# PILLAR III REPORT

SOCIETE GENERALE

Disclosures as of December 31, 2009.

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Except where indicated otherwise, all figures provided in this report are as of December 31, 2009 and stated in millions of Euros. The drawing-up process of Societe Generale's Pillar III report and the data contained in it are not subject to review by the Group's statutory auditors.

# INTRODUCTION

# THE BASEL II FRAMEWORK

According to the regulatory framework enacted in 1988 by the Basel Committee on Banking Supervision (the Basel II framework), regulatory supervision of banks' capital is based on three, interrelated pillars:

- **Pillar I** sets minimum solvency requirements and defines the rules that banks must use to measure risks and calculate associated capital needs, according to standard or more advanced methods.
- **Pillar II** relates to the discretionary supervision implemented by national banking supervisors, which allows them – based on a constant dialogue with supervised credit institutions – to assess the adequacy of capital requirements as calculated under Pillar I, and to calibrate additional capital needs with regard to risks.
- **Pillar III** encourages market discipline by developing a set of qualitative or quantitative disclosure requirements which will allow market participants to make a better assessment of capital, risk exposure, risk assessment processes and hence capital adequacy of the institution.

The Basel II framework was enshrined into European legislation with the enactment of the Capital Requirement Directive (CRD), which was eventually transposed into French regulations through the February 20th, 2007 Decree.

# SOCIETE GENERALE'S PILLAR III REPORT

Published under the joint responsibility of the Group's Finance Department and Risk Department, Societe Generale's Pillar III report intends to provide valuable insight into the Group's capital and risk management, as well as to provide detailed quantitative information in relation to the calculation of Group's consolidated solvency ratios, as they result from the implementation of Pillar I.

Published yearly, on the basis of the year-end figures, Societe Generale's Pillar III report is available on the Group's investor relation website www.investor.socgen.com.

# SCOPE OF PRUDENTIAL REPORTING

Societe Generale is subject to consolidated regulatory reporting to its home supervisor, the French Banking Commission (*Autorité de Contrôle Prudentiel*). Accordingly, the Pillar III report is based on the Group's consolidated regulatory solvency reporting. In addition, the contribution to the Group's total risk-weighted assets of selected key Group subsidiaries are appended to the Group report.

The Group's prudential reporting scope includes all fully consolidated subsidiaries and proportionally consolidated subsidiaries, the list of which is available in the Group's registration document available on www.investor.socgen.com, with the exception of insurance subsidiaries, which are subject to separate insurance capital reporting requirements. For regulatory purposes, Societe Generale's investments in insurances companies, as well as affiliates consolidated according to the equity method, are deducted from the Group's total regulatory capital.

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

**INSURANCE ACTIVITIES**

| | |
|---|---|
| Génécar | France |
| Oradéa Vie | France |
| Sogécap | France |
| Sogéssur | France |
| Antarius | France |
| Généras | Luxembourg |
| Sogelife | Luxembourg |
| Inora Life | Ireland |
| Komercni Pojstovna | Czech Republic |
| La Marocaine Vie | Morocco |
| Sogecap Life Insurance | Russia |

**BANKING ACTIVITIES**

| | |
|---|---|
| Gazelys | France |
| SG Banque au Liban | Lebanon |

**FINANCIAL COMPANY**

| | |
|---|---|
| Amundi | France |

# STATUS OF CONSOLIDATED SUBSIDIARIES

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.

# 1 CAPITAL MANAGEMENT POLICY

## CAPITAL MANAGEMENT OBJECTIVES AND STRATEGY

Societe Generale's capital management ensures that its solvency level is always consistent with its objectives of:

i) maintaining a high level of financial strength, closely correlated to the Group's overall risk profile and risk appetite,

ii) preserving financial flexibility for funding internal and external growth,

iii) ensuring the optimal deployment of capital across its various businesses to optimise the risk/reward balance

iv) achieving a satisfactory resilience of the group in case of adverse stress scenarios, and,

v) satisfying the expectations of various stakeholders: counterparties, debt obligors, ratings agencies and shareholders.

The group's internal solvency target is expressed in reference to its regulatory Core Tier 1 and Tier 1 ratio. Under the Pillar I framework, capital requirements arising from credit risk, market risk and operational risk are determined according to quantitative rules, which are further described in this Pillar III report.

## CAPITAL MANAGEMENT PROCESS

The Group's capital management process is administered by the Finance Division and is subject to the overall guidance and control of the Board. Fully integrated within the Group's financial and strategic planning, the capital management process take into account the group's regulatory capital constraints set by the Regulator as well as its own internal assessment of the amount of capital required to adequately cover risks , including in adverse scenarios.

Ensuring a strong involvement from senior management throughout the process, the bank's ICAAP is based on a multi-pronged approach, which considers primarily:

- Business and risks cyclicality, to explicitly factor in the effect of the credit cycles, while also taking into account risks outside the scope of Pillar I (e.g. business risk, interest rate risk etc.).
- Global stress tests, performed at least annually and on an ad-hoc basis, where Societe Generale's resilience to macro-economic scenarios is evaluated in a top-down approach.

Furthermore, using a Group-wide simulation tool, capital planning is updated at regular intervals (e.g. budget and financial planning, growth funding plans), and helps making sure at all times that sources and application of capital fit well with the Group's overall objectives and business needs.

Finally, in order to vet the outcome of its the capital management process, the bank supplements its results by performing benchmarking with relevant peers, as well as by maintaining a constant dialogue with investors, equity analysts and rating agencies.

# 2 RISK MANAGEMENT POLICY

## RISK MANAGEMENT STRATEGY

Given the diversity of businesses, markets and regions in which Societe Generale operates, the implementation of a high performance and efficient risk management structure is a critical undertaking for the bank. Specifically, the main objectives of the Group risk management are:

- to contribute to the development of the Group's various businesses by optimising their overall risk-adjusted profitability;
- to guarantee the Group's sustainability as a going concern, through the implementation of a high quality infrastructure for risk measurement and monitoring.

In defining the Group's overall risk appetite, the management takes various considerations and variables into account, including:

- the relative risk/reward of the bank's various activities;
- earnings sensitivity to economic cycles and credit or market events;
- sovereign and macro-economic risks, notably in emerging markets;
- the aim of achieving a well-balanced portfolio of earnings streams.

## PRINCIPLES OF RISK MANAGEMENT GOVERNANCE, CONTROL AND ORGANISATION

The Societe Generale Group's risk management governance is based on:

- strong managerial involvement, throughout the entire organisation, from the Board of Directors down to operational field management teams;
- a tight framework of internal procedures and guidelines;
- continuous supervision by an independent body to monitor risks and to enforce rules and procedures.

The Group's risk management is organised around two key principles:

- independence of risk assessment departments from the business divisions;
- a consistent approach to risk assessment and monitoring applied throughout the Group.

Compliance with these principles forms part of the integration plans for subsidiaries acquired by the Group.

Group risk management is governed by two main bodies: the Board of Directors, via the Audit, Internal Control and Risk Committee, and the Risk Committee. Under the authority of the General Management, the Group's Functional Divisions such as the Risk Division and Finance Division, independent from the Business Divisions, are dedicated to permanent risk management and control.

### THE BOARD OF DIRECTORS

The Board of Directors defines the Group's strategy and supervises risk control. In particular, it ensures the adequacy of the Group's risk management infrastructures, monitors the global risk exposure of its activities and approves the annual risk limits for market and credit risk. Presentations on the main aspects of, and notable changes to, the Group's risk management strategy, are regularly made to the Board by the General Management.

### THE AUDIT, INTERNAL CONTROL AND RISK COMMITTEE

Within the Board of Directors, the Audit, Internal Control and Risk Committee plays a crucial role in the assessment of the Group's internal control quality. More specifically it is responsible for examining the consistency and compliance of the internal risk monitoring framework with existing procedures, laws and regulations. With the benefit of specific presentations made by the General Management, the Committee reviews the procedures for controlling market risks as well as structural interest rate risk, and is consulted about the setting of the related risk limits. It also issues an opinion on the Group's overall provisioning policy as well as on significant specific provisions. Lastly, it examines the risk and control procedure assessment report which is submitted each year to the French Banking Commission (*Autorité de Contrôle Prudentiel*).

#### RISK COMMITTEE

The Risk Committee (CORISQ) is chaired by the General Management and meets at least once a month with the Group's Executive Committee. The mandate of the committee is to define the framework required to manage risk, review changes in the characteristics and risks of the Group portfolio and decide on any necessary strategic changes. The Group also has a Large Exposures Committee, which focuses on reviewing large individual exposures.

#### THE RISK DIVISION

The Group Risk Division is in charge of credit, market and operational risks. It is completely separate from the business entities and reports directly to the General Management. Its role is to contribute to the development and profitability of the Group by ensuring that the risk management system is adequate and effective by overseeing all transactions carried out within the Group.

Accordingly, the Risk Division is responsible for:

- Identifying the financial (credit and market risks) and operational risks borne by the Group;
- Defining or validating risk analysis, assessment, approval and monitoring methods and procedures;
- Assessing the risks incurred on transactions proposed by the Group's sales managers and analysing portfolios;
- Ensuring the adequacy of information systems and risk investment tools;
- Anticipating levels of risk provisioning for the Group.

#### THE FINANCE DIVISION

Structural interest rate, exchange rate and liquidity risks as well as the Group's long-term refinancing programme are managed within the Balance Sheet Management Department, whereas capital requirements and equity structure are managed within the Financial Management and Capital Department. Both of these departments report to the Group Finance Division.

The Finance Division is also responsible for assessing and managing the other major types of risk, namely strategic, business risks, etc.

The Finance Committee, a General Management body, validates the methods used to analyse and measure risks, as well as the exposure limits for each Group entity. It also provides advice to both the business divisions and entities.

Societe Generale's risk measurement and assessment processes are integrated in the bank's Internal Capital Adequacy Assessment Process (ICAAP). Alongside capital management, the ICAAP is aimed at providing guidance to both the CORISQ and the Finance Committee in defining the Group's overall risk appetite and setting risk limits.

In addition, the Internal Legal Counsel deals with compliance and legal risks.

Finally, the bank's risk management principles, procedures and infrastructures and their implementation are monitored by the Internal Audit team, the General Inspection Department and the Statutory Auditors.

# RISK CATEGORIES

Given the diversity and changes in the Group's activities, risk management focuses on the following main categories:

- **credit risk** (including country risk): risk of losses arising from the inability of the bank's customers, sovereign 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 the bank's securitisation activities. In addition, credit risk may be further increased by a **concentration risk**, which arises from a large exposure to a given risk or to certain groups of counterparties;
- **market risk**: risk of losses resulting from changes in the price of market products, in volatility and correlations;
- **operational risks** (including legal, accounting, environmental, compliance and reputational risks): risk of losses or sanctions due to inadequacies or failures in procedures and internal systems, human error or external events;
- **investment portfolio risk**: risk of negative fluctuations in the value of equity participation stakes in the bank's investment portfolio;
- **structural interest and exchange rate risk**: risk of loss or of depreciation in the bank's assets arising from variations in interest or exchange rates. Structural interest and exchange rate risk arises from commercial activities and Corporate Centre transactions (operations concerning equity capital, investments and bond issues);
- **liquidity risk**: risk of the Group not being able to meet its obligations as they come due;
- **strategic risk**: risks entailed by a chosen business strategy or resulting from the bank's inability to execute its strategy;
- **business risk**: risk of the earnings break-even point not being reached because of costs exceeding revenues;

Through its insurance subsidiaries, the Group is also exposed to a variety of risks linked to the insurance business (e.g. premium prices risk, mortality risk and structural risk of life and non-life insurance activities).

Through its Specialised Financing division, mainly its operational vehicle leasing subsidiary, the Group is exposed to residual value risk (estimated net resale value of an asset at the end of the leasing contract).

# 3 COMPOSITION OF REGULATORY CAPITAL AND CALCULATION OF REGULATORY RATIOS

# COMPOSITION OF REGULATORY CAPITAL BASE

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

## Tier 1 capital

Tier 1 capital comprises own funds elements less prudential deductions.

Definition of Tier 1 capital:

- Common stock (net of treasury stock).
- Retained earnings, including translation reserves and changes in the fair value of assets available for sale and hedging derivatives, net of tax.
- Minority interests.
- Certain deeply subordinated instruments – further described below – may also be included in Tier 1 capital subject to prior approval of the French Banking commission and within specific regulatory limits.

Less prudential deductions:

- Estimated dividend payment.
- Acquisition goodwill.
- Intangible assets.
- Unrealised capital gains and losses on cash flow hedges and Available For Sale (AFS) assets, except for losses on equity securities. Nevertheless 45% of unrealised gains on AFS securities and tangible assets are included in Tier 2 capital.

Moreover, under the Basel II capital framework, other deductions are made, equally from Tier 1 and from Tier 2:

1. Investments and subordinated claims towards non consolidated banks or financial institutions if the shares held represent an interest of more than 10% of the outstanding capital of this entity.
2. Securitization exposures weighted at 1250% where such exposures are not included in the calculation of total risk-weighted exposures.
3. Expected loss on equity exposures.
4. Negative difference, if any, between portfolio-based provisions and expected losses on performing loans risk-weighted under the Internal Ratings Based approach (IRB).

## Tier 2 capital

Tier 2 capital (or supplementary capital) comprises:

- Undated subordinated debt (upper Tier 2 capital).
- The positive difference, if any, between portfolio-based provisions and expected losses on performing loans risk-weighted under the Internal Ratings Based approach (IRB) is also included in upper Tier 2 up to 0,6% of the total Risk-Weighted Assets.
- Dated subordinated debt (lower Tier 2 capital)

In addition, equity interests of more than 20% held in entities belonging to the insurance sector and any investment qualifying as regulatory capital for insurance solvency requirements are deducted from total own funds until December 31st, 2012 if acquired prior to January 1st, 2007.

# INSTRUMENTS QUALIFYING AS TIER 1 CAPITAL FOR REGULATORY PURPOSES

Societe Generale's deeply subordinated notes and U.S. trust preferred shares issued through guaranteed indirect subsidiaries share the following features:

- These instruments are perpetual and constitute unsecured, deeply subordinated obligations, ranking junior to all other obligations including undated and dated subordinated debt, and senior only to common stock shareholders.
- In addition, Societe Generale may elect, and in certain circumstances may be required, not to pay the interest accrued on the instruments. Waived interest is not cumulative.
- Under certain circumstances, notably with regard to the bank's compliance with solvency requirements, the issuer has the right to use principal and interest to offset losses.
- Subject to the prior approval of the French Banking commission (*Autorité de Contrôle Prudentiel*), Societe Generale has the option to redeem these instruments at certain time intervals, but not earlier than five years after their issuance date.
- The combined outstanding amount of these instruments cannot exceed 35% of the bank's total Tier 1 capital base. In addition, the combined outstanding amount of instruments with a step-up clause (i.e. "innovative instruments"), cannot exceed 15% of the bank's total Tier 1 capital base.

## U.S. Trust Preferred shares

- In the first half of 2000, Societe Generale issued EUR 500 million in preferred shares through a wholly-owned US subsidiary. These securities entitle the holder to a fixed non-cumulative dividend equal to 7.875% of nominal value payable annually, with a step-up clause that comes into effect after 10 years.
- In the fourth quarter of 2001, Societe Generale issued USD 425 million in preferred shares through a wholly-owned US subsidiary, with a step-up clause that comes into effect after 10 years. These shares entitle holders to a non-cumulative dividend, payable quarterly, at a fixed rate of 6.302% of nominal value on USD 335 million of the issue, and at a variable rate of Libor +0.92% on the other USD 90 million.
- In the fourth quarter of 2003, Societe Generale issued EUR 650 million of preferred shares through a wholly-owned US subsidiary (paying a non-cumulative dividend of 5.419% annually) with a step-up clause that comes into effect after 10 years.

From an accounting perspective, due to the discretionary nature of the decision to pay dividends to shareholders, preferred shares issued by the Group are classified as equity and recognized under *Minority interests*. Remuneration paid to preferred shareholders is recorded under minority interests in the income statement.

## Deeply subordinated notes – Titres Super Subordonnés (TSS)

- In January 2005, the Group issued EUR 1 billion of deeply subordinated notes (Titres Super Subordonnés – TSS), paying 4.196% annually for 10 years and, after 2015, 3-month Euribor +1.53% per annum payable quarterly.
- In April 2007, the Group issued USD 200 million of deeply subordinated notes, paying 3-month USD Libor + 0.75% annually and then, from April 5, 2017, 3-month USD Libor +1.75% annually.
- In April 2007, the Group issued USD 1,100 million of deeply subordinated notes, paying 5.922% per annum payable quarterly and then, from April 5, 2017, 3-month USD Libor +1.75% annually.
- In December 2007, the Group issued EUR 600 million of deeply subordinated notes paying 6.999% annually and then, from 2018, 3-month Euribor +3.35% per annum payable quarterly.
- In May 2008, the Group issued EUR 1,000 million of deeply subordinated notes, paying 7.756% annually and then, from May 22, 2013, 3-month Euribor +3.35% per annum payable quarterly.
- In June 2008, the Group issued GBP 700 million of deeply subordinated notes, paying 8.875% annually and then, from September 16, 2019, 3-month Libor +3.40% per annum payable quarterly.
- In July 2008, the Group issued EUR 100 million of deeply subordinated notes, paying 7.715% annually and then, from May 22, 2013, 3-month Euribor +3.70% per annum payable quarterly.

- In December 2008, the Group issued EUR 1,700 of deeply subordinated notes, fully subscribed by the Société de Prises de Participation de l'Etat, an agency of the French government. Interest was 8.18% annually and then, from 2013, Euribor +4.98%. The bank had the option to redeem the notes after five years. These notes were fully redeemed in November 2009.
- In February 2009, the Group issued USD 450 million of deeply subordinated notes, paying 9.5045% annually and then, from February 29, 2016, 3-month Libor +6.77% per annum payable quarterly.
- In September 2009, the Group issued EUR 1,000 million of deeply subordinated notes, paying 9.375% annually and then, from September 4, 2019, 3-month Euribor +8.9% per annum payable quarterly.
- In October 2009, the Group issued USD 1,000 million of deeply subordinated notes, paying 8.75% semi-annually with no step up clause.

From an accounting perspective, given the discretionary nature of the decision to pay dividends to shareholders, deeply subordinated notes are classified as equity and recognized under *Equity instruments and associated reserves*.

## Total amounts issued and outstanding at year-end 2008 and 2009

| Date issued | Currency | Amount issued (million) | Amount in EUR million Year-end 2009 | Amount in EUR million Year-end 2008 |
|---|---|---|---|---|
| **Preference shares** | | | | |
| mars-00* | EUR | 500 | 500 | 500 |
| oct-01* | USD | 425 | 295 | 305 |
| oct-03* | EUR | 650 | 650 | 650 |
| | | | **1,445** | **1,455** |
| **Deeply subordinated notes** | | | | |
| janv-05* | EUR | 1,000 | 1,000 | 1,000 |
| avr-07* | USD | 1,100 | 764 | 790 |
| avr-07* | USD | 200 | 139 | 144 |
| déc-07* | EUR | 600 | 600 | 600 |
| mai-08 | EUR | 1,000 | 1,000 | 1,000 |
| juin-08 | GBP | 700 | 788 | 735 |
| juil-08* | EUR | 100 | 100 | 100 |
| déc-08 | EUR | 1,700 | | 1,700 |
| févr-09 | USD | 450 | 312 | |
| sept-09* | EUR | 1,000 | 1,000 | |
| oct-09 | USD | 1,000 | 694 | |
| | | | **6,397** | **6,069** |
| **Amount at period-end** | | | **7,842** | **7,524** |

* *innovative instruments*

# BASEL II REGULATORY RATIOS

During a transitional period until year-end 2009, the benefit of lower capital requirements associated with the implementation of the Basel II capital framework (as enshrined in the 2006 Capital Requirement Directive – CRD) is capped by regulations. Accordingly, the Group's total minimum capital requirement had to be at least 90% of the one calculated under the Basel I capital framework (as passed into law by the 1993 European Capital Adequacy Directive – CAD) on a parallel basis for 2008, and at least 80% of the Basel I number at year end 2009.

For the purpose of the calculation of this Basel II solvency floor in 2008 and 2009, own funds are fully adjusted to reflect differences in the calculation of own funds between the Basel I (CAD) and Basel II (CRD) frameworks.

The application of these transitional measures at year-end 2008 had the effect of reducing the Group's reported Tier 1 and total capital ratios of 0.35% and 0.51% respectively but do not affect the 2009 solvency ratios.

## Risk capital, risk-weighted and Basel II solvency ratios

| *(in millions of Euros)* | Dec. 2009 | Dec. 2008 |
|---|---|---|
| **Shareholders' equity (IFRS)** | **42,204** | **36,085** |
| Deeply subordinated notes | (6,252) | (5,969) |
| Perpetual subordinated notes | (824) | (812) |
| **Shareholders' equity, net of proposed dividend, deeply subordinated and perpetual subordinated notes** | **35,128** | **29,303** |
| Minority interests | 2,930 | 3,035 |
| Deeply subordinated notes | 6,397 | 6,069 |
| U.S. preferred shares | 1,445 | 1,455 |
| Intangible assets | (1,403) | (1,437) |
| Goodwill on acquisitions | (7,620) | (6,530) |
| Proposed dividends | (392) | (843) |
| Other regulatory adjustments | 473 | 668 |
| **Total tier 1 capital** | **36,957** | **31,721** |
| Basel II deductions* | (2,264) | (1,398) |
| **Total tier 1 capital, net of deductions** | **34,693** | **30,323** |
| Upper tier 2 capital** | 1,159 | 1,188 |
| Lower tier 2 capital | 11,814 | 13,092 |
| **Total tier 2 capital** | **12,974** | **14,280** |
| Basel II deductions | (2,264) | (1,398) |
| Insurance affiliates | (3,406) | (2,971) |
| **Total regulatory capital** | **41,996** | **40,234** |
| **Total risk weighted assets with-out add-on for transitional measures** | **324,080** | **345,518** |
| Credit risk | 263,101 | 277,195 |
| Market risk | 13,900 | 23,068 |
| Operational risk | 47,080 | 45,256 |
| **Solvency ratios** | | |
| Tier 1 ratio*** | 10.7% | 8.8% |
| Total capital ratio*** | 13.0% | 11.6% |

** Basel II deductions are deducted 50% from Tier 1 capital and 50% from Total capital.*

*** Including Euro 145 million in 2008 on account of the positive difference between portfolio-based provisions and expected losses on IRB-weighted performing loans.*

**** Does not reflect additional minimum capital requirements (in 2008, the Basel II requirement cannot be lower than 90% of CAD requirements).*

## Risk-weighted assets by approach and exposure class

| | 2009 | | | 2008 | | |
|---|---|---|---|---|---|---|
| *In millions of Euros* | **IRB** | **Standard** | **Total** | **IRB** | **Standard** | **Total** |
| Sovereign | 4,643 | 2,229 | 6,872 | 4,060 | 1,691 | 5,751 |
| Institutions | 10,396 | 4,151 | 14,547 | 12,757 | 6,162 | 18,920 |
| Corporates | 89,604 | 61,693 | 151,298 | 92,820 | 63,127 | 155,947 |
| Retail | 23,023 | 31,396 | 54,420 | 19,194 | 34,388 | 53,582 |
| Securitisation | 5,899 | 564 | 6,463 | 10,352 | 500 | 10,852 |
| Equity | 6,848 | 712 | 7,561 | 8,679 | 757 | 9,435 |
| Other non credit-obligation assets | 13,485 | 8,856 | 21,941 | 22,708 | - | 22,708 |
| **Risk-weighted assets for credit risk** | 153,899 | 109,202 | 263,101 | 170,570 | 106,625 | 277,195 |
| **Risk-weighted assets for market risk** | 10,979 | 2,921 | 13,900 | 20,532 | 2,536 | 23,068 |
| **Risk-weighted assets for operationnal risk** | 43,013 | 4,067 | 47,080 | 40,450 | 4,806 | 45,256 |
| **Total** | **207,890** | **116,190** | **324,080** | **231,552** | **113,967** | **345,518** |

## Basel II deductions

| *in millions of Euros* | **Dec. 2009** | **Dec. 2008** |
|---|---|---|
| Unconsolidated banking affiliates | (750) | (822) |
| Equity investments | (963) | (127) |
| Subordinated loans to financial institutions | (914) | (688) |
| Deductions on account of securitization positions | (1,864) | (1,114) |
| Expected loss on equity | (34) | (45) |
| Expected loss on performing loans net of provisions | (3) | 146 |
| **Total** | **(4,528)** | **(2,795)** |

# 4 CREDIT AND COUNTERPARTY RISK – RISK MITIGATION

# CREDIT RISK MANAGEMENT: ORGANISATION AND STRUCTURE

The Risk Division has defined a control and monitoring system, in conjunction with the divisions and based on the credit risk policy, to provide a framework for the Group's credit risk management. The credit risk policy is periodically reviewed and validated by the Audit, Internal Control and Risk Committee.

Credit risk supervision is organised by division (French Networks, International Retail Banking, Specialised Financing and Insurance, Private Banking, Global Investment Management & Services and Corporate & Investment Banking) and is supplemented by departments with a more cross-business approach (monitoring of the country risk and the risk linked to financial institutions). The counterparty risk on market transactions is linked to the market risk.

Within the Risk Division, each of these departments is responsible for:

- setting global and individual credit limits by customer, customer group or transaction type;
- authorising transaction files submitted by the sales departments;
- validating credit score or internal customer rating criteria;
- monitoring and supervision of large exposures and various specific credit portfolios;
- reviewing 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.

# RISK APPROVAL

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 a thorough understanding of the client's business, purpose and nature, the structure of the transaction and the sources of repayment. Credit decisions must also ensure that the securing of the transaction sufficiently reflects the risk of loss in case of default. 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 counterparty risk (credit risk, non-settlement or non-delivery risk and issuer risk) must be pre-authorised;
- staff assessing credit risk are fully independent from the decision-making process;
- responsibility for analysing and approving risk lies with the most appropriate business line or risk unit. The business and risk unit examine all authorisation requests relating to a specific client or client group, to ensure a consistent approach to risk management;
- all credit decisions are based on internal counterparty risk ratings, as provided by the business lines and approved by the Risk Division.

The Risk Division submits recommendations to the CORISQ on the concentration limits it deems appropriate for particular countries, geographic regions, sectors, products or customer types, in order to reduce sector 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 Business Divisions exposed to risk and the Risk Division.

Finally, the supervision provided by the CORISQ is supplemented by the Large Exposure Risk Committee. This is an ad-hoc committee responsible for vetting the risk-taking and marketing policy vis-à-vis the bank's key large corporate client group, notably by proposing exposure limits.

# RISK MONITORING AND AUDIT

The Group's risk information systems centralise the operating entities' commitments in a single database and reconcile total counterparty exposure with the corresponding authorisations. These systems constitute a data source for portfolio analysis.

All Group operating units, in particular the trading rooms, are equipped with information systems enabling them to check, on a daily basis, that the exposure limits set for each counterparty have not been exceeded.

The Risk Division and business lines regularly review the quality of commitments when validating credit scores or in the course of quarterly provisioning procedures.

Furthermore, the Risk Division also carries out regular credit file reviews or risk audits in the Group's Business Divisions. Finally, the Group's Internal Audit Department regularly performs audits and reports its conclusions to the General Management.

# REPLACEMENT RISK

The counterparty or replacement risk corresponds to the marked-to-market value of transactions with counterparties. It represents the current cost to the Group of replacing transactions with a positive value should the counterparty default. Transactions giving rise to a counterparty risk are, inter alia, security repurchase agreements, security lending and borrowing and over-the-counter derivative contracts such as swaps, options and futures.

## Replacement risk management

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

In order to quantify the potential replacement risk, the future marked-to-market 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 characterise the subsequent distribution resulting from the Monte-Carlo simulations:

- the current average risk suited to analysing the risk exposure for a portfolio of clients;
- the 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 tests scenarios used to calculate the instantaneous exposure linked to changes in the marked-to-market value of transactions with all of its counterparties in the event of an extreme shock to one or more market parameters.

## Setting counterparty limits

The credit profile of counterparties, including financial institutions, is reviewed on a regular basis and limits are set, defined both by the type and maturity of the instruments concerned. In setting these limits, the bank considers both the intrinsic creditworthiness of the counterparties, as well as the robustness of any legal documentation, the Group's global exposure to financial institutions and the closeness of its commercial relations with the counterparties in question. Fundamental credit analysis is also supplemented by relevant peer comparisons and market surveillance.

IT trading systems allow both traders and the Risk Division to ensure that counterparty limits are not exceeded, on an on-going daily basis, or that incremental authorisations are obtained as needed.

A significant weakening of the bank's counterparties also prompts urgent internal rating reviews and a specific supervision and approval process for more sensitive counterparties or more complex trading instruments.

# RISK MITIGATION OVERVIEW

Guarantees and collateral are used by the bank to partially or fully protect against the risk of debtor insolvency. Accordingly, whenever possible or deemed appropriate, Societe Generale tries to obtain collateral or guarantees as means of securing its credit exposures for its trading or commercial activities. Collateral includes physical securities such as property, commodities or bullion, as well as financial assets such as cash or high quality investments and securities, and also insurance policies. Appropriate haircuts are applied to the value of collateral, reflecting its quality and liquidity. Guarantees encompass commitments or protection provided by banks and similar credit institutions, specialized institutions such as mortgage guarantors (Crédit Logement in France), monoline or multiline insurers, public export agencies, etc. This category also includes Credit Default Swaps (CDS).

## Guarantees and collateral

During the credit approval process, an assessment of the value of the collaterals and guarantees, their legal enforceability and the capacity of the guarantor to meet its obligations is undertaken. This process also ensures that the collateral or guarantee successfully meet the criteria required by the Capital Requirement Directive CRD.

The collateral's market value and the guarantor's financial strength are reviewed periodically at least once a year. Moreover, the bank monitors the diversification of collateral types, as well as the concentration risk brought upon by the providers of these same guarantees.

The consideration of personal guarantees in IRB or standard approach is based on the principle of substitution, thus enabling the calculation of the probability of default (PD) and/or the loss given default (LGD) whilst factoring in the protection in the computation of the related exposure.

Regarding collateral, the risk mitigation is accounted for in the LGD of the related exposure.

The amounts of guarantees and collaterals presented in the table below correspond to the amounts of Basel II eligible guarantees and collaterals, capped at the amounts remaining due. Some guarantees and collaterals, for instance personal guarantees provided by business owners and pledges over unlisted shares, are not included in these amounts.

The Risk department is responsible for validating the operational procedures established by the business divisions for the regular valuation of guarantees and collateral, be it automatically or based on an expert's opinion, and both during the credit decision for a new loan or upon the annual renewal of the credit application.

**Guarantees and collateral for impaired outstanding loans and non-doubtful outstanding loans with past due installments**

| | December 31, 2009 | | December 31, 2008 | |
|---|---|---|---|---|
| *(In millions of euros)* | Retail | Non-retail | Retail | Non-retail |
| Guarantees and collaterals related to past due, unimpaired outstanding loans | 1,249 | 557 | 1,030 | 808 |
| Guarantees and collaterals related to impaired outstanding loans | 1,740 | 1,688 | 1,324 | 1,046 |

* *Accounting exposure ; exposure to counterparty risk not included.*

## Use of credit derivatives

The Group uses credit derivatives in the management of its Corporate loan portfolio. They serve primarily to reduce individual, sector and geographic concentration and also to implement proactive risk and capital management. The Group's over concentration management policy has led it to take major individual hedging positions: for example, the ten most-hedged names account for 32% of the total amount of individual protection purchased.

The notional value of credit derivatives purchased for this purpose is booked in the off-balance sheet commitments under guarantee commitments received.

2009 was marked by the tightening of credit spreads after the significant widening recorded in 2008. To limit the sensitivity of the hedging portfolio, measures to reduce positions were introduced. In 2009, the Credit Default Swap (CDS) portfolio decreased from EUR 28.2 billion to EUR 13.0 billion at December 31, 2009.

Furthermore, the senior protection (synthetic Collateralised Debt Obligations, CDOs) purchased in recent years for the purpose of managing Regulatory Capital under Basel I, was unwound in 2009.

Almost all protection purchases were carried out with banking counterparties with ratings of A- or above, the average being between AA- and A+. Concentration with any particular counterparty is carefully monitored.

## Mitigation of replacement risk

Societe Generale uses different techniques to reduce this risk. With regard to trading counterparties, the bank seeks to implement global closeout/netting agreements wherever it can. Netting agreements are used to net all of the amounts owed and due in case of default. The contracts usually call for the revaluation of required collateral at regular time 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. Other tradable assets are also accepted, after any appropriate value adjustments ("haircuts") to reflect the lower quality and/or liquidity of the asset.

In order to reduce its credit risk exposure, Societe Generale has signed a number of master netting agreements with various counterparties (ISDA contracts governing financial derivative transactions). In the majority of cases, these agreements do not result in the netting of any assets or liabilities on the books, but the credit risk attached to the financial assets covered by a master netting agreement is reduced insofar as the amounts due are settled on the basis of their net value in the event of a default.

Finally, wider use of clearing houses, for exchange-traded products, and increasingly for over-the-counter transactions (e.g. foreign exchange), is another general measure allowing the reduction of counterparty risk.

# EVALUATION OF CAPITAL REQUIREMENTS FOR CREDIT RISK

In December 2007, Societe Generale obtained authorization from its supervisory authorities to apply the internal ratings (AIRB) method for most of its exposures – this is the most advanced method for calculating capital requirements in respect of credit risk.

Societe Generale intends to progressively extend its transition to AIRB to include those activities and exposures which are currently using the Standardised Approach. A roll-out plan has been implemented to organise the transfer of the subsidiaries concerned to AIRB.

# RISK MEASUREMENT AND INTERNAL RATINGS

The Group's rating system is based on three key pillars:

- the internal rating models used to measure both counterparty risk (expressed as a probability of default by the borrower within one year) and transaction risk (expressed as the amount that will be lost should a borrower default) in accordance with the Basel II principles;
- a set of procedures defining guidelines for the use of ratings (scope, frequency of rating revision, procedure for approving ratings, etc.), and for the supervision, back-testing and validation of models;
- reliance on human judgment to look critically at model results.

The main outputs from Societe Generale's credit risk models, which are used as key variables for the calculation of RWA under IRB and are selectively detailed further in this report, are:

- Probability of Default (PD), which measures the financial strength of a counterparty and the likelihood of its failing to make timely payments through its estimated one-year default probability.
- Maturity (M) of the exposure, which helps factor in the likelihood of the counterparty's rating migrating over time.
- Exposure at Default (EAD), which combines the drawn portion of loans as well as the conversion of off-balance sheet commitments into on-balance sheet exposure through the Credit Conversion Factor (CCF).
- Loss Given Default (LGD), which is an estimation of the loss incurred through exposure to a defaulting counterparty.
- 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 obtaining collateral. More simply put, EL equals EAD x PD x LGD (except for defaulted exposures).
- Exposure is defined as all assets (e.g. loans, receivables, accruals, etc.) associated with market or customer transactions, recorded on- and off-balance sheet.

The Group's internal models enable a quantitative assessment of the counterparty and transaction risk that is factored into loan applications for the measurement of the credit risk and the calculation of the risk-adjusted return on capital. They are used by staff (credit analysts and customer relationship managers) and decision-makers as a tool for structuring, pricing and approving transactions. As such, counterparty ratings are one of the criteria for determining the decision-making approval limits granted to operational staff.

These models used to estimate the Probability of Default (PD) in relation to counterparties and the Loss Given Default (LGD) cover the vast majority of the Group's credit portfolios (Retail Banking and Corporate & Investment Banking). Most of them were AIRB-validated (Advanced Internal Ratings Based Approach) in 2007 and have since undergone a regular performance assessment.

# RISK-MODELLING GOVERNANCE

## Modelling responsibility and process

Governance consists in developing, validating, monitoring and making decisions on changes with respect to internal rating models. A dedicated department within the Risk Division is specifically in charge of defining the bank's process for evaluating the key credit metrics used under AIRB (Probability of Default, PD; Loss Given Default, LGD; Credit Conversion Factor, CCF), and validating the internal rating models.

A decision-making committee, the Expert Committee authorizes changes in the internal model system. Sponsored by the Risk Division and the business line concerned, its role is to validate, from a banking perspective, the risk parameters proposed in Model Committee meetings and to establish work priorities.

The credit models used to model the bank's AIRB capital requirements are reviewed once a year in compliance with the related Basel II regulations, and may then be adjusted as needed. To do this, the modelling entities carry out annual back-testing and present their findings to the independent model control entity. The back-testing results and the audit opinion on the models' performance and risk indicator parameters are used as a basis for the discussions in the Model and Expert Committees. Finally, the CORISQ is regularly notified of the conclusions and decisions of the Expert Committees.

The results of the back tests presented in 2009 by and large confirmed the values adopted for parameters of the Large businesses portfolios and caused a slight increase of the values of the SME portfolios' LGD. The changes to the parameters of the retail portfolios capital requirements have a mixed impact, the increase in the default rates of certain portfolios being compensated by a decrease of the LGD.

## Building blocks of Societe Generale's credit risk modelling

In June 2009, in addition to the PD and LGD models, the bank introduced internal Credit Conversion Factor (CCF) models to estimate exposure at the time of default for undrawn credit facilities.

With regard to the bank's corporate exposures, PD modelling has been calibrated on the basis of through-the-cycle assumptions and has been mapped using long-term default data, obtained from an external credit rating agency, and internal data.

For retail portfolios, PD modelling is based on a historical default database covering a medium-term time horizon, incorporating cautious assumptions.

Similarly, the bank's LGD and CCF modelled for large corporate portfolios are based on a historical database that includes a low point in the credit cycle.

With regard to counterparty risk Societe Generale uses the mark to market evaluation method.

The bank's EAD related to counterparty risk is determined by adding the positive marked-to-market value of all market transactions (replacement cost) and an "add-on". This add-on, established by the CRD regulations, is a fixed percentage that varies according to the transaction's type and residual maturity and is applied to the notional amount of the transaction. The effect of collateral and other risk mitigation measures is factored in by replacing the total gross exposure with the sum of all positive individual counterparty exposures, net of any collateral. The regulatory capital requirement then depends on the counterparty's internal obligor rating.

# SOCIETE GENERALE'S INTERNAL RATING SCALE

The following table presents Societe Generale's internal rating scale and the corresponding mean estimated probability of default.

| SG internal obligor rating scale | 1 year Probability of default |
|---|---|
| 1 | 0.01% |
| 2 | 0.02% |
| 3 | 0.04% |
| 4 | 0.30% |
| 5 | 2.16% |
| 6 | 7.93% |
| 7 | 20.67% |
| 8, 9 and 10 | 100.00% |

Societe Generale's definition of a default replicates the definition provided in the Basel II framework, whereby a borrower has defaulted if at least one of the three following conditions has been verified:

- A significant deterioration in the borrower's financial condition that would prevent them from fulfilling their unguaranteed or uncollateralized credit obligations, and that will therefore likely entail a high probability of loss, and/or,
- One or several arrears have been outstanding for more than 90 days (180 days for public obligors) and/or out-of-court settlement proceedings have been initiated, and/or,
- Legal insolvency proceedings are in progress (the obligor has been declared bankrupt or placed under similar conservatory or creditor protection measures).

Finally, Societe Generale applies a principle of contagion whereby any obligation declared in default will result in the classifying as in default of all the obligor's debts, possibly as well as those of all companies belonging to the same economic entity.

# CAPITAL REQUIREMENTS AND QUANTITATIVE DISCLOSURES

The following 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 at year-end 2009. The information provided below is consistent with the bank's published financial statements at that date.

In most of the tables below, Societe Generale's credit risk exposures are laid out along the lines of the obligor categories defined in the Basel II framework (the "Basel exposure class"):

| | |
|---|---|
| **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- and Medium-sized Enterprises are included in this category as a sub-portfolio, and defined as entities with total annual sales below EUR 50 million. |
| **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 million.<br>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. |
| **Securitization:** | Claims relating to securitization transactions. |
| **Equity:** | Non-debt exposures entailing a subordinated, residual claim on the assets or income of the issuer. |
| **Other*:** | This category includes all non-credit obligation assets such as fixed assets, goodwill, other assets, prepaids and other miscellaneous items. |

* *Other non-credit obligation assets.*

The following tables provide a breakdown of Societe Generale's credit exposures[1], their related exposures at default (EAD)[1] and the risk weighted assets[2] (RWA) relating to the Group's on- and off-balance sheet assets. Information is also provided for defaulted exposures.

These quantitative disclosures are presented according to their valuation approaches (Standard or IRB), exposure class and geographies, as needed.

**Summary of quantitative credit risk information**



*(1) After accounting nettings and before credit risk mitigation effects*
*(2) After accounting nettings and credit risk mitigation effects*

## Credit risk exposures, exposure at default (EAD) and risk weighted assets (RWA) by approach and exposure class

| **Global portfolio** *In millions of euros – 31/12/2009* | IRB approach | | | Standard approach | | | Total | | | Average[(1)] | | Total 31/12/2008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exposure | EAD | RWA | Exposure | EAD | RWA | Exposure | EAD | RWA | Exposure | RWA | Exposure | EAD | RWA |
| **Exposure Class** | | | | | | | | | | | | | | |
| Sovereign | 58,884 | 56,879 | 4,643 | 4,123 | 4,143 | 2,229 | 63,007 | 61,022 | 6,872 | 62,010 | 6,636 | 59,161 | 56,992 | 5,751 |
| Institutions | 121,830 | 108,959 | 10,396 | 12,845 | 9,522 | 4,151 | 134,675 | 118,481 | 14,547 | 144,584 | 15,089 | 160,047 | 137,462 | 18,920 |
| Corporates | 271,807 | 213,674 | 89,604 | 107,139 | 66,229 | 61,693 | 378,945 | 279,904 | 151,298 | 400,893 | 154,373 | 412,973 | 305,753 | 155,947 |
| Retail | 121,103 | 118,400 | 23,023 | 52,966 | 46,325 | 31,396 | 174,069 | 164,725 | 54,420 | 170,919 | 53,963 | 168,048 | 160,051 | 53,582 |
| Securitisation | 42,475 | 41,436 | 5,899 | 1,092 | 1,092 | 564 | 43,567 | 42,528 | 6,463 | 49,110 | 10,483 | 54,683 | 39,136 | 10,852 |
| Equity | 3,047 | 2,090 | 6,848 | 707 | 645 | 712 | 3,753 | 2,734 | 7,561 | 3,975 | 8,017 | 4,289 | 3,907 | 9,435 |
| Other non credit-obligation assets | 13,485 | 13,485 | 13,485 | 15,355 | 15,355 | 8,456 | 28,840 | 28,840 | 21,941 | 22,195 | 20,344 | 26,583 | 26,583 | 22,708 |
| **TOTAL** | **632,630** | **554,922** | **153,899** | **194,227** | **143,312** | **109,202** | **826,857** | **698,234** | **263,101** | **853,685** | **268,906** | **885,785** | **729,884** | **277,195** |

*(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 four.*

The credit risk exposure and the exposure at default (EAD) of the Group as at December 31st, 2009 are down from December 31st, 2008. The decrease, particularly on the Corporate and Institutions categories, is partially offset by the increase on the Sovereign and Retail categories.

The decline of the exposure at default (EAD) of the Corporate category was caused in particular by the implementation of internal credit conversion factors (CCF) as of September 2009 and the resulting decrease in the average CCF of this category as well as in IRB-treated exposures at default (EAD).

The increase of credit exposure to the category Retail was largely driven by mortgage loans in France.

In 2009, the Group received the approval from its regulator to use the Internal Assessment Approach (IAA) for the calculation of the regulatory capital requirement on ABCP conduits, thus reducing the risk weighted assets pertaining to securitisation exposures.

## Retail credit risk exposure, exposure at default (EAD) and risk weighted assets (RWA) by approach and exposure class

| **Retail portfolio** *In millions of euros – 31/12/2009* | IRB approach | | | Standard approach | | | Total | | | Average[(1)] | | Total 31/12/2008 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exposure | EAD | RWA | Exposure | EAD | RWA | Exposure | EAD | RWA | Exposure | RWA | Exposure | EAD | RWA |
| **Exposure class** | | | | | | | | | | | | | | |
| Residential mortgages | 66,363 | 66,366 | 5,528 | 10,795 | 10,400 | 4,056 | 77,158 | 76,766 | 9,584 | 74,904 | 9,683 | 73,234 | 72,240 | 9,435 |
| Revolving credits | 10,850 | 7,490 | 2,958 | 4,405 | 3,055 | 2,355 | 15,255 | 10,545 | 5,313 | 14,607 | 4,725 | 13,873 | 9,283 | 4,471 |
| Other credits to individuals | 29,167 | 29,265 | 8,581 | 25,387 | 22,353 | 17,053 | 54,554 | 51,618 | 25,635 | 54,025 | 24,733 | 53,566 | 51,754 | 24,539 |
| Other – small entities or self employed | 14,724 | 15,279 | 5,956 | 12,378 | 10,518 | 7,932 | 27,102 | 25,797 | 13,887 | 27,383 | 14,823 | 27,375 | 26,774 | 15,138 |
| **TOTAL** | **121,103** | **118,400** | **23,023** | **52,966** | **46,325** | **31,396** | **174,069** | **164,725** | **54,420** | **170,919** | **53,964** | **168,048** | **160,051** | **53,582** |

*(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 four.*

## Credit risk exposure by approach and exposure class

| **Exposure class** *In millions of euros 31/12/2009* | IRB | | | Standard | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Credit risk** | **Counterparty risk** | **Total** | **Credit risk** | **Counterparty risk** | **Total** | **Credit risk** | **Counterparty risk** | **Total** |
| Sovereign | 51,109 | 7,775 | 58,884 | 3,784 | 339 | 4,123 | 54,893 | 8,114 | 63,007 |
| Institutions | 69,505 | 52,325 | 121,830 | 11,882 | 963 | 12,845 | 81,388 | 53,287 | 134,675 |
| Corporates | 239,660 | 32,146 | 271,807 | 104,907 | 2,231 | 107,139 | 344,568 | 34,378 | 378,945 |
| Retail | 121,051 | 52 | 121,103 | 52,956 | 10 | 52,966 | 174,007 | 62 | 174,069 |
| Securitisation | 42,040 | 435 | 42,475 | 1,092 | 0 | 1,092 | 43,132 | 435 | 43,567 |
| *Sub-total 1* | *523,365* | *92,733* | *616,099* | *174,622* | *3,542* | *178,165* | *697,987* | *96,276* | *794,263* |
| Equity | 3,047 | 0 | 3,047 | 707 | 0 | 707 | 3,753 | 0 | 3,753 |
| Other non credit-obligation assets | 13,485 | 0 | 13,485 | 15,355 | 0 | 15,355 | 28,840 | 0 | 28,840 |
| *Sub-total 2* | *16,532* | *0* | *16,532* | *16,062* | *0* | *16,062* | *32,593* | *0* | *32,594* |
| **TOTAL** | **539,897** | **92,733** | **632,630** | **190,684** | **3,542** | **194,227** | **730,581** | **96,276** | **826,857** |

## Exposure at default (EAD) by approach and exposure class

| **Exposure Class** *In millions of euros 31/12/2009* | IRB | | | Standard | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Credit risk** | **Counterparty risk** | **Total** | **Credit risk** | **Counterparty risk** | **Total** | **Credit risk** | **Counterparty risk** | **Total** |
| Sovereign | 49,104 | 7,775 | 56,879 | 3,804 | 339 | 4,143 | 52,908 | 8,114 | 61,022 |
| Institutions | 56,788 | 52,171 | 108,959 | 8,560 | 963 | 9,522 | 65,348 | 53,133 | 118,481 |
| Corporates | 181,528 | 32,146 | 213,674 | 63,998 | 2,231 | 66,229 | 245,526 | 34,378 | 279,904 |
| Retail | 118,348 | 52 | 118,400 | 46,315 | 10 | 46,325 | 164,663 | 62 | 164,725 |
| Securitisation | 41,000 | 435 | 41,436 | 1,092 | 0 | 1,092 | 42,092 | 435 | 42,528 |
| *Sub-total 1* | *446,768* | *92,579* | *539,347* | *123,769* | *3,542* | *127,312* | *570,537* | *96,122* | *666,659* |
| Equity | 2,090 | 0 | 2,090 | 645 | 0 | 645 | 2,734 | 0 | 2,734 |
| Other non credit-obligation assets | 13,485 | 0 | 13,485 | 15,355 | 0 | 15,355 | 28,840 | 0 | 28,840 |
| *Sub-total 2* | *15,575* | *0* | *15,575* | *16,000* | *0* | *16,000* | *31,575* | *0* | *31,575* |
| **TOTAL** | **462,343** | **92,579** | **554,922** | **139,769** | **3,542** | **143,312** | **602,112** | **96,122** | **698,234** |

## Exposure at default (EAD) by geographic area

| EAD *In millions of euros – 31/12/2009* | Sover-eign | Insti-tutions | Corp-orates | SME | Retail | Securitisation | Total(1) | Breakdown in % | Total(1) 31/12/08 | Equity | Other non credit-obligation assets | Total(2) | Breakdown in % | Total(2) 31/12/08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| France | 13,711 | 36,594 | 87,737 | 24,765 | 116,120 | 7,242 | **286,169** | 42.9% | **284,242** | 2,203 | 14,900 | **303,272** | 43.4% | **301,356** |
| EU Countries (except France) | 25,869 | 48,150 | 66,232 | 18,553 | 37,642 | 7,760 | **204,206** | 30.6% | **223,477** | 333 | 9,513 | **214,053** | 30.7% | **233,911** |
| *– of which Eastern Europe countries* | *10,855* | *2,743* | *11,442* | *8,635* | *16,241* | *0* | **49,915** | *7.5%* | **49,302** | *59* | *1,232* | **51,207** | *7.3%* | **50,648** |
| Central and Eastern Europe (excluding EU) | 4,389 | 2,772 | 12,090 | 1,642 | 5,123 | 0 | **26,017** | 3.9% | **29,788** | 13 | 787 | **26,817** | 3.8% | **30,440** |
| Africa / Middle East | 7,370 | 2,485 | 10,468 | 4,577 | 3,958 | 0 | **28,858** | 4.3% | **24,411** | 70 | 1,145 | **30,073** | 4.3% | **25,513** |
| America | 6,711 | 20,458 | 39,948 | 3,057 | 1,166 | 24,692 | **96,032** | 14.4% | **108,999** | 102 | 2,127 | **98,260** | 14.1% | **109,885** |
| Asia | 2,972 | 8,022 | 10,455 | 378 | 717 | 2,833 | **25,378** | 3.8% | **28,477** | 13 | 367 | **25,758** | 3.7% | **28,779** |
| **Total** | **61,022** | **118,481** | **226,931** | **52,971** | **164,725** | **42,528** | **666,660** | **100%** | **699,394** | **2,734** | **28,839** | **698,233** | **100%** | **729,884** |

*(1) total without equity and other non credit obligation assets*

*(2) total including equity and other non credit obligation assets*

## Retail exposure at default (EAD) by geographic area

| EAD *In millions of euros – 31/12/2009* | Residential mortgages | Revolving credits | Others credits to individuals | Others - small entities or self employed | Total | Breakdown in % | Total 31/12/2008 |
|---|---|---|---|---|---|---|---|
| France | 65,070 | 8,260 | 27,417 | 15,373 | **116,120** | 70% | **112,093** |
| EU Countries (except France) | 8,934 | 2,264 | 17,337 | 9,106 | **37,642** | 23% | **35,926** |
| *– of which Eastern Europe countries* | *6,271* | *1,120* | *6,874* | *1,975* | ***16,241*** | 10% | ***15,200*** |
| Central and Eastern Europe (excluding EU) | 1,483 | 21 | 3,459 | 160 | **5,123** | 3% | **6,121** |
| Africa / Middle East | 930 | 0 | 2,247 | 782 | **3,958** | 2% | **3,993** |
| America | 234 | 0 | 932 | 0 | **1,166** | 0.71% | **1,099** |
| Asia | 114 | 0 | 226 | 377 | **717** | 0.44% | **820** |
| **Total** | **76,766** | **10,545** | **51,619** | **25,797** | **164,725** | **100%** | **160,051** |

## Corporate credit exposure at default (EAD) by industry sector

| EAD<br>*In millions of euros – 31/12/2009* | Corporate EAD | Corporate Breakdown in % |
|---|---|---|
| Finance & insurance | 51,233 | 18.3% |
| Real estate | 22,470 | 8.0% |
| Public administration | 385 | 0.1% |
| Food & agriculture | 13,127 | 4.7% |
| Consumer goods | 7,420 | 2.7% |
| Chemicals, rubber, plastics | 5,651 | 2.0% |
| Retail trade | 13,226 | 4.7% |
| Wholesale trade | 21,040 | 7.5% |
| Construction | 12,515 | 4.5% |
| Transport equip. Manuf. | 3,207 | 1.1% |
| Education and Associations | 940 | 0.3% |
| Hotels and catering | 5,122 | 1.8% |
| Automobiles | 5,283 | 1.9% |
| Machinery and equipment | 10,725 | 3.8% |
| Forestry, paper | 1,995 | 0.7% |
| Metals, minerals | 14,296 | 5.1% |
| Media | 5,248 | 1.9% |
| Oil and Gas | 13,623 | 4.9% |
| Health, social services | 2,078 | 0.7% |
| Business services | 22,643 | 8.1% |
| Collective services | 17,565 | 6.3% |
| Personal & domectic services | 270 | 0.1% |
| Telecoms | 8,940 | 3.2% |
| Transport & logistics | 20,899 | 7.5% |
| **TOTAL** | **279,904** | **100%** |

## Counterparty risk exposure at default (EAD) by exposure class

| Exposure Class<br>*in millions of EUR – 31/12/2009* | Counterparty Risk EAD | Counterparty Risk RWA |
|---|---|---|
| Sovereign | 8,114 | 220 |
| Institutions | 53,133 | 4,351 |
| Corporates | 34,378 | 15,216 |
| Retail | 62 | 27 |
| Securitisation | 435 | 235 |
| **TOTAL** | **96,122** | **20,048** |

## Counterparty risk exposure at default (EAD) by geographic area

| Counterparty risk<br>*In millions of euros – 31/12/2009* | EAD |
|---|---|
| France | 15,105 |
| Western Europe (except France) | 41,154 |
| Eastern Europe | 4,236 |
| *– of which EU member* | *326* |
| Africa | 668 |
| America | 33,860 |
| Asia | 5,009 |
| **Total** | **96,122** |

## Counterparty risk exposure at default (EAD) by rating under the IRB approach

| Counterparty risk – IRB<br>*in millions of euros – 31/12/09* | EAD |
|---|---|
| **Internal obligor rating** | |
| 1 | 6,587 |
| 2 | 29,905 |
| 3 | 38,160 |
| 4 | 9,793 |
| 5 | 3,456 |
| 6 | 2,421 |
| 7 | 466 |
| 8 to 10 | 1,792 |
| **Total** | **92,579** |

## Credit risk exposure by residual maturity and exposure class

| Exposure(1) *In millions of euros – 31/12/2009* | Maturity analysis | | | |
|---|---|---|---|---|
| | **< 1 year** | **1 to 5 years** | **5 to 10 years** | **> 10 years** |
| Sovereign | 22,559 | 30,362 | 2,385 | 3,016 |
| Institutions | 24,861 | 65,107 | 3,890 | 11,858 |
| Corporates | 103,884 | 134,460 | 17,562 | 15,814 |
| Securitisation | 16,031 | 1,495 | 0 | 556 |
| **Total** | **167,334** | **231,424** | **23,837** | **31,244** |

*(1) Scope: Non Retail IRB exposure, excluding equity and other non credit-obligation assets*

## Credit exposure, exposure at default (EAD) and risk weighted assets (RWA) by exposure class and external rating under the Standard approach*

| *In millions of euros – 31/12/2009* | **External Rating** | **Gross exposure** | **EAD** | **RWA** |
|---|---|---|---|---|
| Sovereigns | AAA to AA- | 667 | 691 | - |
| | A+ to A- | 154 | 153 | 32 |
| | BBB+ to BBB- | 2,204 | 2,204 | 1,102 |
| | BB+ to B- | 1,093 | 1,090 | 1,090 |
| | <B- | 3 | 3 | 5 |
| | Without external rating | 2 | 2 | 0 |
| **Sub-total** | | **4,123** | **4,143** | **2,229** |
| Institutions | AAA to AA- | 9,672 | 6,650 | 1,390 |
| | A+ to A- | 345 | 300 | 150 |
| | BBB+ to B- | 2,765 | 2,520 | 2,559 |
| | <B- | 13 | 14 | 20 |
| | Without external rating | 49 | 39 | 33 |
| **Sub-total** | | **12,845** | **9,522** | **4,151** |
| Corporate | AAA to AA- | 4,372 | 3,269 | 655 |
| | A+ to A- | 3,713 | 3,339 | 1,839 |
| | BBB+ to B- | 50,379 | 19,042 | 19,616 |
| | <B- | 3,097 | 2,853 | 4,278 |
| | Without external rating | 45,579 | 37,728 | 35,304 |
| **Sub-total** | | **107,139** | **66,229** | **61,693** |
| Retail | Without external rating | 52,966 | 46,325 | 31,396 |
| **Total** | | **177,072** | **126,220** | **99,470** |

* *Excluding Securitisation equity and other non credit-obligations assets*

## Credit exposure (excluding defaulted exposure), exposure at default (EAD) and risk weighted assets (RWA) by exposure class and internal rating under the IRB approach

| *In millions of euros – 31/12/2009* | SG internal obligor rating | Gross exposure | Balance-sheet exposure | Off-balance sheet exposure | Average CCF (Off-balance sheet) | EAD | RWA | Average LGD | Average RW* | Expected Loss |
|---|---|---|---|---|---|---|---|---|---|---|
| Sovereigns | 1 | 32,745 | 27,024 | 5,721 | 80% | 31,610 | 0 | 0% | 0% | 0 |
| | 2 | 10,227 | 9,634 | 593 | 89% | 10,096 | 584 | 19% | 6% | 1 |
| | 3 | 2,240 | 1,982 | 258 | 78% | 2,183 | 145 | 20% | 7% | 0 |
| | 4 | 10,009 | 8,293 | 1,716 | 76% | 9,575 | 2,336 | 20% | 24% | 8 |
| | 5 | 2,152 | 1,505 | 647 | 72% | 1,972 | 797 | 19% | 40% | 4 |
| | 6 | 1,185 | 859 | 326 | 78% | 1,113 | 479 | 16% | 43% | 8 |
| | 7 | 256 | 255 | 1 | 75% | 256 | 233 | 18% | 91% | 8 |
| **Sub-total** | | **58,813** | **49,552** | **9,261** | **78%** | **56,807** | **4,575** | **9%** | **8%** | **29** |
| Institutions | 1 | 17,993 | 12,558 | 5,435 | 80% | 16,431 | 483 | 6% | 3% | 0 |
| | 2 | 31,511 | 14,381 | 17,130 | 97% | 30,561 | 1,272 | 13% | 4% | 1 |
| | 3 | 53,559 | 21,661 | 31,898 | 95% | 47,027 | 2,682 | 13% | 6% | 3 |
| | 4 | 13,875 | 7,724 | 6,151 | 78% | 11,318 | 2,908 | 31% | 26% | 7 |
| | 5 | 2,353 | 1,086 | 1,267 | 62% | 1,873 | 1,524 | 37% | 81% | 11 |
| | 6 | 1,638 | 523 | 1,115 | 21% | 744 | 811 | 32% | 109% | 15 |
| | 7 | 325 | 170 | 156 | 20% | 202 | 185 | 25% | 92% | 7 |
| **Sub-total** | | **121,254** | **58,104** | **63,151** | **80%** | **108,155** | **9,864** | **14%** | **9%** | **43** |
| Corporate | 1 | 7,083 | 5,019 | 2,064 | 68% | 6,206 | 722 | NA | 12% | 1 |
| | 2 | 29,106 | 12,614 | 16,492 | 66% | 22,760 | 2,428 | 35% | 11% | 1 |
| | 3 | 52,922 | 22,340 | 30,582 | 62% | 40,486 | 4,392 | 28% | 11% | 5 |
| | 4 | 88,140 | 41,088 | 47,052 | 54% | 62,839 | 20,330 | 30% | 32% | 56 |
| | 5 | 58,065 | 38,230 | 19,835 | 55% | 48,579 | 32,386 | 28% | 67% | 324 |
| | 6 | 18,246 | 12,413 | 5,833 | 67% | 16,205 | 18,060 | 29% | 111% | 352 |
| | 7 | 4,799 | 3,028 | 1,771 | 57% | 4,022 | 4,695 | 23% | 117% | 191 |
| **Sub-total** | | **258,361** | **134,732** | **123,629** | **54%** | **201,097** | **83,013** | **30%** | **41%** | **929** |
| Retail | 1 | 1,738 | 1,494 | 245 | 99% | 1,736 | 181 | NA | 10% | 1 |
| | 2 | 1,509 | 1,387 | 123 | 92% | 1,500 | 148 | NA | 10% | 0 |
| | 3 | 24,599 | 23,701 | 898 | 123% | 24,811 | 401 | 14% | 2% | 2 |
| | 4 | 37,845 | 33,581 | 4,264 | 56% | 35,987 | 2,263 | 15% | 6% | 14 |
| | 5 | 32,233 | 28,236 | 3,997 | 60% | 30,692 | 6,731 | 19% | 22% | 106 |
| | 6 | 11,419 | 10,551 | 868 | 102% | 11,598 | 5,111 | 25% | 44% | 189 |
| | 7 | 6,273 | 6,097 | 176 | 249% | 6,588 | 4,069 | 23% | 62% | 367 |
| **Sub-total** | | **115,617** | **105,047** | **10,570** | **74%** | **112,913** | **18,904** | **20%** | **17%** | **679** |
| Corporate in IRB slotting | | 3,504 | 2,448 | 1,056 | 60% | 2,902 | 2,286 | | 79% | 24 |
| Receivables | | 2,074 | 2,051 | 23 | 0% | 2,129 | 1,353 | | 64% | 22 |
| **Total** | | **559,624** | **351,934** | **207,690** | **64%** | **484,002** | **119,994** | **19%** | **25%** | **1,728** |

* *with consideration of the floor of PD*

## Retail credit exposure (excluding defaulted exposure), exposure at default (EAD) and risk weighted assets (RWA) by exposure class and internal rating under the IRB approach

| *In millions of euros – 31/12/2009* | SG internal obligor rating | Gross exposure | Balance-sheet exposure | Off-balance sheet exposure | EAD / Exposure | EAD | RWA | Average LGD | Average RW* | Expected Loss |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential mortgage | 1 | 118 | 114 | 3 | 100% | 118 | 11 | NA | 10% | 0 |
| | 2 | 1,327 | 1,258 | 69 | 100% | 1,324 | 129 | NA | 10% | 0 |
| | 3 | 20,541 | 19,876 | 665 | 100% | 20,543 | 222 | 10% | 1% | 1 |
| | 4 | 24,674 | 24,072 | 601 | 100% | 24,669 | 838 | 10% | 3% | 4 |
| | 5 | 12,921 | 12,559 | 362 | 100% | 12,919 | 1,560 | 11% | 12% | 14 |
| | 6 | 3,559 | 3,330 | 229 | 100% | 3,561 | 861 | 11% | 24% | 13 |
| | 7 | 2,284 | 2,237 | 48 | 100% | 2,288 | 881 | 10% | 39% | 29 |
| **Sub-total** | | **65,424** | **63,447** | **1,978** | **100%** | **65,422** | **4,503** | **11%** | **7%** | **62** |
| Revolving credit | 1 | 0 | 0 | 0 | | 0 | 0 | | | 0 |
| | 2 | 0 | 0 | 0 | | 0 | 0 | | | 0 |
| | 3 | 171 | 49 | 123 | 204% | 349 | 4 | 43% | 1% | 0 |
| | 4 | 3,666 | 260 | 3,406 | 46% | 1,703 | 110 | 43% | 6% | 2 |
| | 5 | 3,983 | 788 | 3,195 | 59% | 2,347 | 508 | 37% | 22% | 15 |
| | 6 | 1,571 | 1,130 | 441 | 98% | 1,538 | 830 | 37% | 54% | 36 |
| | 7 | 657 | 575 | 82 | 116% | 762 | 847 | 41% | 111% | 73 |
| **Sub-total** | | **10,049** | **2,802** | **7,247** | **67%** | **6,700** | **2,299** | **39%** | **34%** | **125** |
| Other retail credit | 1 | 1,621 | 1,380 | 241 | 100% | 1,619 | 170 | NA | 10% | 0 |
| | 2 | 182 | 129 | 53 | 97% | 177 | 19 | NA | 10% | 0 |
| | 3 | 3,877 | 3,767 | 111 | 101% | 3,908 | 167 | 30% | 4% | 1 |
| | 4 | 6,411 | 6,221 | 190 | 101% | 6,475 | 912 | 23% | 14% | 5 |
| | 5 | 8,949 | 8,726 | 224 | 100% | 8,975 | 2,828 | 25% | 32% | 43 |
| | 6 | 4,105 | 3,985 | 120 | 99% | 4,083 | 2,031 | 30% | 50% | 86 |
| | 7 | 1,797 | 1,771 | 26 | 100% | 1,803 | 1,127 | 26% | 62% | 135 |
| **Sub-total** | | **26,942** | **25,978** | **964** | **100%** | **27,038** | **7,252** | **26%** | **27%** | **270** |
| Small entities or self-employed | 1 | 0 | 0 | 0 | | 0 | 0 | | | 0 |
| | 2 | 0 | 0 | 0 | | 0 | 0 | | | 0 |
| | 3 | 9 | 9 | 0 | 113% | 10 | 7 | 18% | 71% | 1 |
| | 4 | 3,094 | 3,028 | 67 | 101% | 3,139 | 402 | 18% | 13% | 3 |
| | 5 | 6,380 | 6,164 | 216 | 101% | 6,452 | 1,836 | 20% | 28% | 34 |
| | 6 | 2,184 | 2,107 | 78 | 111% | 2,416 | 1,389 | 29% | 57% | 53 |
| | 7 | 1,534 | 1,514 | 21 | 113% | 1,734 | 1,215 | 28% | 70% | 131 |
| **Sub-total** | | **13,202** | **12,821** | **381** | **104%** | **13,752** | **4,849** | **22%** | **35%** | **222** |
| **Total** | | **115,617** | **105,047** | **10,570** | **98%** | **112,913** | **18,904** | **16%** | **17%** | **679** |

* *with consideration of the floor of PD*

## Impaired credit risk exposure and related value adjustments

| *In millions of euros – 31/12/2009* | Total on balance sheet gross exposure | Impaired exposure * Standardized approach | IRB approach | Total | Individual value adjustments * | Collective value adjustments * | Loan Loss provisions |
|---|---|---|---|---|---|---|---|
| Sovereign | 63,007 | 90 | 101 | 191 | 23 | | |
| Institutions | 134,675 | 25 | 459 | 484 | 157 | | |
| Corporates | 378,945 | 3,423 | 5,424 | 8,847 | 3,903 | | |
| Retail | 174,069 | 5,313 | 5,605 | 10,918 | 6,291 | | |
| Securitisation | 42,409 | 0 | 210 | 210 | 139 | | |
| **Total** | **793,105** | **8,852** | **11,799** | **20,650** | **10,513** | **1,181** | **5,848** |

* *excluding impaired credit exposures and related value adjustments on reclassified assets for an amount of EUR Bn 3,6 and EUR Bn 1,1 respectively, mainly classified in the securitisation category treated in IRB.*

## Changes in value adjustments and general provisions *

| *In millions of euros – 31/12/2009* | Asset depreciations at 31/12/2008 | Reversals used | Impairment losses | Reversals available | Other value adjustments (currency and other effects) | Asset depreciations at 31/12/2009 | recoveries associated with writen-off assets |
|---|---|---|---|---|---|---|---|
| Collective value adjustments (general provisions) | (1,070) | 0 | (394) | 256 | 27 | (1,181) | |
| Individual value adjustments | (8,292) | 1,360 | (5,517) | 1,660 | 280 | (10,513) | 0 |
| **TOTAL** | **(9,363)** | **1,360** | **(5,911)** | **1,916** | **306** | **(11,692)** | **0** |

* *excluding own funds instruments and excluding value adjustments on reclassified assets for an amount of EUR Bn 1,1 that relates to 2009 impairment losses on individual value adjustments.*

## Impaired credit risk exposure by geographic area

| *In millions of euros - 31/12/2009* | Impaired exposure * | Impaired exposure 31/12/2008 | Individual value adjustments ** | Individual value adjustments 31/12/2008 |
|---|---|---|---|---|
| France | 9,111 | 6,570 | 3,975 | 3,463 |
| EU (except France) | 4,023 | 3,140 | 1,787 | 1,500 |
| Central and Eastern Europe (except EU) | 4,755 | 2,638 | 3,149 | 2,089 |
| Africa / Middle East | 1,394 | 1,463 | 1,131 | 1,164 |
| America | 1,005 | 872 | 298 | 414 |
| Asia | 363 | 226 | 172 | 98 |
| **TOTAL** | **20,650** | **14,910** | **10,513** | **8,727** |

* *excluding impaired credit exposures on reclassified assets as at 31/12/09 for an amount of EUR Bn 3,6, mainly in the Americas.*
** *excluding value adjustments on reclassified assets as at 31/12/09 for an amount of EUR Bn 1.1, mainly in the Americas.*

## Impaired credit risk exposure by industry sector *

| *In millions of euros – 31/12/2009* | Impaired | % |
|---|---|---|
| Finance & insurance | 525 | 17% |
| Real Estate | 1,099 | 5% |
| Public administration | 255 | 1% |
| Food & agriculture | 450 | 2% |
| Consumer goods | 606 | 3% |
| Chemicals, rubber and plastics | 265 | 1% |
| Retail trade | 417 | 2% |
| Wholesale trade | 1,122 | 5% |
| Construction | 402 | 2% |
| Transport equip. Manuf. | 153 | 1% |
| Education and Associations | 6 | 0% |
| Hotels & Catering | 227 | 1% |
| Automobiles | 225 | 1% |
| Machinery and equipment | 390 | 2% |
| Forestry, paper | 139 | 1% |
| Metals, minerals | 354 | 1% |
| Media | 206 | 1% |
| Oil and Gas | 23 | 0% |
| Health, social services | 30 | 0% |
| Business services | 396 | 2% |
| Collective services | 354 | 1% |
| Personal and domestic services | 7 | 0% |
| Telecom | 17 | 0% |
| Transport & logistics | 759 | 3% |
| Retail | 10,802 | 45% |
| Others | 1,421 | 6% |
| **TOTAL** | **20,650** | **100%** |

* *Excluding impaired credit exposures on reclassified assets for an amount of EUR Bn 3,6.*

## Expected loss by exposure class (excluding defaulted exposures)

| *Global in millions of euros - 31/12/2009* | Expected losses (excluding defaulted exposures) | |
|---|---|---|
| | 12/31/2009 | 12/31/2008 |
| Sovereign | 29 | 31 |
| Institutions | 43 | 56 |
| Corporates | 976 | 764 |
| Retail | 679 | 612 |
| Securitisation | 0 | 0 |
| Equity | 34 | 45 |
| **TOTAL** | **1,762** | **1,508** |

A comparison between Expected Loss (EL) and realised loss is not relevant in our opinion insofar as:

- the parameters of the expected loss calculation (PD, LGD, EAD) provide estimations throughout the cycle, whereas the realised loss presents a piece of accounting information pertaining to a particular year;
- the subsequent structural alterations to the portfolio during the year of the loss are not fully accounted for in the EL calculation.

# 5 SECURITIZATION EXPOSURES

# SOCIETE GENERALE’S SECURITIZATION STRATEGY AND ACTIVITIES

## Definitions

For the purpose of this report, Societe Generale’s securitization positions relate to credit exposures arising from securitization transactions included in the bank’s assets and giving rise to Risk-Weighted Assets (RWA) and capital requirements in the bank’s regulatory banking book.

As defined in the CRD, “securitization” means 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,
- payments in the transaction or scheme are dependent upon 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 scheme.

## Purpose and strategy

Societe Generale is involved in the following securitization activities:

- **Agency business**: the bank intervenes in the structuring of securitization transactions on behalf of third parties, and in the placing of the ensuing notes or bonds. Generally speaking, Societe Generale does not assume direct credit risk in relation to its agency securitization business, which means that there are no consequent risk-weighted assets and capital requirements.
- **Commercial conduits (sponsor activity)**: Societe Generale has set up a number of bankruptcy-remote special purpose entities (“conduits”), with the intention of financing various asset classes (e.g. client receivables and consumer loans) through the issuance of short-term notes and commercial paper. This activity, which is closely integrated in its global commercial and investment banking franchise, helps finance the operating capital needs of some of the bank’s major clients. The purpose of this business is to generate fees for structuring and managing these conduits (e.g. structuring, commitment, usage and administration fees). The credit risk related to the associated assets is transferred to third party investors, including the riskier tranches. This being said, Societe Generale may incur ancillary credit risk from this activity in its providing of committed back-up liquidity facilities, interest rates or foreign exchange SWAPs and letters of credit, or when it purchases commercial paper issued by the conduits. Ultimately, the underlying credit risk emerging from the pool of assets is guaranteed by strict underwriting standards, high granularity and diversification as well as by over-collateralization and other credit enhancement techniques.
- **On balance-sheet financing**: when conducting its origination, sponsoring or underwriting activities, associated with the securitization of various asset classes, the bank may retain some of the underlying asset risks. Additionally, as part of its global credit portfolio management strategy, Societe Generale may tranche specific pools of assets and sell some of the riskier tranches to third party investors, in order to reduce its overall risk exposure.

  Furthermore, while the Group primarily relies on its large and stable funding base to fund its operations, Societe Generale, as part of its broader liquidity management strategy, has set up three transactions backed by prime domestic residential mortgages, thereby boosting its inventory of assets eligible for central bank refinancing. Given that these transactions do not result in any risk transfer for the bank, their capital requirements are unaffected by the securitization.
- **Societe Generale as an investor**: in addition to assets arising from its main securitization activities described above, which may be held on its balance sheet, Societe Generale may occasionally hold securitized assets as an investor, seeking to lock-in a positive net interest margin and an adequate return on the capital employed. While the Group’s insurance subsidiaries may also hold securitized assets in their investment portfolios, they are outside the scope of the Group’s Basel II regulatory banking solvency, as noted in chapter III.

  In addition, as a result of the on-going financial crisis, a number of securitized assets have been transferred from the bank’s trading books, or from money market funds managed by the bank’s asset management arm, to its regulatory banking book, and now give rise to capital requirements on account of their related credit risk.

The Group's activity in securitization has been very limited in 2009, with no significant new transaction closed during the year. However, the Group has continued to optimize and run off its portfolios of riskier assets, while the asset turnover of its ABCP conduits was comparable to 2008.

## Approach for calculating risk-weighted exposures

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

For the securitization positions that Societe Generale may retain, either on- or off-balance sheet, capital requirements are determined based on the bank's exposure, irrespective of its underlying strategy or role. Accordingly, risk-weighted exposure amounts on securitization positions are calculated by applying the relevant risk weights to the exposures' value. These are determined as follows.

The Group's securitization positions are predominantly valued using the Internal Ratings Based (IRB) approach, with less than 1% of the bank's capital exposures are calculated using the Standardized Approach (SA) whereby risk-weighted assets are determined on the basis of ratings assigned by rating agencies (e.g. 20 % for instruments rated between AAA and AA -, 50 % for those rated between A + and A-, etc. ).

The IRB approach is subdivided into three possible calculations:

- First and foremost, the Ratings-Based Approach (RBA) must be applied to all rated exposures or those for which a rating can be inferred. Under this approach, finer risk weights are applied, notably reflecting the positions' seniority and granularity.
- The Supervisory Formula 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.
- Finally, the positions arising from the Asset Backed Commercial Paper (ABCP) programmes' off-balance sheet exposures (such as liquidity facilities) and on-balance sheet exposures (such as drawn liquidity lines) are determined using appropriate Credit Conversion Factors (CCF) and are evaluated by the Internal Assessment Approach (IAA), which in substance allows to refer to the risk weights of the RBA.

Around 58% of the bank's IRB exposures are risk-weighted using the RBA (or similar) approach, 35% using the internal models approach and 8% through the Supervisory Formula.

## External Credit Assessment Institutions used for evaluating credit risk

Societe Generale uses credit ratings to gauge credit risk on its securitization positions. These are assigned by rating agencies that have been granted External Credit Assessment Institution (ECAI) status by the Committee of European Banking Supervisors (CEBS) and the respective members of the bank's college of supervisors. The following credit rating agencies have been granted ECAI status: Standard & Poors, Moody's Investors Service, Fitch Ratings and DBRS.

# CAPITAL REQUIREMENTS

At end-December 2009, Societe Generale's exposures to securitization totaled EUR 43.6 billion, of which EUR 25.9 billion related to on-balance sheet assets and EUR 17.7 billion consisted of off-balance sheet commitments, predominantly associated with liquidity facilities extended to the bank's sponsored commercial conduits. On-balance sheet exposures are accounted for by a variety of instruments, in which CDOs, CMBS and RMBS predominate.

The decline seen in securitization exposures compared to year-end 2008 reflects assets sales, redemptions as well as value impairments. At the same time, the first implementation of the Internal Assessment Approach in 2009 to risk weight exposures arising from sponsored ABCP resulted in diminished risk-weightings and capital requirements.

Under the standardized approach, the bank's risk-weighted exposures relative to securitization positions and related capital requirements are mainly evaluated based on a see-through method. At year-end 2009, Societe Generale's exposures under the standardized approach were as follows:

| | Gross exposure | EAD | Evaluation method | | RWA | Capital Requirement |
|---|---|---|---|---|---|---|
| **Investor** *In millions of euros* | | | Ratings based | See-through | | |
| On-balance sheet | 228 | 228 | 32 | 196 | 16 | 1 |
| Off-balance sheet | - | - | - | - | - | - |
| Total | 228 | 228 | 32 | 196 | 16 | 1 |

| | Gross exposure | EAD | Evaluation method | | RWA | Capital Requirement |
|---|---|---|---|---|---|---|
| **Sponsor** *In millions of euros* | | | Ratings based | See-through | | |
| On-balance sheet | 861 | 861 | - | 861 | 545 | 44 |
| Off-balance sheet | 2 | 2 | - | 2 | 3 | 0 |
| Total | 864 | 864 | - | 864 | 548 | 44 |
| **TOTAL 2009** | **1,092** | **1,092** | **32** | **1,060** | **564** | **45** |
| **TOTAL 2008** | **734** | **666** | **-** | **666** | **500** | **40** |

The bank's risk-weighted exposures and related capital requirements, evaluated based on the internal rating based approach, were as follows:

| | Gross exposure | EAD | Capital deduction | Evaluation method | | | RWA | | |
|---|---|---|---|---|---|---|---|---|---|
| *In millions of Euros* **Originator** | | | | Ratings based[2] | Regulatory formula | IAA | | of which classic securitization | of which synthetic securitization |
| **Originator** | | | | | | | | | |
| On-balance sheet | 1,182 | 1,182 | (5) | - | 1,177 | - | 82 | - | 82 |
| Off-balance sheet | - | - | - | - | - | - | - | - | - |
| Total | 1,182 | 1,182 | (5) | - | 1,177 | - | 82 | - | 82 |
| **Investor** | | | | | | | | | |
| On-balance sheet | 20,808 | 20,809 | (1,357) | 19,452 | - | - | 3,356 | 3,356 | - |
| Off-balance sheet | 3,149 | 3,149 | (24) | 1,270 | 1,856 | - | 362 | 8 | 354 |
| Total | 23,958 | 23,958 | (1,381) | 20,721 | 1,856 | - | 3,719 | 3,365 | 354 |
| **Sponsor** | | | | | | | | | |
| On-balance sheet | 2,826 | 2,819 | (478) | 2,109 | - | 232 | 898 | 898 | - |
| Off-balance sheet | 14,510 | 13,476 | - | 54 | - | 13,422 | 1,200 | 1,200 | - |
| Total | 17,336 | 16,296 | (478) | 2,163 | - | 13,655 | 2,098 | 2,098 | - |
| **TOTAL** | **42,475** | **41,436** | **(1,884)[1]** | **22,884** | **3,033** | **13,655** | **5,899** | **5,463** | **436** |
| *of which classic securitization* | 38,247 | 37,208 | (1,840) | 21,614 | - | 13,655 | 5,463 | | |
| *of which synthetic securitization* | 4,228 | 4,228 | (24) | 1,171 | 3,033 | - | 436 | | |
| **TOTAL 2008** | **53,948** | **38,470** | **(1,144)** | **28,844** | **2,990** | **5,523** | **10,352** | | |

1. *Exposures deducted from regulatory capital exclude provisioned exposures*
2. *Including provisioned exposures*

Under the Ratings based approach, the bank's EAD broken down per relevant risk weight bands, and gross of value adjustments, were as follows:

| **Risk weigth band** | **6% - 10%** | **12% - 18%** | **20% - 35%** | **50% - 75%** | **100%** | **250%** | **425%** | **650%** | **1250%** | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|
| 31/12/2009 | 16,061 | 1,081 | 712 | 683 | 351 | 131 | 113 | 169 | 3,582[(1)] | 22,884 |
| 31/12/2008 | 23,419 | 1,072 | 591 | 341 | 376 | 67 | 74 | 364 | 2,540[(1)] | 28,844 |

1. *EAD risk weighted at 1250% include fully provisioned securitization positions. Exposures deducted from regulatory capital are provided in the IRB exposure table above.*

Furthermore, the overall quality of on- and off-balance sheet positions under IRB were as follows:

| **Rating**<br>*in millions of Euros – 31/12/2009* | **Total** |
|---|---|
| AAA/Aaa | 8,547 |
| AA/Aa | 7,221 |
| A/A | 1,900 |
| BBB/Baa | 1,220 |
| BB/Ba | 414 |
| B and below | 264 |
| **Total rated** | **19,565** |
| **Non-rated** | **3,319** |
| **Total** | **22,884** |

At year-end 2009, securitization positions associated with the ABCP conduits sponsored by Societe Generale, assessed under the internal assessment approach IAA were as follows, broken down by rating band:

| **Rating**<br>*in millions of Euros – 31/12/2009* | **Total** |
|---|---|
| AAA/Aaa | 9,629 |
| AA/Aa | 3,427 |
| A/A | 582 |
| BBB/Baa | 16 |
| BB/Ba | 0 |
| **Total** | **13,654** |

# 6 EQUITY RISK

# INVESTMENT STRATEGIES AND PURPOSES

Societe Generale's exposures to non-trading equity are associated with a number of the bank's strategies and activities. They include shares and similar instruments, shares in mutual funds invested in equities, as well as investments in non consolidated Group subsidiaries and affiliates that are not deducted from prudential own funds.

- Firstly, the Group has a portfolio of industrial holdings, which primarily reflect strong historical or strategic relationships with these companies.
- In addition, Societe Generale holds small minority stakes in selected banks, for strategic purposes, as a mean of fostering increased cooperation with these institutions.
- Furthermore, non-trading equity includes the Group's investments in small, unconsolidated subsidiaries, operating in France or abroad. It also encompasses a variety of holdings and investments, ancillary to the Group's main banking activities, notably in retail banking and security services.
- Finally, Societe Generale and some of its subsidiaries may hold equity investments arising from its involvement in asset management (notably seed money in mutual funds sponsored by Societe Generale).

# VALUATION

## Fair value of Available-for-sale equity holdings

From an accounting perspective, Societe Generale's exposures to non-trading equities are classified as Available-for-sale (AFS) financial assets, as they may be held for indeterminate periods of time and be sold at any time. Changes in fair value are recorded in the Group's shareholders' equity under Unrealized or deferred gains or losses. Changes in fair value are recorded in the income statement when assets are sold or impaired, in which case they are reported as Net gains or losses on AFS assets. Dividend income earned on these securities is booked in the income statement under Dividend income.

For listed shares, fair value is taken to be the quoted price on the balance sheet closing date. For unlisted shares, fair value is determined depending on the category of financial instrument and according to one of the following methods:

- share of adjusted net asset value held;
- valuation based on a recent transaction involving the company (third-party buying into the company's capital, appraisal by professional valuer, etc.);
- valuation based on a recent transaction in the same sector as the company (income multiple, asset multiples, etc.).

## Impairment policy

Where there is objective evidence of prolonged impairment to a financial asset that is available for sale, an impairment loss is recognized through profit or loss. Impairments affecting AFS equity securities are irreversible.

For listed equity instruments, the prospect of booking a prolonged impairment is assessed whenever a material decline (over 20%) in the 12-month trailing average price compared to the security's acquisition cost occurs.

For unlisted equity instruments, a qualitative analysis of their potential impairment is carried out using the valuation methods described in Note 3 of Societe Generale's 2008 Registration document.

# CAPITAL REQUIREMENTS

Societe Generale's exposures to non-trading equity correspond to their book value, net of provisions. The Group applies the simple Internal Ratings Based approach for the larger part of its non-trading equity portfolio. As such, unquoted equities in diversified portfolios are risk-weighted at 190%, quoted equities are risk-weighted at 290%, and other unquoted equities are risk-weighted at 370%.

Nevertheless, unquoted equity holdings in diversified portfolios acquired before January 2008 may be weighted at 150% (grandfathering) and equity exposures considered as ancillary services undertaking may be weighted at 100%.

At year-end 2009, the Group's exposure to equities not included in the trading book and the related risk-weighted assets were as follows:

| | 12/31/2009 | | | | 12/31/2008 |
|---|---|---|---|---|---|
| *Equity Portfolio (in millions of euros)** | **Portfolio** | **Gross exposure** | **EAD** | **RWA** | **RWA** |
| 100% risk weighted | Ancillary Services | 335 | 367 | 367 | 314 |
| 150% risk weighted | Private equity (grandfathering) | 295 | 200 | 300 | 435 |
| 190% risk weighted | Quoted entities | 151 | 100 | 190 | |
| 290% risk weighted | Quoted entities | 1,248 | 879 | 2,549 | 2,954 |
| 370% risk weighted | Unquoted entities | 1,648 | 1,111 | 4,109 | 5,674 |
| **Total** | | ***3,676*** | ***2,657*** | ***7,515*** | ***9,377*** |

* *Excluding treasury investments.*

# 7 MARKET RISK

*Page*

# ORGANISATION

Although primary responsibility for managing risk exposure lies with the front office managers, the supervision systems is based on an independent structure, the Market Risk Department of the Risk Division. The Department's key mission is to continuously monitor, independently from the front offices, the positions and risks generated by the Group's market activities, and to compare these positions and risks with the authorised limits.

It notably carries out the following tasks:

- daily analysis (independently from the front office) of the exposure and risks incurred by the Group's market activities and comparison of these exposures and risks with the approved limits;
- definition of the risk-measurement methods and control procedures, approval of the valuation models used to calculate risks and results and setting of provisions for market risks (reserves and adjustments to earnings);
- definition of the functionalities of the databases and systems used to assess market risks;
- approval of the limit applications submitted by the operating divisions, within the global authorisation limits set by the General Management, and monitoring of their use;
- centralisation, consolidation and reporting of the Group's market risks;
- proposal of authorised risk limits by type of activity to the Risk Committee.

Besides these specific market risk functions, the Department also monitors the gross notional value of trading exposures. This system, based on alert levels applying to all instruments and desks, contributes to the detection of possible rogue trading operations.

Within each entity that incurs market risk, risk managers are appointed to implement level 1 risk controls. The main tasks of these managers, who are independent from the front office, include:

- the ongoing analysis of exposure and results, in collaboration with the front office;
- the verification of the market parameters used to calculate risks and results;
- the daily calculation of market risks, based on a formal and secure procedure;
- the daily monitoring of the limits set for each activity, and constant verification that appropriate limits have been set for each activity.

A daily report on the use of VaR (Value-at-Risk) limits, stress tests and general sensitivity to interest rates compared to the limits set out at Group level and a monthly report, which summarises key events in the area of market risk management and specifies the use of limits set by the General Management and the Board of Directors, are submitted to the General Management and to the business lines management.

# METHODS FOR MEASURING MARKET RISK AND DEFINING EXPOSURE LIMITS

The Societe Generale Group's market risk assessment is based on three types of indicators, which are used to define exposure limits:

- the 99% Value-at-Risk (VaR) method: in accordance with the regulatory internal model, this composite indicator is used for day-to-day monitoring of the market risks incurred by the bank, notably within the scope of its trading activities;
- stress test measurements, based on ten-year shock-type indicators. Stress Test measurements limit the Group's exposure to systemic risk and exceptional market shocks;
- additional measurements (sensitivity, nominal value, concentration or holding period, etc.), which ensure consistency between the total risk limits and the operational limits used by the front office. These measurements also allow the controlling of risks that would only be partially taken into account by VaR or Stress Test measurements.

# THE 99% VALUE AT RISK (VaR) METHOD

This method was introduced at the end of 1996 and the Internal VaR Model has been approved by the French regulator within the scope of the Regulatory Capital calculation.

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

- the 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 price volatility, credit spreads, etc.);
- the definition of 250 scenarios, corresponding to one-day variations of these market parametres over a rolling one-year period;
- the application of these 250 scenarios to the market parametres of the day;
- the revaluation of daily positions, on the basis of the 250 sets of adjusted daily market parametres.

The 99% Value-at-Risk is the largest loss that would occur after eliminating the top 1% of the most adverse occurrences over one year. Within the framework described above, it corresponds to the average of the second and third largest losses out of the 250 computed.

The VaR assessment is based on a model and a certain number of conventional assumptions whose main limitations are as follows:

- the use of "1-day" shocks assumes that all positions can be unwound or hedged within one day, which is not the case for certain products and crisis situations;
- the use of the 99% confidence interval does not take into account losses arising beyond this point; the VaR is therefore an indicator of losses under normal market conditions and does not take into account exceptionally large fluctuations;
- the VaR is computed using closing prices, so intra-day fluctuations are not taken into account;
- there are a number of approximations in the VaR calculation. For example, benchmark indices are used as opposed to more accurate risk factors and not all of the relevant risk factors are taken into account, in particular due to difficulties in obtaining historical daily data.

The Group mitigates these limitations by:

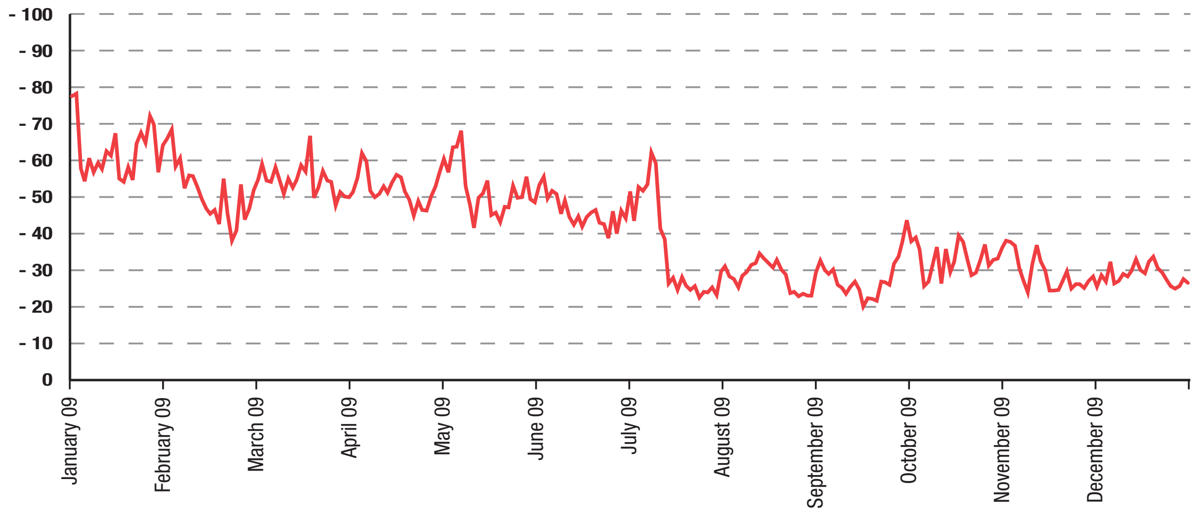
- systematically assessing the relevance of the model through "back-testing" to verify whether the number of days for which the negative result exceeds the VaR complies with the 99% confidence interval;
- supplementing the VaR assessment with stress test measurements.

In 2009, the model was enhanced with new risk factors: basic factors such as "inter-maturity" interest rates, to take account of the variability between the curves associated with different fixing periods; the correlation of times-to-default in the case of multi-underlying structured credit products. Today, the market risks for almost all investment banking activities are covered by the VaR method, including those related to the most complex products, as well as certain Retail Banking and Private Banking activities outside France.

In 2009, the VaR limit for all trading activities remained stable at EUR 85 million.

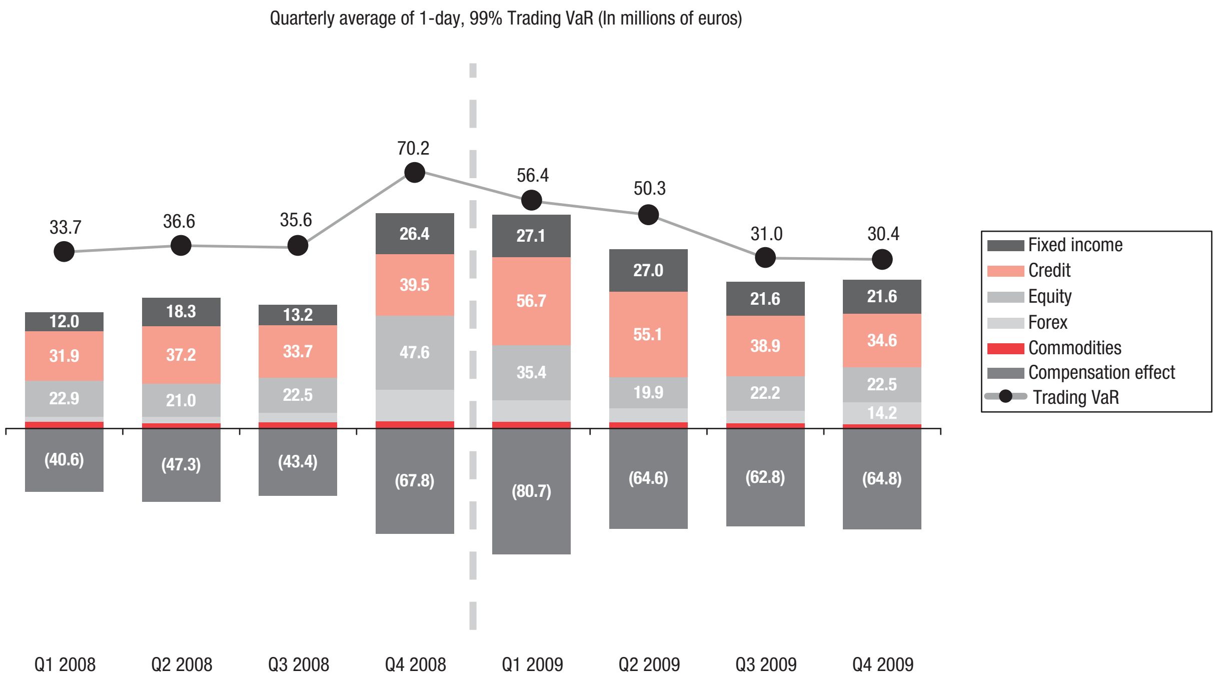
The changes in the Value-at-Risk of the Group's trading activities in 2009, for the entire monitoring scope, are presented below:

**TRADING VAR (TRADING PORTFOLIOS) CHANGES IN THE TRADING VAR OVER THE COURSE OF 2009 (1 DAY, 99%) IN MILLIONS OF EUROS**




No Trading VaR limits were breached in 2009. (In 2009, the VaR limit remained stable at EUR 85 million).

**BREAKDOWN BY RISK FACTOR OF THE TRADING VAR - CHANGES IN QUARTERLY AVERAGE OVER 2008-2009 PERIOD**




*Note: The figures for credit risk cover a reduced scope as of Q4 08 following the transfer of trading book positions to the banking book (cf. Notes to the consolidated financial statements – Note 11). Given their illiquidity, a VaR calculation could no longer be undertaken on these positions using the existing approach.*

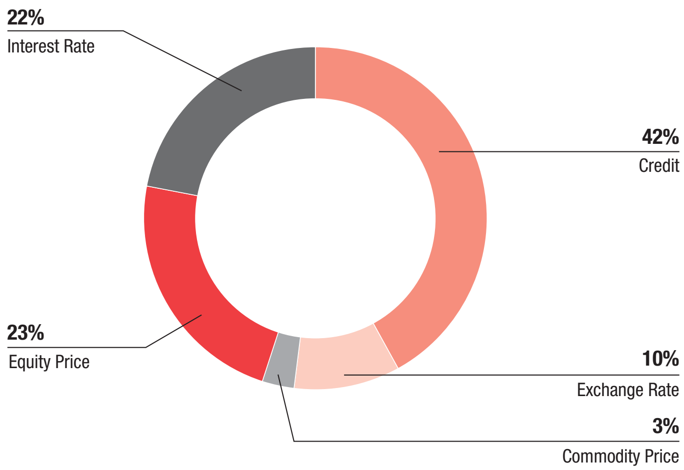
The average VaR amounted to EUR 42 million for 2009 against an annual average of EUR 44 million in 2008.

This stability results from a decrease during the three first quarters of the year, followed by a levelling out in the last quarter.

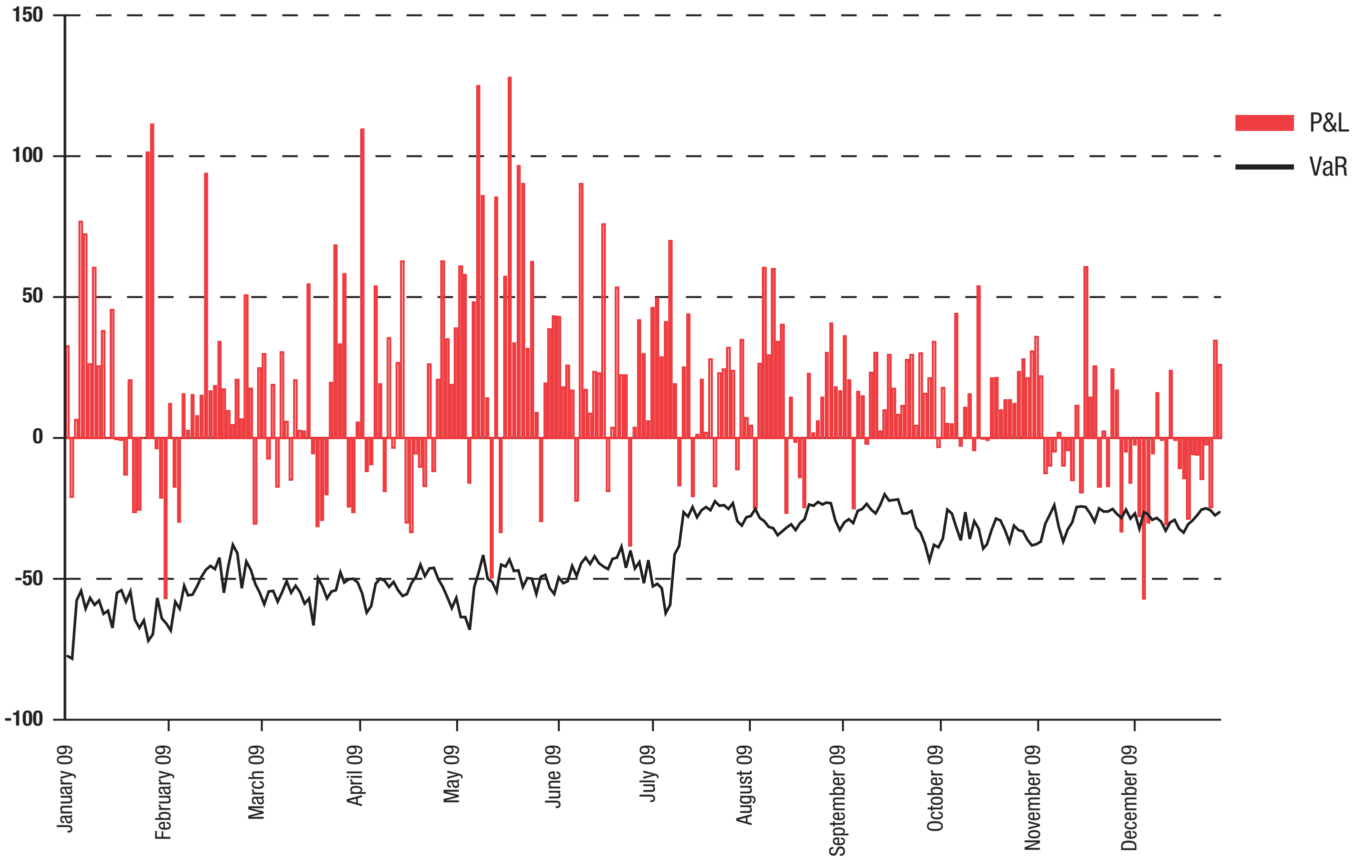
The decrease observed until the third quarter 2009 results from a reduction of the exposures, mainly to equity (cash or derivatives), as well as from a diversification of equity and credit positions significantly compensating for the rest of the year.

During the fourth quarter 2009, the abandoning of very volatile scenarios as a result of the financial crisis in the last quarter 2008 has maintained the VaR at a low level despite the introduction of further adverse scenarios (Dubai and Greece).

**BREAKDOWN OF TRADING VAR BY TYPE OF RISK – 2009**



**VAR *BACK-TESTING* OF THE REGULATORY SCOPE DURING 2009 VaR (1 DAY, 99%) IN MILLIONS OF EUROS**




## STRESS TEST ASSESSMENT

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 parametres over a period corresponding to the time required to unwind or hedge the positions affected (5 to 20 days for most trading positions).

The Stress Test risk assessment methodology is based on 19 historical scenarios and 7 hypothetical scenarios, including the “Societe Generale Hypothetical Financial Crisis Scenario”, based on the events observed in 2008. Alongside the VaR model, the stress test risk assessment methodology is one of the main pillars of the risk management system. The underlying principles are as follows:

- risks are calculated every day for each of the bank’s market activities (all products combined), using the 19 historical scenarios and 7 hypothetical scenarios;
- stress test limits are established for the Group’s activity as a whole and then for the various business lines. They reflect the most adverse result arising from the 26 historical and hypothetical scenarios;

- the various stress test scenarios are revised and supplemented by the Risk Division on a regular basis, in conjunction with the Group's teams of economists and specialists.

Note that the list of scenarios used was reviewed in 2008. Following this review, two new scenarios have been implemented as of January 1, 2009: (i) an "October 3-10, 2008" historical scenario illustrating the trends observed during this time period, and (ii) a hypothetical financial crisis scenario based on the events observed during 2008. Some scenarios of a lesser magnitude than these new scenarios have been eliminated.

## HISTORICAL STRESS TESTS

This method consists of an analysis of the major economic crises that have affected the financial markets since 1995 (a period in 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 are 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. Using this methodology, Societe Generale has established 19 historical scenarios.

## HYPOTHETICAL STRESS TESTS

The hypothetical scenarios are defined by the bank's economists and designed to simulate 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 bank aims to select extreme, but nonetheless plausible events which would have major repercussions on all the international markets. Societe General has therefore adopted 7 hypothetical scenarios including the "Societe Generale Hypothetical Financial Crisis Scenario".

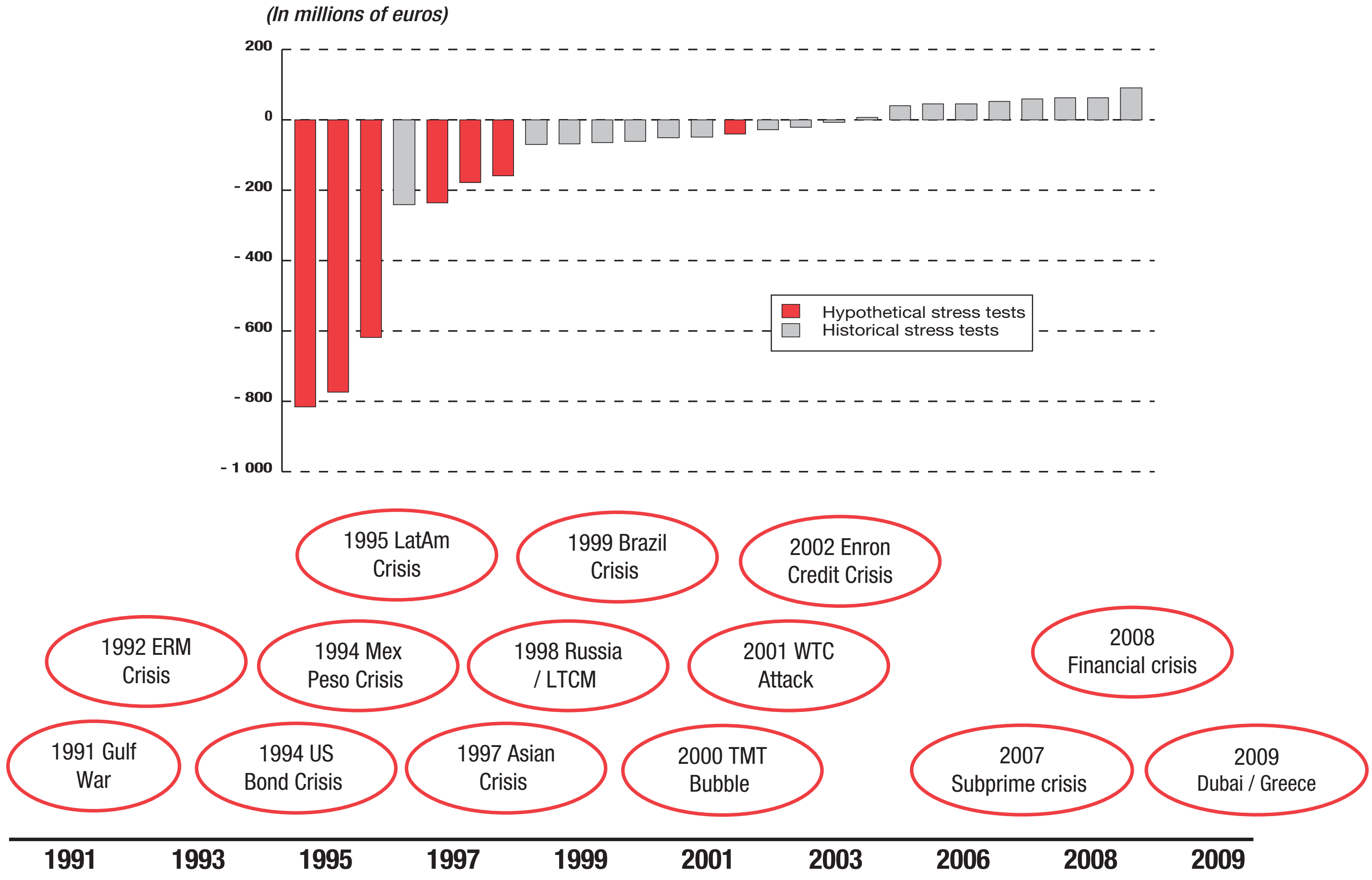
In 2009, Societe Generale relied on seven hypothetical stress tests:

- Generalised: considerable mistrust of financial institutions after the Lehman Brothers' bankruptcy; collapse of equity markets, sharp decline in 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;
- Middle East crisis: refers to instability in the Middle East leading to a significant shock to oil and other energy sources, a stock market crash, and a steepening of the interest rate 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 against other major currencies;
- Bond crisis: crisis in the global bond markets inducing the delinking 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 moderate widening of credit spreads, rise in the US dollar;
- Dollar crisis: strong depreciation of the US dollar against major international currencies due to the deterioration of the US trade balance and budget deficit, the rise of interest rates and the narrowing of US credit spreads;
- Euro zone crisis: decision by some countries to withdraw from Euroland following the Euro's excessive appreciation against the Dollar: decline in euro exchange rates, sharp rise in euro zone 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 euro zone long-term interest rates and flight to quality.

## AVERAGE STRESS TESTS IN 2009

The scenarios resulting in the highest potential losses (around EUR 800 million) are hypothetical scenarios reflecting highly severe or extreme shocks on the price of each of the assets held (for example, a 15% to 30% fall in the global markets).

The following graph provides the average *stress tests* amounts calculated in 2009.



# CAPITAL REQUIREMENTS

Societe Generale's capital requirements on account of market risk are predominantly determined using the IRB approach. The risk typology breakdown provided below highlights that equity and interest rate risk account for the bulk of the capital requirements at year-end 2009. The significant decline in risk-weighted assets seen in 2009 compared to 2008 reflects the normalisation of conditions and risk parameters on global markets.

| *Risk weighted assets in Euro millions* | **Standard Approach** | **IRB** | **Total 2009** | **Total 2008** |
|---|---|---|---|---|
| Interest rate risk | 867 | 7,901 | 8,767 | 9,606 |
| Equity risk | 70 | 2,887 | 2,957 | 11,872 |
| Foreign exchange risk | 1,661 | 111 | 1,772 | 1,202 |
| Commodity risk | 324 | 80 | 404 | 388 |
| **Total RWA 2009** | **2,921** | **10,979** | **13,900** | **23,068** |
| Total RWA 2008 | 2,536 | 20,532 | 23,068 | |

# 8 OPERATIONAL RISK

# OPERATIONAL RISK MANAGEMENT: ORGANISATION AND STRUCTURE

Over the last few years, Societe Generale has developed processes, management tools and a full control infrastructure to enhance the control and management of the operational risks that are inherent to its various activities. These include, *inter alia*, general and specific procedures, permanent supervision, business continuity plans, New Product Committees and functions dedicated to the oversight and management of specific types of operational risks, such as fraud, risks pertaining to payment systems, legal risks, information system security risks and non-compliance risks.

## The operational risk department

Incorporated in 2007 within the Group's Risk Division, the Operational Risk Department works in close cooperation with operational risk staff in the business and functional divisions.

The Operational Risk Department is notably responsible for:

- running the Operational Risk structure;
- devising and implementing Societe Generale's operational risk control strategy, in cooperation with the business and functional 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 business and functional divisions, and in order to ensure consistency across the Group;
- preparing a global Group business continuity plan (BCP) and crisis management policy, managing the policy and coordinating its implementation.

## The operational risk structure

In addition to the Operational Risk Department, the operational risk organisation includes Operational Risk Managers (ORM) in the business and functional divisions, who are functionally attached to the Group's Chief Operational Risk Officer.

ORMs operate throughout the Group's entities, and are responsible for implementing the Group's procedures and guidelines, and 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 business division, functional division and subsidiary level.

# OPERATIONAL RISK MEASUREMENT

Since 2004, Societe Generale has been using the Advanced Measurement Approach (AMA) as proposed by the Capital Requirement Directive to measure operational risk. This approach notably makes it possible to:

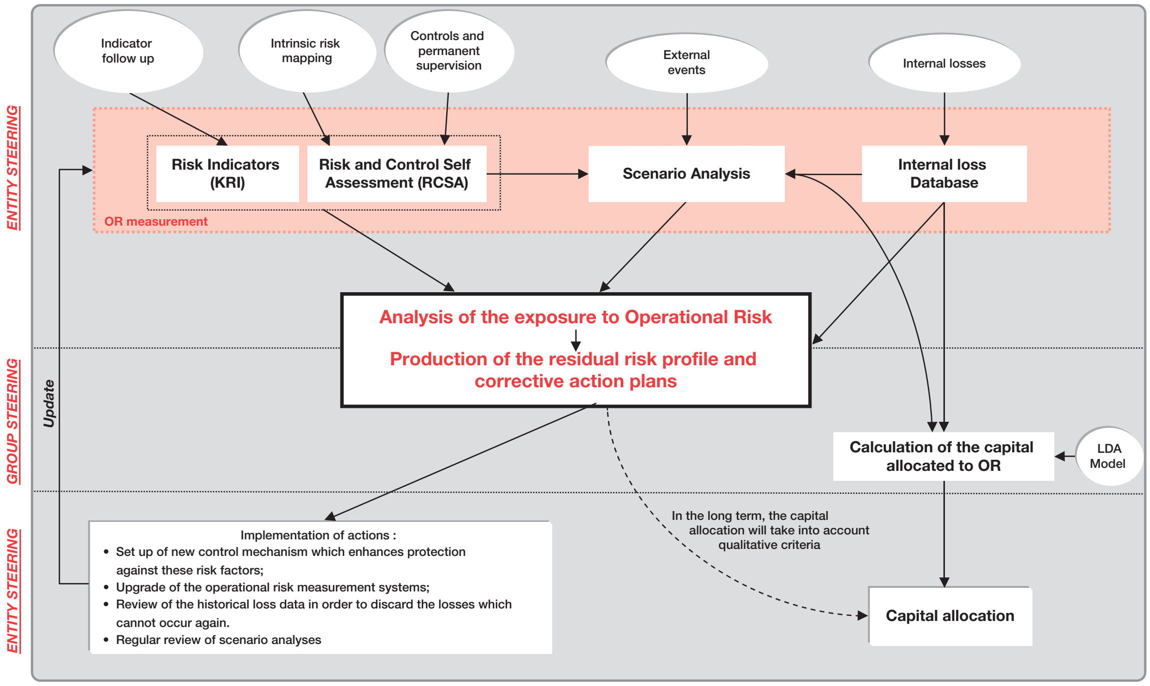
- identify i) the businesses that have the greatest risk exposures and, ii) the types of risk that have the greatest impact on the Group's risk profile and overall capital requirement;
- enhance the Group's operational risk culture and overall management, by introducing a virtuous circle of risk identification, improved risk management and risk mitigation and reduction.

Following its in-depth review in 2007, the French Banking Commission (*Commission bancaire*) approved the use of the most advanced measurement approach (AMA), as defined under the Basel II agreement, to calculate Societe Generale's regulatory capital requirements related to operational risks, as of January 1, 2008. Although some subsidiaries use the Standardised Approach, the AMA's application to the Group's activities covers more than 90% of total net banking income.

# OPERATIONAL RISK MONITORING PROCESS

The frameworks specifically established by the Basel II regulations (the Capital Requirement Directive and “sound practices for the management and supervision of operational risk”) have been implemented, on the basis of existing procedures wherever possible, to support the “virtuous circle” referred to previously. They notably include:

- collecting internal data on operational risk losses;
- drafting Risk and Control Self-Assessment (RCSA) processes in every business unit;
- determining Key Risk Indicators (KRI);
- formulating scenario analyses;
- cross-referencing its own data with external loss data analyses.




Societe Generale’s classification of operational risks in eight event categories and forty-nine mutually exclusive sub-categories is the cornerstone of its risk modelling, ensuring consistency throughout the system and enabling analyses across the Group.

The following 8 categories of risk event chosen by the Group have been mapped to the Basel II regulatory classification for relevant benchmarking:

| | |
|---|---|
| Commercial disputes | Fraud and other criminal activities |
| Disputes with authorities | Rogue trading |
| Pricing or risk evaluation errors | Loss of operating resources |
| Execution errors | IT System failure |

## Internal loss data collection

Internal loss data has been compiled throughout the Group since 2003, enabling staff to:

- build expertise in operational risk management concepts and tools;
- achieve a deeper understanding of their risk areas;
- help disseminate an operational risk culture throughout the Group.

The minimum threshold above which a loss is recorded is EUR 10,000 throughout the Group, except for Corporate and Investment Banking, where this threshold is EUR 25,000 due to the scope of its activity, the volumes involved and the relevance of capital modelling points. Below these thresholds, loss information is collected by the Group's various divisions but is not identified by the Risk Division. The threshold's impact is therefore taken into account in the capital requirement calculation model.

## Risk and Control Self-Assessment (RCSA)

The purpose of Risk and Control Self-Assessment (RCSA) is to assess and then measure the Group's exposure to operational risks. This involves:

- identifying and assessing the operational risks to which each of the Group's businesses is inherently exposed (the "intrinsic" risks), while disregarding the impact of risk prevention and mitigation measures;
- assessing the quality of risk prevention and mitigation measures, including their existence and effectiveness in detecting and preventing risks and/or their capacity to reduce their financial impact;
- measuring the risk exposure of each Group business that remains once the risk prevention and mitigation measures are taken into account (the "residual exposure"), while disregarding insurance coverage;
- correcting any inadequacies in risk prevention and mitigation measures and implementing corrective action plans;
- facilitating and/or supporting the implementation of key risk indicators (KRI);
- adapting the risk insurance strategy, if necessary.

## Key Risk Indicators (KRI)

KRIs complement the overall operational risk management system, by providing a dynamic view of changes in business risk profiles as well as a warning signal. Regular KRI monitoring assists both management and staff in their assessment of the Group's operational risk exposure obtained from the RCSA, the analysis of internal losses and scenario analyses, by providing them with:

- a quantitative and 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 the entire Group are reported to the Group's General Management.

## Scenario analyses

Scenario analyses serve two purposes: informing the Group about potential significant areas of risk and contributing to the calculation of the capital required to cover the operational risk.

For the calculation of capital, the Group uses scenario analyses to:

- measure its exposure to potential losses arising from low frequency/high severity events;
- provide an estimate of loss distribution for event categories whose internal loss data history is insufficient.

In practice, for each event category, various scenarios are reviewed by experts, who gauge the magnitude of the potential impact for the bank, in terms of severity and frequency, by factoring in internal and external loss data and the external (regulatory, business, etc.) and internal (controls and prevention systems) environment. The potential impacts of various scenario are combined to obtain the loss distributions for the risk category in question.

Scenario analyses fall into two broad categories:

- major Group stress scenarios, involving very severe events that cut across businesses and departments, have an external cause and require a business continuity plan (BCP). The ten scenarios analysed so far have helped to develop the Business Impact Analysis aspects of the BCPs;
- business scenarios that do not fall into the category of business continuity in its strictest sense, but are used to measure the unexpected losses to which the businesses may be exposed. Around 100 scenarios have been prepared so far.

## Analysis of external losses

Finally, Societe Generale also uses externally available loss databases to supplement the identification and assessment of the Group's operational risk exposures, by benchmarking internal loss records against industry-wide data.

## Crisis management and Business Continuity Planning

Moreover, the Group is reinforcing its crisis management by working on the intrinsic resilience of its activities and incorporating it in its existing business continuity plans.

# RISK MODELLING

The method used by the Group for operational risk modelling is based on the Loss Distribution Approach (LDA).

This statistical approach models the annual distribution of operational losses, through historical data on internal or external losses or scenario analyses, according to a bottom-up process producing a matrix of losses in the different operational risk categories and business divisions with a potential granularity of 32 event categories.

The annual loss distributions are modelled for each element of the matrix, then aggregated to obtain the annual loss distributions of the Divisions and then the Group. This loss distribution indicates the loss amounts the Group may be exposed to, and associates a probability of occurrence with each of these amounts.

The Group's regulatory capital requirements for operational risk are then defined as the 99.9% quantile of the Group's annual loss distribution.

The correlation between events, their frequency and their severity is also factored in throughout the calculation process.

Based on the Group's models, Societe Generale's capital requirements on account of operational risks were EUR 3,766 million at the end of 2009, representing EUR 47,080 million in risk-weighted assets.

## Insurance cover in risk modelling

As permitted under the Basel II Capital Framework, Societe Generale has developed a method that enables the calculated regulatory capital to be reduced by as much as 20% when insurance policies meet the Basel II regulatory requirements, and are able to cover, at least partly, operational losses.

Group-wide mapping is used to identify insurance policies that are able to cover the various operational risk categories and their corresponding characteristics: deductibles, coverage and coverage probability.

The modelling process therefore takes into account the effect of Group insurance policies that cover major banking risks, i.e. civil liability, fraud, fire and theft, as well as policies covering systems interruptions and operating losses due to a loss of operating capacities.

Insurance is an operational risk mitigation factor that may be included in the model for both internal losses and scenario analyses. In Societe Generale's model, insurance has an impact on the severity distributions by reducing the loss amounts ultimately booked. The modelled frequency distribution however remains unchanged.

For regulatory requirements, two calculations are carried out, one including, and the other excluding, cover from existing insurance policies. The aim is to verify that the reduction applied to the total capital requirement as a result of these policies remains below the maximum 20% threshold set by the regulations.

The capital relief arising from Societe Generale's insurance cover calculated using the Advanced Measurement Approach (AMA) represents 5% of its total capital requirement on account of operational risk.

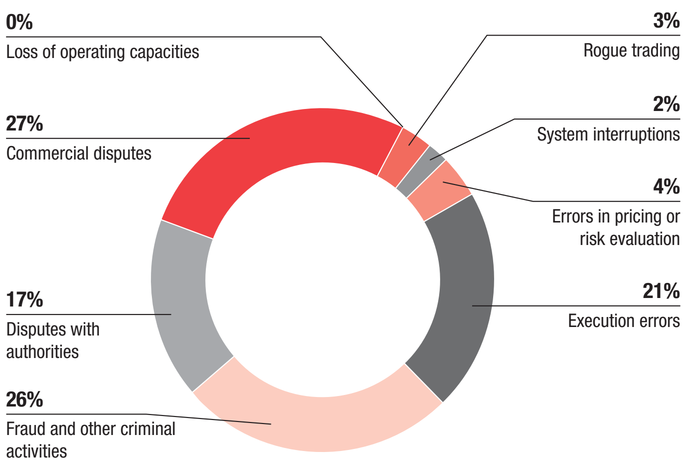
## Governance of the regulatory capital calculation process

The operational risk capital calculation process is subject to specific governance, particularly with respect to roles, responsibilities and frequency.

# QUANTITATIVE DATA

The following chart breaks down the operational losses by risk category for the period 2005-2009.

**OPERATIONAL RISK LOSSES (EXCLUDING EXCEPTIONAL *ROGUE TRADING* LOSS): BREAKDOWN BY SG RISK EVENT TYPE (AVERAGE FROM 2005 TO 2009)**



# 9 INTEREST RATE RISK MANAGEMENT

# STRATEGY AND PROCESSES

Societe Generale manages its structural exposure to interest rate risk within its global Asset and Liability Management (ALM) structure which, besides the interest rate risk, also manages the Group's exposure to liquidity and foreign exchange risks[1].

Structural exposure to interest rate risk encompasses all exposures due to i) commercial activities and ii) proprietary transactions of the Group's consolidated entities.

Interest rate risks associated with trading activities are excluded from the scope of structural interest rate risk, and are dealt with under market risk. The structural and market exposures constitute the overall interest rate exposure of the Group.

## Governance

When it comes to the management of structural interest rate risk, governance is based on the following core principles:

- A general policy and overall management standards validated by the Group's finance committee and translated into detailed management norms by the Group Finance Department.
- Decentralized risk management at entity level, controlled via limits.
- Tight supervision by the Group Finance Department on the implementation of norms and interest rate risk management by the entities.

Group norms and procedures set precise guidelines for:

- Policy implementation and management of structural interest rate risk,
- Investment norms covering entities' shareholders' equity,

How structural and market interest rate risks are to be differentiated.

## Organisation

The Group Finance Department is in charge of defining management norms (relating to organisation and methodologies) and validating the models developed and used by the entities. It also notifies Group entities of the respective sensitivity limits under which they must operate. In addition, the Finance Department is responsible for the centralisation and reporting of the interest rate risk and second level controls.

Conversely, Group entities are responsible for the management and control of the interest rate risk at their own level, within the guidelines defined for the Group.

Responsibility for adhering to Group policy and enforcing the limits defined lies with each entity's Managing Director, who is assisted in this task by his Structural Risk Manager. Furthermore, the Group's main retail banking entities have set up ALM Committees responsible for monitoring the interest rate risk in accordance with Group principles.

The interest rate risk is measured monthly for the Group's main entities, and at least quarterly for the other entities. Every quarter, all the Group entities report their ALM positions to the Group Finance Department, which prepares a consolidated interest risk report.

*(1) For more information on the management of other risks encompassed by Societe Generale's ALM, see the Group's 2009 Registration document.*

# INTEREST RATE RISK MANAGEMENT METHODOLOGY AND OBJECTIVES

The general principle is to concentrate interest rate risks within capital market activities, where they are monitored and controlled according to the methods exposed in chapter 7, and to reduce structural interest rate risk within the consolidated entities as much as possible.

Whenever possible, commercial transactions are hedged against interest rate risk, either through micro-hedging (individual hedging of each commercial operation), or macro-hedging (global hedging of portfolios of similar commercial transactions). These principles also apply for proprietary transactions.

The interest rate risk exposure on the banking book therefore results only from residual positions. The sensitivity of residual positions must comply with the limits set for each entity, and for the Group overall, as approved by the Finance Committee.

In order to quantify its exposure to structural interest rate risk, the Group analyses all its balance sheet's fixed rate assets and liabilities to identify any gaps which reflect mismatches in the maturity and/or repricing of the fixed interest rate assets and liabilities recorded on the balance sheet. The maturities and amortization of outstanding positions are determined based on their contractual terms, or models reflecting historical customer behavior observed as well as conventional assumptions for certain aggregates (mainly shareholders' equity).

Once the fixed rate gaps have been identified, the position's resulting sensitivity to interest rate variations is calculated.

Group policy calls for the transfer of residual risk from commercial activity either into local treasuries or in the Group Treasury using an internal transfer price. The interest rate risk is then managed within the authorized limits of the related trading books.

For products without a fixed maturity date (the French retail network's current and savings accounts, for example), the Group uses amortization models, in which the outstanding amounts are deemed to be composed of a stable portion and a volatile portion (i.e. the difference between the total outstanding amount and the stable portion). For example, for Societe Generale's French retail network, the volatile portion of its deposits is scheduled at sight, while the stable portion is determined by using an auto-regressive model that is regularly back- tested. Its amortization profile was defined based on an auto projective model and on the bank's historical data.

The amortization of loans takes into account early repayment models that may be sensitive to the level of interest rates.

# KEY INTEREST RATE RISK INDICATORS

Societe Generale uses several indicators to measure its interest rate risk, its three preferred measurements being:

- *Gap analysis*: the fixed rate positions and gaps are the main indicators for assessing the characteristics of the hedging operations required, they are calculated on a static basis.
- The *sensitivity of the economic value* is a supplementary and synthetic indicator used to set limits for the entities. It is calculated as the effect on Economic Value of an instantaneous movement in the yield curve. This measurement is calculated for all the currencies to which the Group is exposed.
- The *sensitivity of the interest margin* to variations in interest rates takes into account the sensitivity which is generated by future commercial productions over a three-year rolling horizon, calculated on a dynamic basis.

Sensitivity limits of the economic value are set for each entity and periodically reviewed by Group Finance Department. The Group's global sensitivity limit is currently set at EUR 500 million, which represents less than 1,2% of Societe Generale's Tier 1 capital base.

Other measurements that are also used to monitor the structural interest rate risk include:

- *Measurement of Economic Value sensitivity in various stress scenarios.* In these scenarios, the modeling of the behavior of products without a fixed maturity date and on early loan repayment is adjusted accordingly.
- *Measurement of interest margin sensitivity in various stress scenarios.*
- *Measurement of the economic capital* on account of the interest rate risk in the banking book. Societe Generale uses a Value-at-Risk (VAR) measurement method for its assessment of economic capital. The VAR measures the maximum loss in economic value that might occur over a one-year time horizon as a result of movements in interest rates.

# INTEREST RATE RISK INDICATORS AT END-DECEMBER 2009

## Measurement of the sensitivity of the economic value of the balance sheet, by currency, to variations of interest rates

As at December 31, 2009, the sensitivities of the economic value by currency in the case of different movements of the yield were as follows. The calculations below take into account the optionality.

| *In millions of euros - 31/12/2009* | | | | **Sensitivity by currency** | | | | |
|---|---|---|---|---|---|---|---|---|
| *Niveau de sensibilité par devises* | **EUR** | **USD** | **GBP** | **JPY** | **CZK** | **RUB** | **Others** | **Total** |
| Parallel increase of the yield curve of 50 basis points | 6 | (7) | 4 | 2 | 7 | (2) | 22 | **34** |
| Parallel decrease of the yield curve of 50 basis points | (101) | 7 | (5) | (2) | (8) | 2 | (23) | **(130)** |
| Parallel increase of the yield curve of 10 basis points | 7 | (1) | 1 | 0 | 1 | 0 | 5 | **13** |
| Parallel decrease of the yield curve of 10 basis points | (12) | 1 | (1) | 0 | (1) | 0 | (5) | **(18)** |
| Steepening of the yield curve | 6 | (1) | 4 | 2 | 12 | (1) | 25 | **48** |
| Flattening of the yield curve | (118) | 2 | (4) | (2) | (13) | 1 | (25) | **(160)** |

# APPENDIX:

## INFORMATION PERTAINING TO THE CONTRIBUTION OF KEY SUBSIDIARIES TO THE GROUP'S TOTAL RISK WEIGHTED ASSETS

The contribution to Group's RWA of three subsidiaries accounting collectively for more than 10% of Group's RWA is as follows.

| | Crédit du Nord | | Rosbank | | Komercni Banka | |
|---|---|---|---|---|---|---|
| **Contribution to the Group risk weighted assets** | | | | | | |
| *in millions of euros* | **SA** | **IRB** | **SA** | **IRB** | **SA** | **IRB** |
| **Credit and counterparty risk** | **3,559** | **10,560** | **8,764** | **29** | **1,653** | **8,932** |
| Sovereign | 8 | - | 992 | - | - | 438 |
| Institutions | 113 | 195 | 811 | - | 12 | 1,026 |
| Corporates | 1,870 | 5,912 | 4,742 | - | 345 | 6,246 |
| Retail | 781 | 4,300 | 1,743 | - | 960 | 1,137 |
| Securitisation | - | - | - | - | - | 2 |
| Equity | - | 154 | | 29 | - | 83 |
| Other non credit-obligation assets | 787 | - | 476 | - | 336 | - |
| **Market risk** | **28** | | **355** | | **5** | |
| **Operational risk** | **732** | | **1,285** | | **933** | |
| **Total 2009** | **14,879** | | **10,433** | | **11,522** | |
| **Total 2008** | **15, 813** | | **13,045** | | **11,234** | |