M	3M-1YR	1-5 YRS	> 5 YRS	Total		
Revaluation difference on portfolios hedged against interest rate risk		2,723					2,723		
Held-to-maturity financial assets	Note 3.9					4,044	4,044		
Tax assets	Note 6	7,367					7,367		
Other assets	Note 4.4		69,398				69,398		
Non-current assets held for sale			104	67			170		
Investments in subsidiaries and affiliates accounted for by the equity method						1,352	1,352		
Tangible and intangible fixed assets	Note 8.2					19,421	19,421		
Goodwill	Note 2.2					4,358	4,358		

1. Revaluation differences on portfolios hedged against interest rate risk are not scheduled, as they comprise transactions backed by the portfolios in question. Similarly, the schedule of tax assets whose schedule would result in the early disclosure of income flows is not made public.

2. Held-to-maturity financial assets have a residual maturity of more than five years.

- 3. Other assets and Other liabilities (guarantee deposits and settlement accounts, miscellaneous receivables) are considered as current assets and liabilities.
- 4. The notional maturities of commitments in derivative instruments are presented in Note 3.13 to the Group's consolidated financial statements. The net balance of transactions in derivatives measured at fair value through profit or loss on the balance sheet is EUR -1,899 million (according to the rules set above, it would be classified as a trading liability < 3 months, see Note 3.4 to the consolidated financial statements).</p>
- 5. Non-current assets held for sale have a maturity of less than 1 year, as do the associated liabilities.
- 6. Investments in subsidiaries and affiliates accounted for by the equity method and tangible and intangible fixed assets have a maturity of more than 5 years.
- 7. Provisions and shareholders' equity are not scheduled.

# IN BRIEF

Non-compliance risk (including legal and tax risks) corresponds to the risk of legal, administrative or disciplinary sanction, or of material financial losses, arising from failure to comply with the provisions governing the Group's activities.

This section describes the compliance system and provides information regarding ongoing legal disputes.

# 10. COMPLIANCE, REPUTATIONAL AND LEGAL RISKS

# **10.1. COMPLIANCE**

Compliance means acting in accordance with applicable banking and financial rules, whether laws or regulations, as well as professional, ethical and internal principles and standards.

Fair treatment of customers (and, more generally, the integrity of banking and financial practices) contributes decisively to the reputation of our institution.

By ensuring that these rules are observed, the Group works to protect its customers and, in general, all of its counterparties, employees, and the various regulatory authorities to which it reports.

### **Compliance System**

Independent compliance structures have been set up within the Group's different business lines around the world to identify and prevent any risks of non-compliance.

The Group's Corporate Secretary is the Chief Compliance Officer. He is assisted in his duties by the Compliance Department and a compliance function consisting of a coordinated network of Compliance Officers operating in all Group entities.

#### COMPLIANCE DEPARTMENT

The Compliance Department verifies that all compliance laws, regulations and principles applicable to the Group's banking and investment services business are observed, and that all staff respect codes of good conduct and individual compliance. It also monitors the prevention of reputational risk. It provides expertise for the Group, performs controls at the highest level and assists the Corporate Secretary with the day-to-day operation of the Compliance Department. It is organised into three cross-business departments and three departments dedicated to the Group's businesses.

The cross-business functions are responsible for:

- the Group's financial security (prevention of money laundering and terrorism financing; know-your-customer obligations; embargoes and financial sanctions);
- developing and updating consistent standards for the function, promoting a compliance culture, coordinating employee training and managing Group regulatory projects;
- coordinating a compliance control mechanism within the Group (second-level controls), overseeing a normalised Compliance process, oversight of personnel operations and, finally, managing large IT projects for the function.

The departments responsible for business line compliance cover:

- Retail Banking and Financial Services networks in France and abroad;
- Global Banking and Investor Solutions;
- Private Banking.

The Insurance Compliance Officer reports functionally to the Compliance Department.

Its main tasks are to define, in accordance with legal and regulatory requirements, the policies, principles and procedures applicable to compliance and financial security, and to manage their implementation and monitor their application to:

- ensure compliance with professional and financial market regulations;
- prevent and manage conflicts of interest;
- propose the ethical rules to be followed by all Group employees;
- train and advise employees and raise their awareness of compliance issues;
- ensure the effectiveness of the compliance officers within the various businesses and entities by setting out their prerogatives, ensuring that they have the necessary resources, tools and normative framework to accomplish their duties, while monitoring their proper implementation;
- build and implement steering and organisational tools for the function: Compliance and Reputational Risk dashboards, forums to share best practices, meetings of functional compliance officers;
- generally monitor subjects likely to be harmful to the Group's reputation.

The Compliance Department relies on two Group-level committees.

- The Compliance Committee of The Executive Committee (COM-CO): this committee, which was created during the third quarter of 2015, brings all members of the Group's Executive Committee and the Deputy Compliance Director together on a quarterly basis. It determines the Group's major compliance focuses and supervises implementation of the risk and control monitoring mechanism.
- The Group Compliance Committee (CCG): the Group Compliance Committee meets once a month and is chaired by the Group's Corporate Secretary, with the participation of functional compliance officers, the Finance and Development Department, the Resource Department, the Head of Internal Control Coordination, the Chief Legal Officer, the Chief Operational Risk Officer, as well as a General Inspection representative.

The Committee reviews the most significant incidents that occurred over the period across the entire Group and decides on the actions to be taken. It examines key compliance events and initiatives conducted across and within the different business lines, and considers current compliance-related topics. The major legal and regulatory oversight items are also presented by the Chief Legal Officer within this governance body.

In addition, two dashboards are presented each quarter to the Compliance Committee of the Group Executive Committee (COM-CO) and each half year to the Audit and Internal Control Committee (CACI):

- the reputational risk dashboard, which has been distributed since 2012, integrates key internal and external indicators;
- the compliance dashboard, distributed since 2014, which shows the key events of the quarter, with a focus on four compliance themes (financial security, customer protection, regulatory relationships, and market abuse), and key indicators.

## THE COMPLIANCE FUNCTION

Compliance function duties are carried out in the business lines and corporate divisions by dedicated teams operating under the Compliance Officer's authority. The Compliance Department supervises the function.

The compliance control system for the business lines is structured around dedicated departments: International Retail Banking & Financial Services, Banking Customers, Private Banking, Global Banking and Investor Solutions, and Insurance. The corporate teams report directly to the the Head of the Compliance Department, with the exception of the Insurance business line, which retains functional reporting. Subsidiary compliance officers in France and abroad have a strong functional link with the Compliance Department.

Compliance Officers develop and implement the governance and principles defined at Group level within their remit. They contribute to the identification and prevention of compliance and reputational risks, the validation of new products, the analysis and reporting of compliance anomalies, the implementation of corrective measures, remediation plans, staff training and the promotion of compliance values throughout the Group. In particular, they rely on a pyramid structure of business-line, entity and subsidiary compliance officers under their hierarchical or operational authority.

The organisation of the function is designed to achieve multiple objectives:

- centralise the Group's compliance specialists to develop expertise in this area;
- set up cross-business functions aimed at promoting and harmonising compliance values throughout the Group, covering all the Group's businesses and corporate divisions;
- establish a clear separation between advisory functions and those inherent in control;
- simplify the compliance system to improve information flow and shorten the decision-making cycle.

# GROUP FINANCIAL SECURITY SYSTEM

(prevention of money laundering, terrorism financing, know-yourcustomer obligations, embargoes and financial sanctions).

The financial security system rests on two pillars:

- the Group Financial Security Department is responsible for:
  - defining the standards and policies applied at the Group level, in cooperation with the Legal Department, monitoring its implementation and circulating new regulatory provisions, while providing guidelines for operational departments, primarily through a dedicated Intranet compliance portal,
  - organising and managing the Group financial security system and further raising the business lines' awareness of these particularly complex and rapidly changing issues,
  - reporting suspicious activity to TRACFIN for all of the Group's French entities (with the exception of Crédit du Nord and Boursorama Banque, which report directly), as well as submitting reports on asset freezes and authorisation requests to the French Treasury for Societe Generale SA.
  - For entities and subsidiaries located outside France, the Anti-Money Laundering Officers (AMLOs) report suspicious activity to local authorities.
  - It should be emphasised that monitoring financial security processes using quantitative indicators began in 2015 within the various Group businesses. The primary goal of this new approach, which is being deployed, is to better control risk.
- the business line compliance officers and a structured network of AMLO agents at the entity level are responsible for ensuring that the financial security system is properly implemented within each of the entities in their business division.

#### NORMATIVE DOCUMENTATION AND INFORMATION SHARING

To complete its assignments, the Societe Generale Compliance function relies on normative documents (directives, instructions and procedures) which are regularly updated.

In addition, a collaborative information sharing tool was implemented in 2015 to encourage exchanges and best practices among various departments within the function.

# COMPLIANCE ENFORCEMENT APPLICATIONS

Three types of IT applications ensure compliance with regulations and detect breaches or situations requiring special attention:

- profiling/scenario management tools that trigger alerts when unusual account flows or transactions are detected, especially for Retail Banking. More specifically, they are used to prevent terrorism financing and money laundering, and to detect market abuse, price manipulation and insider trading;
- tools used to filter data based on pre-defined lists (internal lists, external databases, etc.) that trigger alerts when certain people, countries or activities targeted by sanctions and embargoes are detected;
- risk reporting/evaluation tools that provide reports/statements on specific characteristics of an entity, core business, business line or customer to notify the relevant authorities (management, senior management, regulators, etc.). There is also a tool for mapping and assessing compliance risks, a reporting tool for personal transactions, a set of tools to manage lists of insiders and possible conflicts of interests.

These tools are regularly updated to incorporate regulatory and technological changes and improve their operational efficiency.

# Compliance Culture and the Code of Conduct

Compliance with ethical rules which meet the highest professional standards is part of the fundamental values of the Societe Generale Group. They are not simply followed by some, but are part of the culture which applies to everyone.

The Group has established protection of the company's reputation as a strategic goal and ensures that each employee acts with integrity on a daily basis. Numerous culture and conduct workshops have been conducted since 2011. The Group has a set of strict good conduct doctrines and rules. The Group's Code of Conduct was covered in a directive which went into effect in January 2013. The individual and group behaviour principles and rules promulgated go beyond the strict application of current laws and regulations, in particular when the ethical standards in certain countries are not consistent with the values and commitments the Group applies.

This directive applies to all employees, regardless of their responsibility level, as well as to Group managers, and also specifies alert procedures when a special situation justifies it.

For a bank, compliance culture means:

- not working with a customer or counterparty for which it is not possible to gather satisfactory information to know that person;
- understanding how to assess the economic reality of a transaction;
- being able to justify each decision under any circumstance.

#### As a result, the Group:

- may not complete transactions in countries or enter into relationships with natural persons or legal entities whose activity would violate the laws or principles that guide a banker's behaviour;
- will not work with customers or counterparties in transactions for which it cannot assess the economic reality, or where there is an absence of transparency which could lead to the conclusion that they violate accounting or ethical principles;
- provides correct, clear and non-misleading information regarding the products and services offered and ensures that they meet customer expectations.

The Societe Generale Group implements the recommendations of the G30 International Consultative Group on economic and monetary issues in its report entitled "Calls for fully comprehensive cultural and conduct reforms at major global banks".

These recommendations are organised around five major themes: a fundamental shift in the overall mindset on culture; senior accountability and governance; performance management and incentives; staff development and promotion and three effective lines of defence including, inter alia, strengthening the role and positioning of the compliance function.

# The Compliance Function's Transformation Programme

The Societe Generale Group launched a programme covering the period from 2015 to 2018 to transform and improve the operational efficiency of the Compliance function, in particular to raise our monitoring standards and better fulfil the increasing requirements of regulatory authorities.

Among other things, this programme strengthens governance and increases the resources made available to the function, both by recruiting additional resources and by investing in streamlining the Compliance function's existing IT applications and strengthening alert controls and management.

It targets the continued enhancement of priority functions, the central tools for monitoring regulatory application (including training, harmonisation, and regulatory oversight), financial security, constant oversight, customer protection, market integrity (including preventing conflicts of interest), and reporting quality.

The Societe Generale Group Compliance function significantly increased its workforce in 2015. This increase affected all function departments. This growth in employees also included numerous training sessions, many of which were mandatory.

## Implementation of compliance policies

#### PREVENTION OF MONEY LAUNDERING

AND TERRORISM FINANCING

The main events in 2015 were:

- Reworking the Group instruction governing the prevention of money laundering and terrorism financing;
- strengthening the mechanism to prevent terrorism financing and to monitor Group employees;
- continuing the COSI (systematic information communication) project with TRACFIN, which includes cash deposit/withdrawal transactions and international wire transfers;
- the launch of a Group IT application implementation project to optimise operational dossier processing and to facilitate information sharing among various business lines.

#### KNOW YOUR CUSTOMER

As part of "Know Your Customer", periodic dossier review received special attention within the Group in 2015.

We also note:

- the publication of an instruction covering banking relationship management;
- the launch of a project on best practices to filter politically exposed persons;
- the continuation of actions to distribute and share KYC data.

#### EMBARGOS AND FINANCIAL PENALTIES

With respect to embargos, the international context in 2015 continued to be very complex for the banking sector. Compliance function employees, in particular the corporate department advance team, were trained on this topic.

- the major rules governing international sectoral penalties against Russia were updated in 2015 based on additional information received from authorities (European Commission, Office of Foreign Assets Control, etc.).
- The Financial Security Department of the Societe Generale Group issued specific instructions on preventing financing of Islamic State (Daech) for the Iraq, Syria and Libya region, as well as to manage accounts to freeze credits.
- Filtering tools were strengthened in 2015, in particular aimed at controlling the re-issue of Swift payment messages (e.g. antistripping control).
- In 2015, the Financial Security Department continued to raise awareness among management and employees. In addition, it should be emphasised that mandatory training for all global Group employees on the risks of international penalties was conducted in mid-2015. By the end of 2015, most Group employees had already completed this training in French and English. The training will continue in 2016 in local languages mainly for the subsidiaries of International Retail Banking & Financial Services.

#### FIGHTING CORRUPTION

The fight against corruption has become global. Many countries have strengthened their anti-corruption laws and increased the corresponding penalties.

In 2000, Societe Generale made certain commitments as part of the Wolfsberg Group and, in 2003, under the Global Compact. The anti-money laundering mechanism includes monitoring the use of the banking system by third parties to identify cases of corruption.

To fight corruption, Societe Generale applies strict principles which form part of its Code of Conduct and comply with the strictest regulations in this regard, including the UK Bribery Act. Their implementation is strictly monitored. Mandatory instructions and controls which are applicable throughout the Group have been distributed since 2001.

To enhance vigilance, a training module designed to increase Societe Generale Group employee awareness of fighting corruption was deployed in 2015 and is mandatory.

#### EMPLOYEE ETHICS

Compliance with ethical policies is a constant obligation under Societe Generale's rules of conduct. Procedures and their proper application are closely examined, including those related to the supervision of outside personnel (employees of service providers, temporary employees and trainees).

#### CROSSING OWNERSHIP THRESHOLDS

The cross-business tool for monitoring share ownership and voting rights in listed issuers ensures worldwide compliance (103 countries) with regulations regarding the crossing of share ownership thresholds (legal, statutory, or during public offer periods).

It monitors all shares and derivatives with underlying equity securities held by the Societe Generale Group. These holdings are calculated in accordance with the specific rules in each country.

#### CONFLICTS OF INTEREST

The Group has an instruction on the prevention and management of conflicts of interest which specifies the principles and mechanisms to be implemented by their appropriate management. This instruction was updated in 2015 to take into consideration the regulatory changes in the field.

The policy addresses potential conflicts of interest liable to involve the Group, its customers or employees. It also maps out potential conflicts of interest which could arise when providing investment or related services.

#### MARKET ABUSE

To adapt to technological change (development of new trading platforms) and the growing risk of pricing manipulation (particularly indices), and to incorporate regulatory developments already known to the Group, special efforts are made to raise employee awareness, including the staff of the Retail Banking arm, of *ad hoc* procedures and their application in all businesses, and of ongoing developments in detection and analytical tools.

As part of the entry into force on 3<sup>rd</sup> July 2016 of the reform of the Market Abuse System (the "Market Abuse" Regulation of 12<sup>th</sup> June 2014 and the "Market Abuse 2" Directive), the Group launched a dedicated project managed by the Compliance Department in 2015.

#### CUSTOMER PROTECTION

Customer protection is central to the Group. It is a prerequisite to high-quality customer relationships.

Among the actions taken, the following are particularly important:

- the Compliance function's contribution to developing products through its participation in the New Product Committee, where it establishes pre-requisites, if needed;
- the response to the Customer Protection questionnaire of the French Prudential Supervisory Authority (l'Autorité de contrôle prudentiel et de résolution);
- the distribution of an instruction governing the relationship of Societe Generale Group entities with financial sector intermediaries and introducing agents (apporteurs d'affaires) (in France, the rules applicable to banking intermediaries and "IOBSP" payment departments, "CIF" financial investment advisors, "ALPSI" investment service agents, and "IAS" insurance intermediaries).

Finally, the Group is preparing to implement the new customer protection requirements in the MIF 2 Regulation, which will apply from 2017.

#### CLAIMS AND MEDIATION

A claim is treated foremost as a commercial action which contributes to customer satisfaction. The Compliance function carefully monitors customer claims to identify inappropriate procedures or offers. Each of the Group's core businesses has governance, an organisation, procedures and resources tailored to its business to process and monitor claims.

Significant efforts to train and enhance the awareness of employees were conducted within the Group, in particular in French Retail Banking (Societe Generale, Boursorama Banque and Crédit du Nord) and within the Insurance business line (ISO 9001 quality requirement), which significantly contributed to process optimisation (recording, quality and customer response times). In addition, customer information was improved.

Group instructions include an escalation process for claims handling, as well as the possible use of an internal or external mediator (a mediator independent from the Societe Generale Group jointly with the Crédit du Nord Group, the French Financial Markets Authority (AMF), and the French Banking Federation). International entities and subsidiaries can also use local mediators (if regulation so requires) or local mediation bodies approved by professional organisations.

#### REGULATORY PROJECTS

Finally, in 2015, in cooperation with the business lines, the Compliance function continued development and compliance workshops covering numerous important regulations, in particular: the French banking law of 26<sup>th</sup> July 2013, the Volcker reforms, the DFA ("Dodd-Frank Act"), EMIR ("European Market Infrastructure Regulation"), MIF 2, FATCA ("Foreign Account Tax Compliance Act"), Common Reporting Standards ("CRS") and Market Abuse Directive/ Market Abuse Regulation ("MAD II/MAR").

## Looking Ahead to 2016

2016 will see an acceleration in the transformational actions under the "Compliance Engagement" programme with further recruitments, an improvement in the operational effectiveness of the Compliance function and control mechanisms, as well as an optimisation of the various IT systems included in the mid-term strategic plan.

These actions will allow the Societe Generale Group to better frame its business both in France and abroad given the significant transaction volumes, data and alerts which have to be handled. Further, they will reduce the implementation time for various regulatory requirements.

This programme will also contribute to the "Culture and Conduct" strategic action plan led by senior management which is designed, among other things, to develop training and enhance employee and management awareness.

# **10.2. RISKS AND LITIGATION**

The Group reviews in detail every quarter the disputes presenting a significant risk.

Societe Generale, along with numerous other banks, financial institutions, and brokers, is subject to investigations in the US by the Internal Revenue Service, the Securities and Exchange Commission, the Antitrust Division of the Department of Justice, and the attorneys general of several states for alleged noncompliance with various laws and regulations relating to their conduct in the provision to governmental entities of Guaranteed Investment Contracts ("GICs") and related products in connection with the issuance of tax-exempt municipal bonds. Societe Generale is cooperating with the investigating authorities. Societe Generale resolved the investigations of the attorneys general of several states, as announced on 24<sup>th</sup> February 2016, without admitting or denying allegations of misconduct. The settlement amount was fully provisioned.

Several lawsuits were initiated in US courts in 2008 against Societe Generale and numerous other banks, financial institutions, and brokers, alleging violation of US antitrust laws in connection with the bidding and sale of GICs and derivatives to municipalities. These lawsuits were consolidated in the US District Court in Manhattan. Some of these lawsuits are proceeding under a consolidated class action complaint. In April 2009, the court granted the defendants' joint motion to dismiss the consolidated class action complaint against Societe Generale and all the other defendants except three. A second consolidated and amended class action complaint was filed in June 2009. Societe Generale's motion to dismiss the second consolidated and amended class action complaint was denied and the proceeding is continuing as to Societe Generale and numerous other providers and brokers. The class plaintiffs filed a third amended class action complaint in March 2013. Societe Generale reached a settlement with the class plaintiffs, and on 24th February 2016, the class plaintiffs filed a motion with the court seeking preliminary approval of the settlement. The settlement amount was fully provisioned. In addition, there are other actions that are proceeding separately from the consolidated class action complaint, including another purported class action under the US antitrust laws and California state law as well as lawsuits brought by individual local governmental agencies. Motions to dismiss the complaints in these related proceedings have been denied in their entirety or in part, and discovery is proceeding.

On 24<sup>th</sup> October 2012, the Court of Appeal of Paris confirmed the first judgment delivered on 5<sup>th</sup> October 2010, finding J. Kerviel guilty of breach of trust, fraudulent insertion of data into a computer system, forgery and use of forged documents. J. Kerviel was sentenced to serve a prison sentence of five years, two years of which are suspended, and was ordered to pay EUR 4.9 billion as damages to the bank. On 19<sup>th</sup> March 2014, the Supreme Court confirmed the criminal liability of J. Kerviel. This decision puts an end to the criminal proceedings. On the civil front, the Supreme Court has departed from its traditional line of case law regarding the compensation of victims of criminal offences against property. The amount of damages will be heard by the Versailles Court of Appeal before which the case was remanded.

- Since 2003, Societe Generale had set up "gold consignment" lines with the Turkish group Goldas. In February 2008, Societe Generale was alerted to a risk of fraud and embezzlement of gold reserves held at Goldas. These suspicions were rapidly confirmed following the failed payment (EUR 466.4 million) of gold purchased. In order to recover the sums owed by the Goldas Group and to protect its interests, Societe Generale brought civil proceedings in Turkey against its insurance carriers and Goldas Group entities. Goldas, for its part, has recently launched various proceedings in Turkey against Societe Generale. Societe Generale also brought proceedings against its insurers in the United Kingdom, which were discontinued by consent, without any admission of liability by any party. Proceedings in France against its insurers are still underway.
- Societe Generale Algeria ("SGA") and several of its branch managers are prosecuted for breach of Algerian laws on exchange rates and capital transfers with other countries. The defendants are accused of having failed to make complete or accurate statements to the Bank of Algeria on capital transfers in connection with exports or imports made by clients of SGA. The events were discovered during investigations by the Bank of Algeria, which subsequently filed civil claims before the criminal Court. Sentences were delivered by the court of appeal against SGA and its employees in some proceedings, while charges were dropped in other ones. All proceedings were referred to the Supreme Court. To date, twelve cases have been terminated in favour of SGA and seven remain pending.

In the early 2000s, the French banking industry decided to transition to a new digital system in order to streamline cheque clearing.

To support this reform (known as EIC – *Echange d'Images Chèques*), which has contributed to the improvement of cheque payments security and to the fight against fraud, the banks established several interbank fees (including the CEIC which was abolished in 2007). These fees were implemented under the aegis of the banking sector supervisory authorities, and to the knowledge of the public authorities.

On 20<sup>th</sup> September 2010, after several years of investigation, the French competition authority considered that the joint implementation and the setting of the amount of the CEIC and of two additional fees for related services were in breach of competition law. The authority fined all the participants to the agreement (including the *Banque de France*) a total of approximately EUR 385 million. Societe Generale was ordered to pay a fine of EUR 53.5 million and Crédit du Nord, its subsidiary, a fine of EUR 7 million.

However, in its 23<sup>rd</sup> February 2012 order, the French Court of Appeal, to which the matter was referred by all the banks involved except *Banque de France*, upheld the absence of any competition law infringement, allowing the banks to recoup the fines paid. On 14<sup>th</sup> April 2015, the Supreme Court quashed and annulled the Court of Appeal decision on the ground that the latter did not examine the arguments of two third-parties who voluntarily intervened in the proceedings. The case will be heard again by the Court of Appeal before which the case was remanded.
Societe Generale Private Banking (Suisse), along with several other financial institutions, has been named as a defendant in a putative class action that is pending in the US District Court for the Northern District of Texas. The plaintiffs seek to represent a class of individuals who were customers of Stanford International Bank Ltd. ("SIBL"), with money on deposit at SIBL and/or holding Certificates of Deposit issued by SIBL as of 16<sup>th</sup> February 2009. The plaintiffs allege that they suffered losses as a result of fraudulent activity at SIBL and the Stanford Financial Group or related entities, and that the defendants bear some responsibility for those alleged losses. The plaintiffs further seek to recoup payments made through or to the defendants on behalf of SIBL or related entities on the basis that they are alleged to have been fraudulent transfers. The Official Stanford Investors Committee ("OSIC") was permitted to intervene and filed a complaint against Societe Generale Private Banking (Suisse) and the other defendants seeking similar relief.

The motion by Societe Generale Private Banking (Suisse) to dismiss these claims on grounds of lack of jurisdiction was denied by the court by order filed 5<sup>th</sup> June 2014. Societe Generale Private Banking (Suisse) sought reconsideration of the Court's jurisdictional ruling, which the Court ultimately denied. On 21<sup>st</sup> April 2015, the Court permitted the substantial majority of the claims brought by the plaintiffs and the OSIC to proceed.

In May 2015, the plaintiffs filed a motion for class certification, which Societe Generale Private Banking (Suisse) and the other defendants have opposed. The motion is now pending for decision.

On 22<sup>nd</sup> December 2015, the OSIC filed a motion for partial summary judgment seeking return of a transfer of USD 95 million to Societe Generale Private Banking (Suisse) made in December 2008 (prior to the Stanford insolvency) on the grounds that it is voidable under Texas state law as a fraudulent transfer. Briefing on this motion is ongoing.

Connected with the allegations in this class action, Societe Generale Private Banking (Suisse) and Societe Generale have also received requests for documents and other information from the US Department of Justice. Societe Generale Private Bank (Suisse) and Societe Generale are cooperating with the US authorities.

Societe Generale, along with other financial institutions, has received formal requests for information from several authorities in Europe, the US and Asia, in connection with investigations regarding submissions to the British Bankers Association for setting certain London Interbank Offered Rates ("Libor") and submissions to the European Banking Federation (now the EBF-FBE) for setting the Euro Interbank Offered Rate ("Euribor"), as well as trading in derivatives indexed to various benchmark rates. Societe Generale is cooperating with the investigating authorities

Societe Generale, along with other financial institutions, was named as a defendant in five putative class actions and several individual (non-class) actions in connection with its involvement in the setting of US Dollar Libor rates and trading in derivatives indexed to Libor. The actions were brought by purchasers of certain exchange-based derivatives contracts, over-the-counter derivatives contracts, bonds, equity securities and mortgages, and are pending before a single judge in the US District Court in Manhattan. The actions variously allege violations of, among other laws, US antitrust laws, the US Commodity Exchange Act ("CEA"), and numerous state laws. On 23<sup>rd</sup> June 2014, the

court dismissed the claims against Societe Generale in putative class actions brought by purchasers of certain over-the-counter derivative contracts and purchasers of certain exchange-based derivative contracts. On 5<sup>th</sup> March 2015, Societe Generale was voluntarily dismissed from a third putative class action brought by purchasers of adjustable rate mortgages tied to Libor. The two other putative class actions are effectively stayed pending resolution of the appeal described below. On 20th October 2015, the court dismissed the claims against Societe Generale in an individual action brought by the liquidating agent of several failed credit unions. On 4th August 2015, the court dismissed several claims asserted by individual plaintiffs, but permitted some state law claims to proceed against defendants in limited circumstances. The parties are still litigating the impact of this decision on the claims against Societe Generale and the other defendants. The plaintiffs in most of the class and individual actions have appealed the court's dismissal of their antitrust claims against all defendants to the US Court of Appeals for the Second Circuit.

Societe Generale, along with other financial institutions, also has been named as a defendant in two putative class actions in the US District Court in Manhattan brought by purchasers or sellers of Euroyen derivative contracts on the Chicago Mercantile Exchange ("CME"), and purchasers of over-the-counter derivative contracts, respectively, who allege that their instruments were traded or transacted at artificial levels due to alleged manipulation of Yen LIBOR and Euroyen TIBOR rates. These actions allege violations of, among other laws, the US antitrust laws, the CEA, the civil provisions of the Racketeer Influenced Corrupt Organization ("RICO") Act, and state laws. On 28th March 2014, the court dismissed the exchange-based plaintiffs' antitrust claims, among others, but permitted certain CEA claims to proceed. On 31st March 2015, the court denied the exchange-based plaintiffs' motion for leave to add a RICO claim and additional class representatives, who sought to assert CEA, RICO and state law claims. Motions to dismiss the over-the-counter plaintiffs' claims are due shortly.

Societe Generale, along with other financial institutions, also has been named as a defendant in a putative class action in the US District Court in Manhattan brought on behalf of purchasers or sellers of Euribor-linked futures contracts on the LIFFE exchange, Euro currency futures contracts on the CME, Euro interest rate swaps, or Euro foreign exchange forwards, who allege that their instruments traded or that they transacted at artificial levels due to alleged manipulation of Euribor rates. The action alleges violations of, among other laws, US antitrust laws, the CEA, RICO and state laws. Motions to dismiss have been filed. Societe Generale, along with other financial institutions, also has been named as a defendant in litigation in Argentina brought by a consumer association on behalf of Argentine consumers who held government bonds or other instruments that paid interest tied to US Dollar Libor. The allegations concern violations of Argentine consumer protection law in connection with an alleged manipulation of the US Dollar Libor rate. Societe Generale has not yet been served with the complaint in this matter.

On 4<sup>th</sup> December 2013, the European Commission issued a decision further to its investigation into the EURIBOR rate, that provides for the payment by Societe Generale of an amount of EUR 445.9 million in relation to events that occurred between March 2006 and May 2008. Societe Generale has filed an appeal with the Luxembourg Court regarding the method used to determine the value of the sales that served as a basis for the calculation of the fine.

On 10th December 2012, the Council of State (French Conseil d'État) made two rulings on the lawfulness of withholding tax (précompte), a tax which has now been abolished. It concluded that this tax violated EC law and defined the conditions pursuant to which the amounts levied towards the withholding tax should be restituted to companies. The conditions for restitution defined by the Council of State significantly reduce the amount of restitution. In 2005, two companies (Rhodia and Suez) assigned their rights to restitution to Societe Generale with a limited right of recourse against the assignors. One of the Council of State's rulings concerns Rhodia. Societe Generale defended its rights in the various proceedings against the French tax authorities before French administrative courts in France - the last decision having been handed down by the Paris Administrative Court of Appeal on 12th December 2014 in the Suez matter - which continue to implement the conditions of restitution of withholding tax defined by the Council of State in its decision of 10<sup>th</sup> December 2012.

Seized by several French companies, the European Commission considered that the decisions handed down by the Council of State on 10<sup>th</sup> December 2012, following the decision handed down by the European Court of Justice C-310/09 on 15<sup>th</sup> September 2011, breach several European law principles. The European Commission informed the plaintiffs, including Societe Generale, that it initiated an infringement procedure against the French Republic by sending a letter of formal notice on 26 th November 2014.

- Societe Generale has engaged in discussions with the US Office of Foreign Assets Control, the US Department of Justice, the office of the District Attorney of New York County, the Board of Governors of the Federal reserve System in Washington, the Federal Reserve Bank of New York, and the New York State Department of Financial Services in relation to US dollar transfers made by Societe Generale on behalf of entities based in countries that are the subject of economic sanctions ordered by the US authorities. In connection with these discussions, Societe Generale is conducting an internal review and is cooperating with the US authorities.
- Vladimir Golubkov, CEO of Rosbank at the time of the events, and an employee of the bank are under criminal investigation in the Russian Federation for actions that would amount to corruption. According to the press, the case against Vladimir Golubkov was dismissed in December 2015.

- On 22<sup>nd</sup> May 2013, the ACPR (French Prudential Supervisory and Resolution Authority) launched disciplinary proceedings against Societe Generale in relation to the resources and procedures deployed by it pursuant to the legal requirements relating to the "right to a bank account" ("Droit au compte"). On 11<sup>th</sup> April 2014, the ACPR sanctions commission imposed the following sanctions on Societe Generale: a fine of EUR 2 million, a reprimand, and the publication of the decision. In May 2014, Societe Generale referred this decision to the Council of State. By a judgment handed down on 14<sup>th</sup> October 2015, the Council of State cancelled the ACPR's penalty of 11<sup>th</sup> April 2014. By a letter dated 9<sup>th</sup> November 2015, the ACPR informed Societe Generale that it will resume the proceedings before the sanctions commission. The college representative filed its brief on 18<sup>th</sup> December 2015. Societe Generale must file its response on 1<sup>st</sup> February 2016.
- On 7<sup>th</sup> March 2014, the Libyan Investment Authority ("LIA") brought proceedings against Societe Generale before the High Court of England regarding the conditions pursuant to which LIA entered into certain investments with the Societe Generale Group. LIA alleges that Societe Generale and other parties who participated in the conclusion of the investments notably committed acts amounting to corruption. Societe Generale firmly refutes such allegations and any claim tending to question the lawfulness of these investments. The English Court decided that the trial hearing will take place in January 2017. Also, on 8<sup>th</sup> April 2014, the US Department of Justice served Societe Generale with a subpoena requesting the production of documents relating to transactions with Libyan entities and individuals, including the LIA. Societe Generale is cooperating with US authorities.
- Societe Generale, along with other financial institutions, has been named as a defendant in a putative class action alleging violations of US antitrust laws and the CEA in connection with its involvement in the London Gold Market Fixing. The action is brought on behalf of persons or entities that sold physical gold, sold gold futures contracts traded on the CME, sold shares in gold ETFs, sold gold call options traded on CME, bought gold put options traded on CME, sold over-the-counter gold spot or forward contracts or gold call options, or bought over-the-counter gold put options. The action is pending in the US District Court in Manhattan. Motions to dismiss the action have been filed and are pending for decision. Societe Generale and certain subsidiaries, along with other financial institutions, have also been named as defendants in putative class action in Canada (Ontario Superior Court in Toronto) involving similar claims.
- On 30<sup>th</sup> January 2015, the US Commodity Futures Trading Commission served Societe Generale with a subpoena requesting the production of information and documents concerning trading in precious metals done since 1<sup>st</sup> January 2009. Societe Generale is cooperating with the authorities.
- Societe Generale Americas Securities, LLC ("SGAS"), along with other financial institutions, has been named as a defendant in several putative class actions alleging violations of US antitrust laws and the CEA in connection with its activities as a US Primary Dealer, buying and selling US Treasury securities. The cases have been consolidated in the US District Court in Manhattan. SGAS's time to respond to the complaints has not yet been set.

Societe Generale, along with several other financial institutions, has been named as a defendant in a putative class action alleging violations of US antitrust laws and the Commodity Exchange Act in connection with foreign exchange spot and derivatives trading. The action is brought by persons or entities that transacted in certain over-the-counter and exchange-traded foreign exchange instruments. The litigation is pending in the US District Court in Manhattan. Motions to dismiss the action have been filed. Societe Generale and certain subsidiaries, along with other financial institutions, have also been named as defendants in two putative class actions in Canada (in Ontario Superior Court in Toronto and Quebec Superior Court in Quebec City) involving similar claims.

# IN BRIEF

This section describes equity risks and other risks not described in previous chapters.

# 11. OTHER RISKS

# **11.1. EQUITY RISKS**

#### Investment strategies and purpose

Societe Generale Group's exposure to its non-trading equity portfolio relates to several of the bank's activities and strategies. It includes equities and equity instruments, mutual fund units invested in equities, and holdings in the Group's subsidiaries and affiliates which are not deducted from shareholders' equity for the purpose of calculating solvency ratios. Generally speaking, due to their unfavourable treatment under regulatory capital, the Group's future policy is to limit these investments.

- First, the Group has a portfolio of industrial holdings which mainly reflect its historical or strategic relations with these companies.
- It also has some minority holdings in certain banks for strategic purposes, with a view to developing its cooperation with these establishments.
- In addition, the equities that are not part of the trading book include Group shares in small subsidiaries which operate in France and abroad, and which are not included in its consolidation scope. This includes various investments and holdings that are ancillary to the Group's main banking activities, particularly in French Retail Banking, Corporate and Investment Banking, and Securities Services (private equity activities in France, closely linked with banking networks, stock market bodies, brokerages, etc.).
- Lastly, Societe Generale and some of its subsidiaries may hold equity investments related to their asset management activities (particularly seed capital for mutual funds promoted by Societe Generale), in France and abroad.

# Monitoring of banking book equity investments and holdings

The portfolio of industrial holdings has been significantly reduced in recent years, further to the disposal of non-strategic lines. It now includes only a limited number of investments. It is monitored on a monthly basis by the Group's Finance Division, and where necessary value adjustments are recognised quarterly in accordance with the Group's provisioning policy.

The holdings that are ancillary to the Group's banking activity are monitored on a quarterly basis by the Group's Finance Division and, where necessary, value adjustments are recognised quarterly in accordance with the Group's provisioning policy. Private equity activities in France are subject to dedicated governance and monitoring, within the budgets periodically reviewed by the Group's Executive Committee. Investment or disposal decisions take the financial aspects and the contribution to the Group's activities into consideration (supporting clients in their development, cross-selling with flow activities, Corporate and Investment Banking, Private Banking, etc.).

#### Valuation of banking book equities

From an accounting perspective, Societe Generale's exposure to equities that are not part of its trading book is classified under shares held for sale insofar as the equities may be held for an indefinite period or they may be sold at any time.

Societe Generale Group's exposure to equities that are not part of the trading book is equal to their book value net of impairments.

The following table presents these exposures at end-December 2015 and 2014, for both the accounting scope and the regulatory scope. Regulatory data cannot be reconciled with data from consolidated financial statements, specifically because the regulatory scope excludes equity investments held on behalf of clients by the Group's insurance subsidiaries.

#### TABLE 67: BANKING BOOK EQUITY INVESTMENTS AND HOLDINGS

(In EUR m)	31.12.2015	31.12.2014
Banking book equity investments and holdings - Accounting scope	14,720	15,201
Of which equities and other equity instruments (AFS) Note 3.3	12,091	13,181
Of which AFS equities held over the long term	2,629	2,020
Banking book equity investments and holdings - Prudential scope (EAD)	7,081	10,799
Of which listed shares	717	466
Of which unlisted shares	6,364	10,333

AFS: Available For Sale.

EAD: Exposure At Default.

With regard to the regulatory scope, the exposure to equities and holdings that are not included in the trading book, and calculated as EAD, amounted to EUR 7.1 billion at the end of 2015, versus EUR

Changes in fair value are recognised in shareholders' equity under "Unrealised or deferred capital gains and losses". In the event of a sale or durable impairment, changes in the fair value of these assets are recorded in the income statement under "Net gains and losses on available-for-sale financial assets". Dividends received on equity investments are recognised in the income statement under "Dividend income".

For listed shares, the fair value is estimated based on the closing share price. For unlisted shares, the fair value is estimated based on 10.8 billion at the end of 2014. This change is due primarily to the sale of liquidity instruments.

the category of financial instrument and one of the following methods:

- the share of net assets owned;
- the valuation based on recent transactions involving the company's shares (acquisition of shares by third parties, expert valuations, etc.);
- the valuation based on recent transactions involving companies in the same sector (earnings or NAV multiples, etc.).

#### TABLE 68: NET GAINS AND LOSSES ON BANKING BOOK EQUITIES AND HOLDINGS

(En M EUR)	31.12.2015	31.12.2014
Gains and losses on the sale of shares	374	163
Impairment of assets in the equity portofolio	(28)	(28)
In proportion to the net income on the equities portofolio	56	63
Net gains/losses on banking book equities and holdings	402	198
Unrealised gains/losses on holdings	1,058	1,587
Share included in Tier 1 and Tier 2 capital*	1,057	467

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\* Amounts pro forma Basel 3.

#### Provisioning policy

The impairment of an available-for-sale financial asset is described in Note 3.8 of the financial statements in Chapter 6 of this Registration Document (p. 322 and next).

#### **Regulatory capital requirements**

To calculate the risk-weighted assets under Basel 3, the Group applies the simple risk weight method as defined in the Internal Ratings Based approach for the majority of its non-trading equity portfolio.

Shares in private equity companies are assigned a risk-weighting coefficient of 190%, shares in listed companies a coefficient of 290%, and shares in unlisted companies, including the holdings in our insurance subsidiaries, a coefficient of 370%. Note that private equity shares acquired before January 2008 can be weighted at 150%.

Furthermore, if they are not deducted from own funds, material investments in the capital of finance companies are assigned a weighting coefficient of 250%.

At 31<sup>st</sup> December 2015, the Group's risk-weighted assets related to its non-trading equity portfolio, and its capital requirements were as follows:

#### TABLE 69: CAPITAL REQUIREMENTS RELATED TO BANKING BOOK EQUITIES AND HOLDINGS(1)

(In EUR m)		31.12.2015		31.12.2014				
Equities & holdings	Approach	Weighting	Exposure at default	Risk weighted assets	Capital requirements	Exposure at default	Risk weighted assets	Capital requirements
Private equity	Standard	150%	114	171	14	123	185	15
Private equity	Simple approach	190%	121	229	18	171	325	26
Financial securities	Simple approach	250%	807	2,016	161	1,404	3,511	281
Listed shares	Simple approach	290%	283	821	66	403	1,169	93
Unlisted shares and insurances	Simple approach	370%	4,706	17,412	1,393	4,387	16,231	1,299
Total			6,030	20,650	1,652	6,488	21,421	1,714

(1) Excluding cash investments.

#### **11.2. STRATEGIC RISKS**

Strategic risks are defined as the risks inherent in the choice of a given business strategy or resulting from the Group's inability to execute its strategy. They are monitored by the Board of Directors, which approves the Group's strategic direction and reviews them at least once every year. Moreover, the Board of Directors approves strategic investments and any transaction, particularly disposals and acquisitions, that could significantly affect the Group's results, the structure of its balance sheet or its risk profile.

Strategic steering is carried out by the Executive Committee under the authority of the General Management, with the assistance of the Group Management Committee. The Executive Committee meets once a week, barring exceptions. The makeup of these different bodies is laid out in the Corporate Governance chapter of this Registration Document (p. 64). The Internal Rules of the Board of Directors define the procedures for convening meetings as described in Chapter 7 of this Registration Document (p. 471).

#### **11.3. ACTIVITY RISK**

Activity risk is the risk of taking a loss if expenses incurred are higher than revenues generated. They are managed by the Finance Division through monthly revenue committees. During these meetings, which are chaired by a member of the General Management, the Group's business lines present their results and comment on the state of business, and also present an analysis of their consumption of their budget and scarce resources (especially capital and liquidity).

## **11.4. RISKS RELATING TO INSURANCE ACTIVITIES**

Through its insurance subsidiaries, the Group is also exposed to a variety of risks inherent to this business. These include ALM risk management (risks related to interest rates, valuations, counterparties and exchange rates) as well as premium pricing risk, mortality risk and structural risk related to life and non-life insurance activities, including pandemics, accidents and catastrophes (such as earthquakes, hurricanes, industrial disasters, terrorist attacks or military conflicts). The risk monitoring structure related to these risks and related issues are described in Note 4.3 of the consolidated financial statements and in Chapter 6 of this Registration Document (p. 338).

## **11.5. ENVIRONMENTAL AND SOCIAL RISKS**

Information on environmental and social risks appears in Chapter 5 of this Registration Document, (p. 209).

# 12.1. CROSS REFERENCE TABLE OF RISK AND PILLAR 3 REPORT

CRD4/CRR article	Theme	Risk and Pillar 3 report reference (except reference to the Registration Document)	Page in Risk Report Pillar 3	Page in the Registration Document
90 (CRD4)	Return on assets	1. Key risks indicators	2	
435 (CRR)	0. Risk management objectives	3.1 Corporate governance structure and main bodies		64
	and policies	2 Governance and risk management organisation	5	
436 (a)(b) (CRR)	1. Scope of application	3 Capital management and adequacy	24-25	
		Note 8.4 to the consolidated financial statement		367
436 (c)(d)(e) (CRR)	1. Scope of application	Information not published for confidentiality reasons		
437 (CRR)	2. Own funds	3 Capital management and adequacy (and (and SG website - Capital instruments)	23	
438 (CRR)	3. Capital requirements	3 Capital management and adequacy	31	
439 (CRR)	4. Exposure to counterparty credit risk	4 Credit risks	45	
440 (CRR)	5. Capital buffers	3 Capital management and adequacy	23	
441 (CRR)	6. Indicators of global systemic importance	SG website - Informations and publications section/		
442 (CRR)	7. Credit risk adjustments	4 Credit risks	45	
443 (CRR)	8. Unencumbered assets	9 Liquidity risk	130	
444 (CRR)	9. Use of ECAIs	5 Securitisation	89	
445 (CRR)	10. Exposure to market risk	6 Market risks	103	
446 (CRR)	11. Operational risk	7 Operational risks	113	
447 (CRR)	12. Exposures in equities not included in the trading book	11 Equity risk	147	
448 (CRR)	13. Exposure to interest rate risk on positions not included in the trading book	8 Structural interest rate and exchange rate risks	121	
449 (CRR)	14. Exposure to securitisation positions	5 Securitisation	89	
450 (CRR)	15. Remuneration policy	First update of the Registration Document (planned)		
451 (CRR)	16. Leverage	3 Capital management and adequacy	39	
452 (CRR)	17. Use of the IRB Approach to credit risk	4 Credit risks	54	
453 (CRR)	18. Use of credit risk mitigation techniques	4 Credit risks	50	
454 (CRR)	19. Use of the Advanced Measurement Approaches to operational risk	7 Operational risks	113	
455 (CRR)	20. Use of Internal Market Risk Models	6 Market risks	103	

## 12.2. CROSS REFERENCE TABLE WITH THE RECOMMENDATIONS MADE BY THE ENHANCED DISCLOSURE TASK FORCE - EDTF

N°	Recommandation	Detail	Page in Risk Report- Pillar 3	Page in the Registration Document
1	Present all related risk information	■ Chapter 1 (description of the Group, strategy,		6 and
	together in any particular report	presentation of the businesses)		following.
		Chapter 2 (management report, balance sheet		21 and
		structure, recent developments and outlook)		following.
		Chapter 4 (risks, capital adequacy, Pillar 3)	5 and following	
2	Definition of the principal terms	Availability of a glossary of the principal terms used	156	
	and metrics used	Definitions as necessary in the chapters concerned		
		- credit risks	45	
		- market risks	103	
		- operational risks	113	
		General concepts of IFRS 9	52	
3	Definition and classification of risks	■ Key figures	2-3	
	and risk outlook	Types of risks	6	
		Risk factors	13	
		Recent developments and outlook		7;59
		Description of the inpairments in IFRS 9	53	
4	Definition of regulatory changes	Fully-loaded Basel 3 capital ratio	29	
	and new key ratios	Phase-in stages	29	
		Additional GSIB buffer	23	
		Leverage ratio	34	
		■ LCR	133	
		■ NSFR	133	
5	Risk governance	Group governance principles (summary diagram)		64
5	There go vor harloo	Chairman's report on corporate governance		76
		Chairman's report on internal control and risk management		115
		<ul> <li>Risk management principles (summary diagram)</li> </ul>	5-21	124-128
		Credit risks	45	124-120
		Market risks		
			103	
		■ Operational risks	113	
	Diele eultruie	■ Implementation strategy of IFRS 9	53	
6	Risk culture	Organisation and governance of the risk management system	5	
_		"Enterprise Risk Management" programme	10	
7	Key figures for the businesses,	■ Key Group figure		6
	risk appetite, risk management	Description of the businesses	0.0	10
		■ Key risk figures	2-3	
		■ Risk appetite	7	
		Governance of risk management	5-12	
В	Stress test system	General description	7-8	
		Credit stress tests	46	
		Market risk stress tests	107	
9	Capital requirements	Capital requirements by type of risks	31	
		Complementary buffers GSIB	23	
10	Information on the composition	Composition of regulatory capital	29	
	of regulatory capital	Details of regulatory capital	37	
	Reconciliation of accounting	Reconciliation of the accounting balance sheet	24	
	and regulatory data	and the regulatory balance sheet		
		Reconciliation of accounting capital and regulatory capital	29	
11	Changes in regulatory capital	Capital reconciliation chart		54
		Regulatory capital flow statement	30	
		Qualitative comment	33	
12	Regulatory capital targets	Information on ratio targets and constraints (CET 1)		59
	-	Regulatory information	23, 29	
13	Distribution of risk-weighted assets by business	Additional information in the analyses by risk type (credit, market operational, etc.)		
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N°	Recommandation	Detail	Page in Risk Report- Pillar 3	Page in the Registration Document
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# **12.4. GLOSSARY OF MAIN TECHNICAL TERMS**

#### ACRONYM TABLE

Acronym	Definition	Glossary
ABS	Asset-backed-securities	See: Securitisation
CDS	Credit Default Swap	See: Securitisation
CDO	Collaterallised Debt Obligation	See: Securitisation
CLO	Collateralised Loan Obligation	See: Securitisation
CMBS	Commercial Mortgage Backed Securities	See: Securitisation
CRD	Capital Requirement Directive	CRD
CVaR	Credit Value at Risk	Credit Value at Risk (CVaR)
EAD	Exposure at default	Exposure at default (EAD)
EL	Expected Loss	Expected Loss (EL)
GSIB	Global Systemically Important Banks (see: SIFI)	SIFI
LCR	Liquidity Coverage Ratio	Liquidity Coverage Ratio (LCR)
LGD	Loss Given Defalut	Loss Given Defalut (LGD)
NSFR	Net Stable Funding Ratio	Net Stable Funding Ratio (NSFR)
PD	Probability of default	Probability of default (PD)
RMBS	Residential Mortgage backed securities	RMBS
RWA	Risk Weighted Assets	Risk Weighted Assets (RWA)
SVaR	Stressed Value at Risk Stressed Value at Risk (SVaR)	
VaR	Value at Risk	Value at Risk (VaR)

Asset Backed Securities (ABS): see securitisation.

**Basel 1 (Accords):** prudential framework established in 1988 by the Basel Committee to ensure solvency and stability in the international banking system by setting an international minimum and standardised limit on banks' capital bases. It notably establishes a minimum capital ratio—a proportion of the total risks taken on by banks—which must be greater than 8%. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Basel 2 (Accords):** prudential framework used to better assess and limit banks' risks. It is focused on banks' credit, market and operational risks. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Basel 3 (Accords):** further changes to prudential standards which included lessons from the 2007-2008 financial crisis. They supplement the Basel 2 accords by improving the quality and quantity of banks' required capital. They also implement minimum requirements in terms of liquidity risk management (quantitative ratios), define measures to limit the financial system's procyclicality (capital buffers that vary according to the economic cycle) and even strengthen requirements related to systemically significant banks. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012). The Basel 3 accords are defined in Europe in Directive 2013/36/EU ("CRD4") and Regulation 575/2013 ("CRR") that have been in force since 1<sup>st</sup> January 2014.

**Bond:** a bond is a fraction of a loan, issued in the form of a security, which is tradable and—in a given issue—grants rights to the issuer according to the issue's nominal value (the issuer being a company, public sector entity or government).

**Cash Generating Unit (CGU):** the smallest identifiable set of assets which generates incoming cash flow which is generally independent from incoming cash flow generated by other assets or sets of assets in accordance with the IAS 36 accounting standard. "In accordance with IFRS standards, a company must determine the largest number of cash generation units (CGU) which make it up; these CGU should be generally independent in terms of operations and the company must allocated assets to each of these CGU. Impairment testing must be conducted at the CGU level periodically (if there are reasons to believe that their value has dropped) or annually (if they include goodwill)." (source: Les Echos.fr, citing Vernimmen).

**Collateral:** transferable asset or guarantee used as a pledge for the repayment of a loan in the event that the borrower cannot meet its payment obligations. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Collateralised Debt Obligation (CDO):** see securitisation. Collateralised Loan Obligation (CLO): see securitisation.

Commercial Mortgage Backed Securities: see securitisation.

**Common Equity Tier 1 capital:** includes principally share capital, associated share premiums and reserves, less prudential deductions.

**Common Equity Tier 1 ratio:** ratio between Common Equity Tier 1 capital and risk-weighted assets, according to CRD4/CRR rules. Common Equity Tier 1 capital has a more restrictive definition than in the earlier CRD3 Directive (Basel 2).

**Comprehensive Risk Measurement (CRM):** capital charge in addition to Incremental Risk Charge (IRC) for the credit activities correlation portfolio which accounts for specific price risks (spread, correlation, collection, etc.) The CRM is a 99.9% risk factor, meaning

the highest risk obtained after eliminating the 0.1% most unfavourable incidents.

**Core Tier 1 ratio:** ratio between Core Tier 1 capital and risk-weighted assets, according to Basel 2 rules and their changes known as Basel 2.5.

**Cost/income ratio:** ratio indicating the share of Net Banking Income (NBI) used to cover the company's operating costs. It is determined by dividing management fees by the NBI.

**Cost of commercial risk in basis points:** the cost of risk in basis points is calculated comparing the net cost of commercial risk to loan outstandings at the start of the period. Net commercial risk load equals the cost of risk calculated for credit commitments (balance sheet and off-balance sheet), i.e., allocations – recaptures (whether used or not used) + Losses on non-collectable receivables – collections on amortised loans and receivables. Allocations and recaptures of dispute provisions are excluded from this calculation.

**Credit and counterparty risk:** risk of losses arising from the inability of the Group's customers, issuers or other counterparties to meet their financial commitments. Credit risk also includes the counterparty risk linked to market transactions, as well as that stemming from securitisation activities.

**Credit Default Swaps (CDS):** insurance mechanism against credit risk in the form of a bilateral financial contract, in which the protection buyer periodically pays the seller in return for a guarantee to compensate the buyer for losses on reference assets (government, bank or corporate bond) if a credit event occurs (bankruptcy, payment default, moratorium, restructuring). (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Credit Value at Risk (CVaR):** the largest loss that would be incurred after eliminating the top 1% of the most adverse occurrences, used to set the risk limits for individual counterparties.

**CRD3:** European Directive on capital requirements, incorporating the provisions known as Basel 2 and 2.5, notably in respect of market risk: improvement in the incorporation of the risk of default or rating migration for assets in the trading book (tranched and untranched assets), and reduction in the procyclicality of Value at Risk (see definition).

**CRD4/CRR** (Capital Requirement Regulation): The Directive 2013/36/ EU ("CRD4") and the Regulation (EU) No. 575/2013 ("CRR") constitute the corpus of the texts transposing Basel 3 in Europe. They therefore define the European regulations relating to the solvency ratio, large exposures, leverage and liquidity ratios, and are supplemented by the European Banking Authority's ("EBA") technical standards.

**Derivative:** a financial asset or financial contract, the value of which changes based on the value of an underlying asset, which may be financial (equities, bonds, currencies, etc.) or non-financial (commodities, agricultural commodities, etc.). Depending on the circumstances, this change may be accompanied by a leverage effect. Derivatives can take the form of securities (warrants, certificates, structured EMTNs, etc.) or in the form of contracts (forwards, options, swaps, etc.).

**Doubtful loan coverage rate:** ratio between portfolio provision and depreciation and doubtful outstandings (customer loans and receivables, loans and receivables with credit institutions, finance leases and basic leases).

**Expected Loss (EL):** losses that may occur given the quality of a transaction's structuring and all measures taken to reduce risk, such as collateral.

**Exposure at default (EAD):** Group exposure to default by a counterparty. The EAD includes both balance sheet and off-balance sheet exposures. Off-balance sheet exposures are converted to their balance sheet equivalent using internal or regulatory conversion

Fair value: the amount for which an asset could be exchanged or a liability settled, between informed and consenting parties under normal market conditions.

**Gross rate of doubtful outstandings:** ratio between doubtful outstandings and gross book loan outstandings (customer loans and receivables, loans and receivables with credit institutions, finance leases and basic leases).

Haircut: percentage by which the market value of securities is reduced to reflect their value in the context of stress (counterparty or market stress risk). The extent of the reduction reflects the perceived risk.

**Impairment:** recording of probable loss on an asset. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Incremental Risk Charge (IRC):** capital cost incurred due to rating migration risk and risk of issuers' default within a one-year horizon for trading book debt instruments (bonds and CDS). The IRC is a 99.9% risk factor, meaning the highest risk obtained after eliminating the 0.1% most unfavourable incidents.

**Insurance risk:** beyond asset/liability risk management (interest-rate, valuation, counterparty and currency risk), these include underwriting risk, mortality risk and structural risk of life and non-life insurance activities, including pandemics, accidents and catastrophic events (such as earthquakes, hurricanes, industrial disasters, or acts of terrorism or war).

**Internal Capital Adequacy Assessment Process (ICAAP):** process outlined in Pillar 2 of the Basel Accord, by which the Group verifies its capital adequacy with regard to all risks incurred.

**Investment grade:** long-term rating provided by an external ratings agency, ranging from AAA/Aaa to BBB-/Baa3 for a counterparty or underlying issue. A rating of BB+/Ba1 or lower indicates a Non-Investment Grade instrument.

Leverage ratio: The leverage ratio intends to be a simple ratio that aims to limit the size of banks' balance sheets. The leverage ratio compares the Tier One prudential capital with the accounting balance sheet/off-balance sheet, after restatements of certain items. A new definition of the leverage ratio has been implemented in accordance with the application of the CRR regulation.

**Liquidity:** for a bank, the capacity to cover its short-term maturities. For an asset, this term indicates the potential to purchase or sell it quickly on the market, with a limited discount. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

Liquidity Coverage Ratio (LCR): this ratio is intended to promote short-term resilience of a bank's liquidity risk profile. The LCR requires banks to hold risk-free assets that may be easily liquidated on markets in order to meet required payments for outflows net of inflows during a thirty-day crisis period without central bank support (source: December 2010 Basel document).

Loss Given Default (LGD): ratio between the loss incurred from exposure to default by a counterparty and the amount of the exposure at the time of default.

**Market risk:** risk of impairment of financial instruments arising from changing market parameters, as well as their volatility and the correlations between them. In particular, these parameters are foreign exchange rates, interest rates, as well as the prices of securities (equities and bonds), commodities, derivatives and all other assets, such as real estate assets.

**Market stress tests:** to assess market risks, alongside the internal VaR and SVaR model, the Group monitors its exposure using market stress test simulations to take into account exceptional market occurrences, based on 26 historical scenarii and eight hypothetical scenarios.

**Mezzanine:** form of financing between equity and debt. In terms of ranking, mezzanine debt is subordinate to senior debt, but it is still above equity.

**Monoline insurer:** insurance company participating in a credit enhancement transaction and which guarantees bond issues (for example, a securitisation transaction), in order to improve the issue's credit rating.

**Net earnings per share:** net earnings of the company (adjusted for hybrid securities recorded under equity instruments) divided by the weighted average number of shares outstanding.

**Net Stable Funding Ratio (NSFR):** this ratio aims to promote resilience over a longer time horizon by creating additional incentives for banks to fund their activities with more stable sources of funding. This structural ratio has a time horizon of one year and has been developed to provide a sustainable maturity structure of assets and liabilities (source: December 2010 Basel document).

**Netting agreement:** a contract in which two parties to a forward financial instrument, securities lending or resale contract agree to offset reciprocal claims arising from these contracts, with the settlement of these claims based only on the net balance, especially in the event of default or termination. A master netting agreement enables this mechanism to be extended to different kinds of transactions, subject to various framework agreements under a master agreement.

**Operational risks (including accounting and environmental risks):** risk of losses or sanctions, notably due to failures in procedures and internal systems, human error or external events, etc.

**Own shares:** shares held by the company, especially as part of the Share Buyback programme. Own shares are excluded from voting rights and are not included in the calculation of earnings per share, with the exception of shares held as part of a liquidity contract.

**Personal commitment:** represented by a deposit, autonomous guarantee or letter of intent. Whoever makes themselves guarantor for an obligation binds themselves to the creditor to honour that obligation, if the debtor does not honour it themselves. An independent guarantee is an undertaking by which the guarantor binds themself, in consideration of a debt subscribed by a third party, to pay a sum either on first demand or subject to terms agreed upon. A letter of intent is an undertaking to do or not to do, the purpose of which is the support provided to a debtor in honouring their obligation

**Physical collateral :** guarantees consisting of assets including tangible and intangible property and securities, including commodities, precious metals, cash, financial instruments and insurance contracts.

**Prime Brokerage:** all specific services designed for hedge funds to allow them to better conduct their business. In addition to standard intermediation transactions on financial markets (purchase and sale on behalf of clients), prime brokers offer securities borrowing and lending services and financial services specifically tailored for hedge funds. **Probability of Default (PD):** likelihood that a counterparty of the bank will default within one year.

**Rating:** assessment by a ratings agency (Moody's, Fitch Ratings, Standard & Poor's, etc.) of an issuer's financial solvency risk (company, government or other public institution) or of a given transaction (bond loan, securitisation, covered bond). The rating has a direct impact on the cost of raising capital. (Source: Bank of France Glossary - Documents et Débats - No. 4 - May 2012).

**Resecuritisation:** securitisation of an already securitised exposure where the risk associated with underlyings is divided into tranches and, therefore, at least one of the underlying exposures is a securitised exposure.

Residential mortgage backed securities (RMBS): see securitisation.

Return On Equity (ROE): ratio between the net income restated for interest on hybrid securities recorded under equity instruments and restated book equity (especially hybrid securities), which enables return on capital to be measured.

**Risk appetite:** level of risk by type and by business line, which the Group is prepared to take on with regard to its strategic objectives. Risk appetite is derived using both quantitative and qualitative criteria. Exercising risk appetite is one of the strategic steering tools available to the Group's decision-making bodies.

**Risk weight:** percentage of weighting of exposures which are applied to a particular exposure in order to determine the related risk-weighted asset.

**RWA – Risk-Weighted Assets:** risk-weighted outstanding balances or risk-weighted assets; exposure multiplied by its risk weighting.

Securitisation: transaction that transfers a credit risk (loan outstandings) to an organisation that issues, for this purpose, tradable securities to which investors subscribe. This transaction may involve a transfer of outstandings (physical securitisation) or a transfer of risk only (credit derivatives). Securitisation transactions may, if applicable, enable securities subordination (tranches).

#### The following products are considered securitisations:

ABS: Asset Backed Securities

**CDO:** Collateralised Debt Obligation, a debt security backed by an asset portfolio (bank loans (residential) or corporate bonds). Interest and principal payment may be subordinated (tranche creation);

**CLO:** Collateralised Loan Obligation, a CDO backed by an asset portfolio of bank loans;

**CMBS:** Commercial Mortgage Backed Securities, a debt security backed by an asset portfolio of corporate real estate loans leading to a mortgage;

**Share:** equity stake issued by a company in the form of shares, representing a share of ownership and granting its holder (shareholder) the right to a proportional share in any distribution of profits or net assets as well as a right to vote in a General Meeting of Shareholders.

**RMBS:** Residential Mortgage Backed Securities, a debt security backed by an asset portfolio of residential mortgage loans.

**SIFI (Systemically Important Financial Institution):** the Financial Stability Board (FSB) coordinates all of the measures to reduce moral hazard and risks to the global financial system posed by systematically important institutions Globally Systemically Important Financial Institutions (G-SIFI). These banks meet criteria defined in the Basel Committee rules included in the document titled "Global systemically important banks: Assessment methodology and the additional loss absorbency requirement" and published as a list in November 2011. This list is updated by the FSB each November (29 banks to date).

Stressed Value at Risk (SVaR): Identical to the VaR approach, the calculation method consists of a "historical simulation" with "one-day" shocks and a 99% confidence interval. Unlike the VaR, which uses 260 scenarios of daily variation year-on-year, the stressed VaR uses a fixed one-year window that corresponds to a historical period of significant financial tensions.

Structural interest rate and currency risk: risk of loss or of writedowns in the Group's assets arising from variations in interest or exchange rates. Structural interest rate and exchange rate risks are incurred in commercial activities and proprietary transactions.

Structured issue or structured product: a financial instrument combining a bond product and an instrument (an option for example) providing exposure to all types of asset (equities, currencies, interest rates, commodities). Instruments can include a total or partial guarantee in respect of the invested capital. The term "structured product" or "structured issue" also refers to securities resulting from securitisation transactions, where holders are subject to a ranking hierarchy.

**Tier 1 capital:** comprises Common Equity Tier 1 capital and Additional Tier 1 capital. The latter corresponds to perpetual debt instruments, with no incentive to redeem, less prudential deductions.

Tier 1 ratio: ratio between Tier 1 capital and risk-weighted assets.

**Tier 2 capital:** supplementary capital consisting mainly of subordinated notes less prudential deductions.

**Total capital ratio:** ratio between total (Tier 1 and Tier 2) capital and risk-weighted assets.

**Transformation risk:** appears as soon as assets are financed through resources with a different maturity. Due to their traditional activity of transforming resources with a short maturity into longer-term maturities, banks are naturally faced with transformation risk which itself leads to liquidity and interest-rate risk. Transformation occurs when assets have a longer maturity than liabilities; anti-transformation occurs when assets are financed through longer-maturity resources.

**Treasury shares:** shares held by a company in its own equity through one or several intermediary companies in which it holds a controlling share either directly or indirectly. Treasury shares are excluded from voting rights and are not included in the calculation of earnings per share.

Value at Risk (VaR): composite indicator used to monitor the Group's daily market risk exposure, notably for its trading activities (99% VaR in accordance with the internal regulatory model). It corresponds to the greatest risk calculated after eliminating the top 1% of most unfavourable occurrences observed over a one-year period. Within the framework described above, it corresponds to the average of the second and third largest losses computed.