A spotlight from the top left corner of the page shines a beam of light onto a dictionary page at the bottom. The background is a solid dark blue. The title is written in large, bold, yellow capital letters. The subtitle and date are in white text.

# ENHANCING THE RISK DISCLOSURES OF BANKS

Report of the  
Enhanced Disclosure Task Force

(Appendix B only)

29 October 2012

cry out (*clāre*).—*v.t.* to disclose: to open: to  
avowal, or renunciation, disclosure (*clāre*).  
a disavowal. [O.Fr. *disclaimer*—L. *dis*, apart,  
*clāmāre*, to cry out.]  
disclose, *dis-klōz'*, *v.t.* to unclose: to open: to  
lay open: to bring to light: to reveal: to hatch  
(*Shak.*): to transform and give vent to (*Spens.*):  
—*pa.p.* (*Spens.*) *disclo'st.*—*n.* a disclosure:  
emergence from the egg (*Shak.*).—*n.* *disclō'sure*  
(*-zhər*), act of disclosing: a bringing to light or  
revealing: that which is disclosed or revealed.  
[O.Fr. *desclos*—L. *dis*-, apart, *claudēre*, clausum,  
to shut.]  
*discobolus*, *dis-kob'ə-ləs*, *n.* a discus,  
one of a famous  
of which

## Appendix B: Examples of leading or best practice disclosures in current bank reporting

To assist banks in adopting the recommendations in this report, this appendix sets out examples of, or excerpts from, leading or best practice disclosures that were presented in banks' recent annual and interim reports, Pillar 3 reports or other publicly available documents. It is important to note that many of the examples set out in this appendix illustrate only particular elements of the relevant recommendation.

### Disclosures reproduced (in full or in part) in this appendix:

No.	Description of disclosure	Bank	Report reference	Relevant recommendation
<b>General recommendations</b>				
1	Top and emerging risks	HSBC Holdings	2011 Annual report, pages 13 and 99-103	3 Top and emerging risks
<b>Risk governance and risk management strategies/business model</b>				
2	Risk management organisation	Goldman Sachs	2011 Annual report, pages 75-76	5 Risk management organisation
3	Compensation structure	Deutsche Bank	2011 Remuneration report, pages 5-8	6 Risk culture
4	Continuous development program	DBS	2011 Annual report, page 47	6 Risk culture
5	Allocation of capital	ING	2011 Annual report, page 109	7 Risk appetite
6	Capital allocation framework	JP Morgan Chase	2011 Annual report, page 123	7 Risk appetite
7	Economic capital	Royal Bank of Canada	2011 Annual report, page 61	7 Risk appetite
8	Analysis of adverse scenarios	Santander	2011 Annual report, page 172	8 Stress testing
<b>Capital adequacy and risk-weighted assets</b>				
9	Scope of the standardised and IRB approaches	Barclays	2011 Pillar 3 report, page 32	14 Method used to calculate RWAs
10	Credit risk by exposure class	Lloyds Banking Group	2011 Pillar 3 report, page 32	15 RWAs - portfolio composition
11	Credit risk metrics by line of business and PD grade	Deutsche Bank	2011 Pillar 3 report, page 73-76	15 RWAs - portfolio composition
12	Credit risk metrics by line of business and PD grade	RBS Group	2011 Pillar 3 report, pages 25-32	15 RWAs - PD grades
<b>Liquidity</b>				
13	Liquidity buffer composition	Nordea	Q1 2012 Fact book, page 73	18 Liquidity reserve
14	Aggregate of liquidity resources	Citigroup	2011 Annual report, page 47	18 Liquidity reserve
<b>Funding</b>				
15	Assets pledged and collateral held	Barclays	2011 Annual report, page 271	19 Asset encumbrance
16	Additional collateral or termination payments that may be required	Goldman Sachs	2011 Annual report, page 83	19 Asset encumbrance
17	Maturity analysis of assets and liabilities	Swedbank	Q1 2012 Fact report, page 72	20 Maturity analysis of assets and liabilities
<b>Market risk</b>				
18	Decomposition of relevant risk factors	Bank of America	2011 Annual report, pages 112 and 115	23 VaR risk factor decomposition
19	Discussion of non-traded portfolios	UBS	2011 Annual report, pages 136-139	23 Non-traded market risk
20	Sensitivity and VaR analyses	RBS Group	2011 Annual report, pages 131-133 and 234	23 Non-traded market risk
21	Year-on-year variance analysis	Barclays	2011 Annual report, page 123	24 Period-on-period variance analysis
22	Changes in VaR model	Credit Suisse	2011 Annual report, pages 117-120	24 Model methodology
23	Graph of daily VaR and P&L	UBS	2011 Annual report, page 135	24 Model methodology and backtesting
24	VaR limitations	Morgan Stanley	2011 Annual report, page 104	24 Model methodology
25	Alternative risk measures	Barclays	2011 Annual report, pages 122 and 123	25 Supplemental analyses
26	Stress testing scenarios and results	BNP Paribas	2011 Annual report, pages 270 and 271	25 Stress testing

No.	Description of disclosure	Bank	Report reference	Relevant recommendation
<b>Credit risk</b>				
27	Credit risk by industry	Commonwealth Bank of Australia	2012 Annual report, page 182	26 Overview of credit risk
28	Credit exposure by business division	UBS	2011 Annual report, page 119	26 Overview of credit risk
29	Risk of credit-related losses	Mitsubishi UFJ Financial Group	2012 Annual report, pages 8-9	26 Overview of credit risk
30	Impairment and cash loss projections	HSBC Holdings	2011 Annual report, page 151	26 Overview of credit risk
31	Quantitative information on undrawn amounts	Nordea Group	2011 Pillar 3 report, page 15	26 Off balance sheet exposures
32	Renegotiated loans and forbearance	HSBC Holdings	2011 Annual report, pages 129-132	27 Restructured loans
33	Impairment information	Wells Fargo	2011 Annual report, page 144	28 Impairment and non-performing loans
34	Quantitative disclosure on derivatives	UniCredit	2011 Pillar 3 report, page 179	29 Derivatives exposure
35	Quantitative disclosure on derivatives	Deutsche Bank	Q1 2012 Interim report, page 20	29 Derivatives exposure
<b>Other risks</b>				
36	Definition of operational risks	Mizuho	2011 Annual report, page 67	31 Definition of other risks
37	Operational risk management model	Mizuho	2011 Annual report, page 68	31 Description of risk management process for other risks

**Other additional leading practice examples, not reproduced in this report.**

No.	Description of disclosure	Bank	Report reference	Relevant recommendation
<b>General recommendations</b>				
38	Roadmap for risk disclosures	Santander	2011 Annual report, page 146	1 Roadmap to risk disclosures
<b>Risk governance and risk management strategies/business model</b>				
39	Graphic of risk governance structure	RBS Group	2011 Annual report, page 42	5 Risk management organisation
40	Total reward principles	UBS	2011 Compensation report, pages 8 and 9	6 Risk culture
41	Design delivery: implementation of the risk appetite framework	RBS Group	2011 Annual report, page 101	6 Risk culture
42	RWAs- Basel 2.5	Credit Suisse	2011 Annual report, page 101	7 Risk appetite
43	Sensitivity of revenues to interest	BNP	2011 Pillar 3 report, page 42	8 Sensitivity analysis
<b>Capital adequacy and risk-weighted assets</b>				
44	Movement in tier 1 capital in the first half of 2012	HSBC Holdings	June 2012 interim report, page 197	11 Flow statement of regulatory capital
45	Credit RWA exposures by rating approach and industry	Lloyds Banking Group	2011 Pillar 3 report, page 35	15 RWAs - portfolio composition
46	Credit RWA exposures by rating approach and contractual maturity	Lloyds Banking Group	2011 Pillar 3 report, page 39	15 RWAs - portfolio composition
<b>Liquidity</b>				
47	Details of additional liquid assets	Swedbank	Q1 2012 Fact book, page 55	18 Liquidity buffer
<b>Funding</b>				
48	Assets charged as security for liabilities and collateral accepted as security	HSBC Holdings	2012 Interim report, page 250	19 Asset encumbrance
49	The value of assets accepted as collateral that the bank is permitted to sell or repledge	HSBC Holdings	2012 Interim report, page 251	19 Asset encumbrance
50	Detailed maturity analysis of liabilities by source	Swedbank Group	Q1 2012 Fact book, page 38	20 Maturity analysis of assets and liabilities
<b>Market risk</b>				
51	Decomposition of relevant risk factors – CVA treatment in VaR	Citigroup	2011 Annual report, page 98	23 VaR risk factor analysis
52	Presentation of non-traded portfolios	BNP Paribas	2011 Annual report, page 272	23 Non-traded market risk

No.	Description of disclosure	Bank	Report reference	Relevant recommendation
53	Pension sensitivity to actuarial assumptions	HSBC Holdings	2011 Annual report, page 324	23 Pension risk
54	Qualitative discussion of revenue components	JPMorgan Chase	2011 Annual report, page 160	24 VaR back-testing
55	Alternative risk measures	Mizuho	2011 Annual report, page 160	25 Supplemental analyses
56	Use of economic capital	Deutsche Bank	2011 Annual report, pages 100 and 105	25 Economic capital
<b>Credit risk</b>				
57	Maximum exposure to credit risk	Deutsche Bank	2011 Annual report, page 63	26 Overview of credit risk
58	Dynamic nature of credit risk	RBS Group	2011 Pillar 3 report, page 15	26 Overview of credit risk
59	Exposure at default by 10 most important counterparties	Societe Generale	2012 Pillar 3 report, page 40	26 Concentration risks
60	Impairment information	HSBC Holdings	2011 Annual report, page 137	28 Impairment and non-performing loans
61	Valuation control environment	Barclays	2011 Annual report, page 231	29 Derivatives exposure
62	Valuation control environment	RBS Group	2011 Annual report, page 345	29 Derivatives exposure
63	Quantitative disclosure on derivatives	UBS	2011 Annual report, page 360	29 Derivatives exposure
64	Credit concentrations from mortgages	Credit Suisse	2011 Annual Report, page 311	30 Collateral
65	Credit concentrations from mortgages and commercial real estate	Santander	2011 Annual report, pages 167-171	30 Collateral
66	Approach to credit risk	Citigroup	2011 Annual report, pages 88-91	30 Collateral
<b>Other risks</b>				
67	Disclosure of significant operational risk loss event: computer systems failure	Mizuho	2011 Annual report, pages 10-18	32 Disclosure of significant loss events
68	Disclosure of significant operational risk loss event: residential mortgages through crisis	JPMorgan Chase	2011 Annual report, pages 27-32	32 Disclosure of significant loss events
69	Operational losses	DNB Group	2011 Pillar 3 report, page 35	32 Operational losses

## General recommendations

### 1. Top and emerging risks

#### Top and emerging risks

We classify certain risks as ‘top’ or ‘emerging’. We define a ‘top risk’ as being a current, emerged risk which has arisen across any of our risk categories, regions or global businesses and has the potential to have a material impact on our financial results or our reputation and the sustainability of our long-term business model, and which may form and crystallise within a one year horizon. We consider an ‘emerging risk’ to be one which has large uncertain outcomes which may form and crystallise beyond a one year horizon and, if it were to crystallise, could have a material effect on our long term strategy.

Our approach to identifying and monitoring top and emerging risks is informed by the risk factors.

All of our activities involve, to varying degrees, the measurement, evaluation, acceptance and management of risk or combinations of risks which we assess on a Group-wide basis. Top and emerging risks fall under the following three broad categories:

- macro-economic and geopolitical risk;
- macro-prudential, regulatory and legal risks to our business model;
- risks related to our business operations, governance and internal control systems.

During 2011 our senior management paid particular attention to a number of top and emerging risks which are summarised below:

#### Macro-economic and geopolitical risk

- Eurozone – risk of sovereign defaults
- Eurozone member departing from the currency union
- Increased geopolitical risk in certain regions

#### Macro-prudential, regulatory and legal risks to our business model

- Regulatory developments affecting our business model and Group profitability
- Regulatory investigations and requirements relating to conduct of business and financial crime negatively affecting our results and brand
- Dispute risk

#### Risks related to our business operations, governance and internal control systems

- Challenges to achieving our strategy in a downturn
- Internet crime and fraud
- Social media risk
- Level of change creating operational complexity and heightened operational risk
- Information security risk

All of the above risks are regarded as top risks with the exception of social media risk which is an emerging risk.

A detailed account of these risks is provided on page 99. Further comments on expected risks and uncertainties are made throughout the *Annual Report and Accounts 2011*, particularly in the section on Risk, pages 98 to 210.

Source: HSBC Holdings 2011 Annual Report, page 13.

## 1. Top and emerging risks (continued)

### Top and emerging risks

(Unaudited)

Details of the top and emerging risks identified through our risk management processes are set out below:

#### Macro-economic and geopolitical risk

- Eurozone – risk of sovereign default
- Eurozone member departing from the currency union
- Increased geopolitical risk in certain regions

#### Eurozone – risk of sovereign and counterparty defaults

Exposures to the eurozone have received increasing focus given the continued instability in the area and the potential for contagion from the peripheral to core eurozone countries.

There is an increasing risk of sovereign defaults by the peripheral eurozone countries which would place further pressure on banks within the core European countries that are exposed to these sovereigns. Although our exposure to the peripheral eurozone countries is relatively limited, we are exposed to counterparties in the core European countries which could be affected by any sovereign crisis. Our eurozone exposures are described in more detail on pages 113 to 118.

#### Potential impact on HSBC

- Our exposures to European banks may come under stress, heightening the potential for credit and market risk losses, if the sovereign debt crisis in the region increases the need to recapitalise parts of the sector.
- Trade and capital flows may contract as a result of banks deleveraging, protectionist measures being introduced in certain markets or the emergence of geopolitical risks, which in turn might curtail profitability.
- A prolonged period of low interest rates due to policy actions taken to address the eurozone crisis will constrain, through spread compression and low returns on assets, the interest income we earn from investing our excess deposits.
- In the event of contagion from stress in the peripheral eurozone sovereign and financial sectors, our ability to borrow from other financial institutions or to engage in funding transactions may be adversely affected by market dislocation and tightening liquidity.
- We have actively managed the risk of sovereign defaults during 2011 by reducing exposures and other measures.

Source: HSBC Holdings 2011 Annual Report, excerpt from pages 99-103.

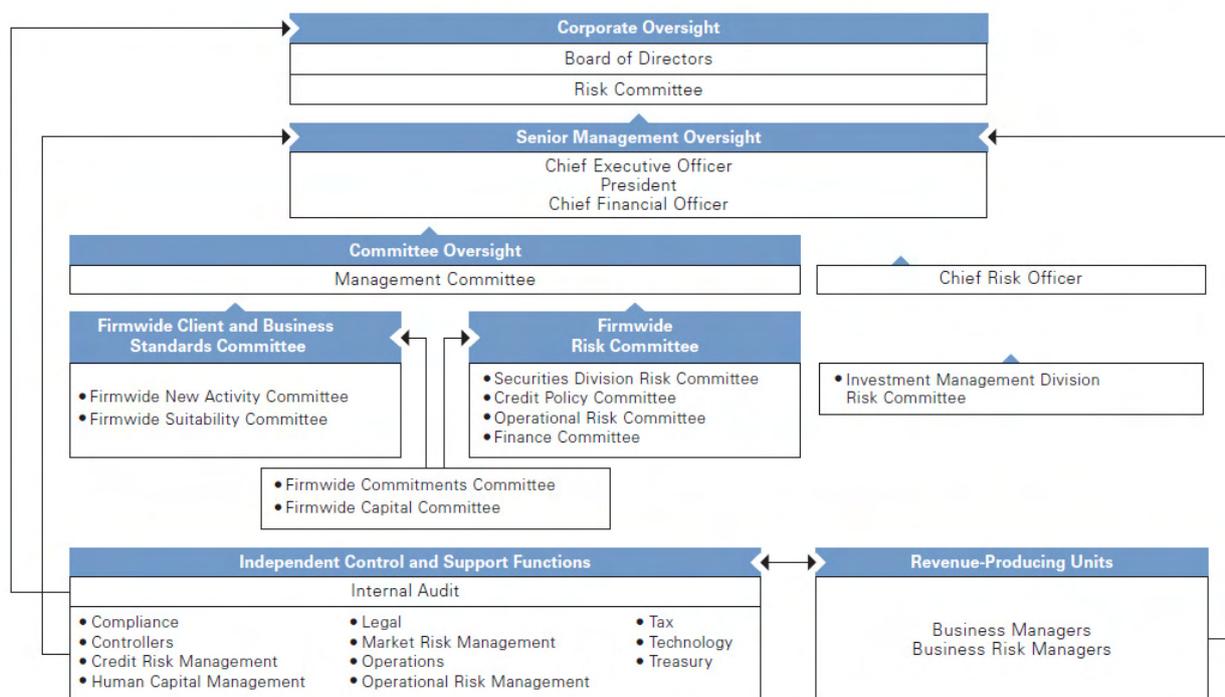
## Risk governance and risk management strategies/business model

### 2. Risk management organisation

#### Management's Discussion and Analysis

The chart below presents an overview of our risk management governance structure, highlighting the oversight

of our Board, our key risk-related committees and the independence of our control and support functions.



**Management Committee.** The Management Committee oversees the global activities of the firm, including all of the firm's independent control and support functions. It provides this oversight directly and through authority delegated to committees it has established. This committee is comprised of the most senior leaders of the firm, and is chaired by the firm's chief executive officer. The Management Committee has established various committees with delegated authority and the chairperson of the Management Committee appoints the chairpersons of these committees. Most members of the Management Committee are also members of other firmwide, divisional and regional committees. The following are the committees that are principally involved in firmwide risk management.

**Firmwide Client and Business Standards Committee.** The Firmwide Client and Business Standards Committee assesses and makes determinations regarding business standards and practices, reputational risk management, client relationships and client service, is chaired by the firm's president and chief operating officer, and reports to the Management Committee. This committee also has responsibility for overseeing the implementation of the recommendations of the Business Standards Committee. This committee has established the following two risk-related committees that report to it:

Source: Goldman Sachs 2011 Annual Report, page 75.

## 2. Risk management organisation (continued)

- **Firmwide New Activity Committee.** The Firmwide New Activity Committee is responsible for reviewing new activities and establishing a process to identify and review previously approved activities that are significant and that have changed in complexity and/or structure or present different reputational and suitability concerns over time to consider whether these activities remain appropriate. This committee is co-chaired by the firm's head of operations/chief operating officer for Europe, Middle East and Africa and the chief administrative officer of our Investment Management Division who are appointed by the Firmwide Client and Business Standards Committee chairperson.
- **Firmwide Suitability Committee.** The Firmwide Suitability Committee is responsible for setting standards and policies for product, transaction and client suitability and providing a forum for consistency across divisions, regions and products on suitability assessments. This committee also reviews suitability matters escalated from other firm committees. This committee is co-chaired by the firm's international general counsel and the co-head of our Investment Management Division who are appointed by the Firmwide Client and Business Standards Committee.
- **Credit Policy Committee.** The Credit Policy Committee establishes and reviews broad credit policies and parameters that are implemented by our Credit Risk Management department (Credit Risk Management). This committee is chaired by the firm's chief credit officer.
- **Operational Risk Committee.** The Operational Risk Committee provides oversight of the ongoing development and implementation of our operational risk policies, framework and methodologies, and monitors the effectiveness of operational risk management. This committee is chaired by a managing director in Credit Risk Management.
- **Finance Committee.** The Finance Committee has oversight of firmwide liquidity, the size and composition of our balance sheet and capital base, and our credit ratings. This committee regularly reviews our liquidity, balance sheet, funding position and capitalization, and makes adjustments in light of current events, risks and exposures, and regulatory requirements. This committee is also responsible for reviewing and approving balance sheet limits and the size of our GCE. This committee is co-chaired by the firm's chief financial officer and the firm's global treasurer.

**Firmwide Risk Committee.** The Firmwide Risk Committee is responsible for the ongoing monitoring and control of the firm's global financial risks. Through both direct and delegated authority, the Firmwide Risk Committee approves firmwide, product, divisional and business-level limits for both market and credit risks, approves sovereign credit risk limits and reviews results of stress tests and scenario analyses. This committee is co-chaired by the firm's chief financial officer and a senior managing director from the firm's executive office, and reports to the Management Committee. The following four committees report to the Firmwide Risk Committee, which is responsible for appointing the chairperson of each of these committees:

- **Securities Division Risk Committee.** The Securities Division Risk Committee sets market risk limits, subject to overall firmwide risk limits, for our Fixed Income, Currency and Commodities Client Execution and Equities Client Execution businesses based on a number of risk measures, including VaR, stress tests, scenario analyses, and inventory levels. This committee is chaired by the chief risk officer of our Securities Division.

The following committees report jointly to the Firmwide Risk Committee and the Firmwide Client and Business Standards Committee.

- **Firmwide Commitments Committee.** The Firmwide Commitments Committee reviews the firm's underwriting and distribution activities with respect to equity and equity-related product offerings, and sets and maintains policies and procedures designed to ensure that legal, reputational, regulatory and business standards are maintained on a global basis. In addition to reviewing specific transactions, this committee periodically conducts general strategic reviews of sectors and products and establishes policies in connection with transaction practices. This committee is co-chaired by the global co-head of our Financial Institutions Group for Investment Banking and the head of Mergers & Acquisitions for Europe, Middle East, Africa and Asia Pacific for Investment Banking who are appointed by the Firmwide Client and Business Standards Committee chairperson.

Source: Goldman Sachs 2011 Annual Report, page 76.

### 3. Compensation structure

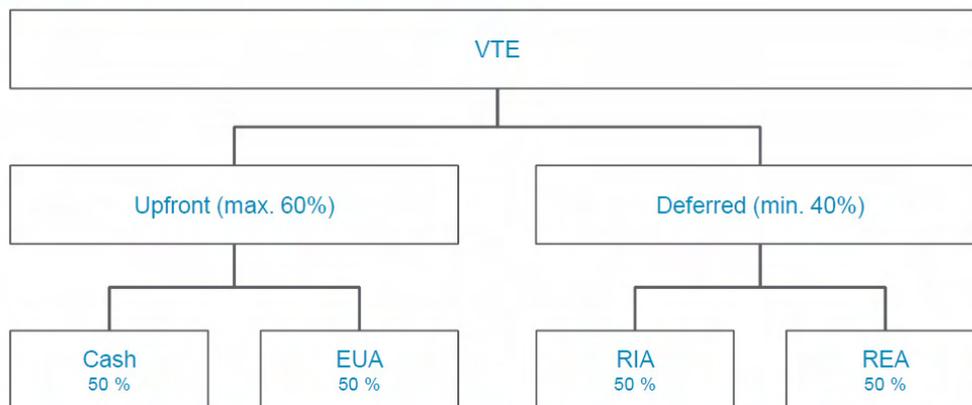
#### Compensation Structures for Regulated Employees

Regulated Employees are subject to the same matrix as the general employee population in order to determine the percentage of their variable award that is deferred. All Regulated Employees are subject to a minimum of 40% deferral as required under the InstitutsVergV regulations, however in practice, many are subject to deferral rates of 80% and higher. The highest earning Regulated Employees and by association, typically the most senior employees in the bank, are subject to deferral rates in excess of 90%.

All Regulated Employees receive 50% of their deferred variable remuneration in the form of equity (REA) and 50% in restricted cash (RIA). The deferred equity award is subject to a minimum three year vesting period during which time performance and behavioural forfeiture provisions apply (for more details see below). Upon the vesting of each tranche, a further minimum six month retention period applies during which time employees are not permitted to sell the shares. The remaining 50% of the deferred award in cash is subject to a minimum three year vesting period during which time, performance and behavioural forfeiture provisions apply.

In accordance with Section 5 InstitutsVergV regulations, 50% of the upfront award (the remaining portion after the deferred percentage is calculated) is also awarded in equity (an Equity Upfront Award 'EUA'). At award, the equity is subject to a minimum six month retention period during which time the shares cannot be sold. As a result of 50% of the upfront award being delivered in equity, Regulated Employees receive a maximum of 30% of their total discretionary variable compensation in upfront cash. In practice, for Regulated Employees with deferral rates in excess of 80 or 90%, this equates to an upfront cash payment of approximately 5%-10% or less of the overall value of their award.

#### Compensation Structure for Regulated Employees



EUA = Equity Upfront Awards  
 RIA = Restricted Incentive Awards  
 REA = Restricted Equity Awards

Source: Deutsche Bank 2011 Remuneration Report, page 5.

### 3. Compensation structure (continued)

#### Ex-post risk adjustment measures for Regulated Employees

The Bank continues to support the use of clawback provisions for deferred compensation awards to ensure the ultimate value of compensation awarded to employees is reflective of the Bank's performance and the performance of the individual themselves and their respective division.

The 2011 variable compensation awards to Regulated Employees include the following clawback provisions:

#### Group clawback

This clawback utilises positive Group NIBT (Net Income Before Income Taxes) as a performance condition for vesting in the full value of the Restricted Equity Award (REA) and Restricted Incentive Award (RIA) granted for 2011. The performance condition is met only if Group NIBT is zero or greater. If Group NIBT is negative for any year during the three year vesting period the performance condition will not be met and 100% of the REA and RIA tranches due to vest in respect of that year will be forfeited.

#### Divisional clawback

This clawback utilises positive Divisional NIBT as a performance condition for vesting in the full value of the REA and RIA granted for 2011. The performance condition is met for individual employees only if their respective Divisional NIBT is zero or greater. If NIBT is negative for any Division during any year of the three year vesting period, the performance condition will not be met and 100% of the REA and RIA tranches due to vest in respect of that year will be forfeited by all employees in the applicable Division.

The Divisional clawback measure does not apply to Regulated Employees working in Infrastructure divisions on the basis that they are not revenue generating.

#### Performance Forfeiture clawback

This clawback puts an employee's RIA at risk into the future and allows Deutsche Bank to determine whether adjustments may be necessary based on actual outcomes. Up to 100% of an employee's unvested RIA award can be clawed back in the event that the Bank discovers that the original award value was inappropriate because a performance measure is later deemed to be materially inaccurate or if a deal, trade or transaction considered to be attributable to the employee has a significant adverse effect on a DB Company, Division or the DB Group.

#### Policy/Regulatory Breach clawback

All of the Bank's long-term compensation plans contain a behavioural clawback, which includes provisions providing for the forfeiture of all unvested and unpaid compensation if an employee is terminated for misconduct, including but not limited to, dishonesty, fraud, misrepresentation or breach of trust. An award may also be clawed back for an internal policy or procedure breach or breach of any applicable laws or regulations imposed other than by the Bank. Specific tranches of an award may also be forfeited where it is determined that a policy breach has occurred, however the disciplinary sanctions fall short of termination for Cause.

Each of the above clawbacks were applied to the 2010 variable compensation awards granted to Regulated Employees. For 2011 awards, however, the Bank has extended the Group and Divisional clawbacks such that either clawback may now trigger the forfeiture of both the RIA and REA tranches. As such, if the Group NIBT is negative in a particular year, all Regulated Employees will forfeit both REA and RIA tranches in respect of that year. If a Division's NIBT is negative then all Regulated Employees from the Division will forfeit both the RIA and REA tranches. In addition to the enhancements made in respect of clawbacks for deferred awards, the Bank has determined that the EUA will be subject to the Policy/Regulatory Breach clawback during the retention period and will also carry a service requirement until the delivery date. Both of these provisions represent enhancements to the 2010 EUA clawback provisions.

Source: 2011 Deutsche Bank Remuneration Report, page 6.

### 3. Compensation structure (continued)

#### Performance Forfeiture Governance

The Bank is mindful that the implementation of performance adjustment and clawback measures is just one step in the overall governance process. It is equally important that formal measures are taken to ensure the policies are monitored closely by appropriately qualified and experienced members of the Bank's independent control functions who have the authority to take appropriate action where required. The NIBT conditions are explicit and quantitative in nature and therefore are formally determined based on Bank-wide and divisional results following the end of each financial year.

The Performance Forfeiture clawback is more subjective in nature and, given its expansion to a far larger population of employees, it is essential that it is effectively governed. To ensure this, the Bank has established an independent control body, the Impairment Review Control Committee (IRCC). The Committee is empowered in this role by the SECC and membership includes representatives from the Bank's Risk, Legal and HR Divisions, in addition to the Chief Financial Officers aligned to each revenue earning Division. This committee will be responsible for reviewing potential forfeiture cases, including reviewing all financial and risk evidence, and reaching forfeiture decisions.

Throughout the course of a year, the Bank incurs numerous profit and loss transactions in the normal course of operations. Risk and Finance will be responsible for independently identifying to the IRCC which items are outside the Bank's normal operations. Other control functions, and the Divisions themselves, will also be required to self-report to the IRCC in instances where they believe that losses or one-off costs require formal investigation. The IRCC will meet quarterly to assess the relevant cases in a timely manner to ensure that forfeitures are communicated in the appropriate time span. If cases require adjudication outside of the quarterly cycle, the committee will meet as necessary. Cases brought to the IRCC for review, especially those raised by the Divisions themselves, may also involve aspects of behaviour that could trigger the Bank's Policy/Regulatory Breach clawback (and vice versa). For this reason the IRCC will work closely with the Deferred Compensation Forfeiture Panels globally to ensure a thorough review of both the financial and behavioural aspects of all potential forfeiture cases.

#### Clawback Overview and Governance

Review Cycle Upon Incident	Annual		Quarterly	Upon Incident
Type of Clawback	Group Performance (Group NIBT)	Divisional Performance (Divisional NIBT)	Performance Forfeiture	Policy Regulatory Breach
Administered by	Finance/Risk	Finance/Risk	Finance/Risk	HR
Decided by	Management Board (based on financials)	Management Board (based on financials)	Impairment Review Control Committee	Deferred Compensation Forfeiture Panels
Review Body			GCRC	GCRC

Source: Deutsche Bank 2011 Remuneration Report, pages 7 and 8.

#### 4. Continuous development program

##### Continuous Development Program (“CDP”)

Sustainable high quality performance is an important factor in the proper discharge of the duties of directors. During the course of 2011, the NC continued to implement the CDP for directors to ensure that they are continually equipped with the appropriate skills and knowledge to perform their roles on the Board and the committees. These sessions ensured that all directors received regular updates on relevant new legislation, regulations and changing market conditions. The CDP is based on the Guidelines.

The CDP has the following key objectives:

- (i) Augmenting the knowledge of Board members so that they can contribute effectively.
- (ii) Providing ongoing training conducted by external advisors and professional trainers to ensure all directors receive the knowledge they need to effectively carry out their duties.
- (ii) Ensuring that the Board is kept abreast of regulatory and legislative developments and changes across key markets.

During the financial year, the following training programmes were provided to directors:

- An update on international accounting standards.
- A presentation on current regulatory hot topics and risk issues.
- The members of the BRMC attended two internal workshops on the Group’s risk appetite framework as well as the approach, implementation plans and timelines for various initiatives within the risk area.

Board members also attended three modules of training delivered by external speakers organised by MAS covering a range of topics as follows:

##### **Module One**

Key lessons learnt on board direction and oversight from bank failures and the recent financial crisis. This module focused on areas in which boards should pay greater attention in order to provide better oversight of bank operations. Financial reform proposals were also addressed with a focus on the implication for banks.

##### **Module Two**

Issues and challenges faced by bank boards; enhancing the effectiveness and performance of the board; how to strengthen the role of directors, especially independent directors; interaction between board and management, and best practices in board oversight of a bank’s operation.

##### **Module Three**

Board’s role in supervising banks to meet desired outcomes of MAS’ supervision of banks; how boards might achieve this and discussion on how bank boards and the regulator can forge a closer working relationship in order to meet supervisory objectives more effectively.

Source: DBS 2011 Annual Report, page 47.

## 5. Allocation of capital

### Economic and Regulatory Capital (Bank diversified only) by risk type

	Economic Capital		Regulatory Capital	
	2011	2010	2011	2010
Credit risk	14,365	15,245	22,474	22,452
Market risk	8,262	7,233	1,124	364
Business Risk	2,448	2,435		
Operational Risk	1,683	1,619	2,836	2,872
<b>Total banking operations</b>	<b>26,758</b>	<b>26,532</b>	<b>26,434</b>	<b>25,688</b>

### Economic Capital (Bank diversified only) by business line combination

	Economic Capital		Regulatory Capital	
	2011	2010	2011	2010
Commercial Banking	9,726	10,695	11,615	11,395
Retail Banking Benelux	4,445	4,613	5,552	5,498
Retail Banking Direct & International	9,475	8,881	8,783	8,587
Corporate Line Bank <sup>(1)</sup>	3,112	2,343	484	208
<b>Total banking operations</b>	<b>26,758</b>	<b>26,532</b>	<b>26,434</b>	<b>25,688</b>

Source: ING 2011 Annual Report, page 109.

## 6. Capital allocation framework

### Line of business equity

December 31, (in billions)	2011	2010
Investment Bank	\$ 40.0	\$ 40.0
Retail Financial Services	25.0	24.6
Card Services & Auto	16.0	18.4
Commercial Banking	8.0	8.0
Treasury & Securities Services	7.0	6.5
Asset Management	6.5	6.5
Corporate/Private Equity	73.3	64.3
<b>Total common stockholders' equity</b>	<b>\$ 175.8</b>	<b>\$ 168.3</b>

### Line of business equity

Year ended December 31, (in billions)	Yearly Average		
	2011	2010	2009
Investment Bank	\$ 40.0	\$ 40.0	\$ 33.0
Retail Financial Services	25.0	24.6	22.5
Card Services & Auto	16.0	18.4	17.5
Commercial Banking	8.0	8.0	8.0
Treasury & Securities Services	7.0	6.5	5.0
Asset Management	6.5	6.5	7.0
Corporate/Private Equity	70.8	57.5	52.9
<b>Total common stockholders' equity</b>	<b>\$ 173.3</b>	<b>\$ 161.5</b>	<b>\$ 145.9</b>

#### Line of business equity

The Firm's framework for allocating capital is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III Tier 1 common capital requirements), economic risk measures and capital levels for similarly rated peers. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Effective January 1, 2010, the Firm enhanced its line of business equity framework to better align equity assigned to the lines of business with changes anticipated to occur in each line of business, and to reflect the competitive and regulatory landscape. The lines of business are now capitalized based on the Tier 1 common standard, rather than the Tier 1 capital standard. Effective January 1, 2011, capital allocated to Card was reduced by \$2.4 billion to \$16.0 billion, largely reflecting portfolio runoff and the improving risk profile of the business; capital allocated to TSS was increased by \$500 million, to \$7.0 billion, reflecting growth in the underlying business.

Effective January 1, 2012, the Firm further revised the capital allocated to certain businesses, reflecting additional refinement of each segment's Basel III Tier 1 common capital requirements. The Firm continues to assess the level of capital required for each line of business, as well as the assumptions and methodologies used to allocate capital to the business segments, and further refinements may be implemented in future periods.

Source: JPMorgan Chase 2011 Annual Report, page 123.

## 7. Economic capital

### Economic Capital

Economic capital is our internal quantification of risks associated with business activities which is the capital required to remain solvent under extreme market conditions, reflecting our objective to maintain a debt rating of at least AA. Economic capital is attributed to each business segment in proportion to management's assessment of the risks. It allows for comparable performance measurements among our business segments through ROE and RORC as described in the Key performance and non-GAAP measures section and also aids senior management in determining resource allocation in conjunction with other factors.

Economic capital is also used to assess the adequacy of our capital base. Our policy is to maintain a level of available capital, defined as common equity and other capital instruments with equity-like permanence and loss absorption features such as preferred shares and Innovative Tier 1 instruments that exceed Economic capital with a comfortable cushion.

Economic capital is calculated and attributed on a wider array of risks than is Basel II Pillar I regulatory capital, which is calibrated predominantly to target credit, market (trading) and operational risk measures. Economic capital is calculated based on credit, market (trading and non-trading), operational, business and fixed asset, and insurance risks and includes capital attribution for goodwill and other intangibles.

- Business risk is the risk of loss or harm due to variances in volumes, prices and costs caused by competitive forces, regulatory changes, reputation and strategic risks.
- Fixed asset risk is defined as the risk that the value of fixed assets will be less than their book value at a future date.

For further discussion on credit, market, operational and insurance risks, refer to the Risk management section.

The calculation and attribution of economic capital involves a number of assumptions and judgments by management which are monitored to ensure that the economic capital framework remains comprehensive and consistent. The models are benchmarked to leading industry practices via participation in surveys, reviews of methodologies and ongoing interaction with external risk management industry professionals.

We revised our economic capital methodology, prospectively, effective November 1, 2010. For further details, refer to the How we measure and report our business segments section.

The following provides a discussion of our Economic capital from continuing operations.

Economic capital	Table 63	
(C\$ millions, average balances)	2011	2010
Credit risk	\$ 10,100	\$ 8,250
Market risk (trading and non-trading)	4,200	3,300
Operational risk	4,350	3,250
Business and fixed asset risk	2,950	2,250
Insurance risk	550	350
Risk capital	\$ 22,150	\$ 17,400
Goodwill and intangibles	9,450	8,400
Economic capital	31,600	25,800
Under attribution of capital	900	3,650
Average common equity from discontinued operations	3,050	3,800
<b>Average common equity</b>	<b>\$ 35,550</b>	<b>\$ 33,250</b>

Economic capital increased \$5.8 billion from a year ago, mainly due to the change in the capital allocation methodology noted above of which \$4.7 billion was attributed across different risk types and business segments. The remaining \$1.1 billion was largely due to higher goodwill and intangibles from the acquisition of BlueBay and higher Operational & Business risk due to revenue growth. These factors were partially offset by lower Credit risk mainly due to a reduction in the capital rate for non accrual loans and the impact of a stronger Canadian dollar.

We remain well capitalized with current levels of available capital exceeding the economic capital required to underpin all of our material risks.

Source: Royal Bank of Canada 2011 Annual Report, page 61.

## 8. Analysis of adverse scenarios

### Analysis of scenarios

As part of its management of monitoring and continuous control, the Group conducts simulations of its portfolio using adverse scenarios and stress tests in order to assess the Group's solvency in the face of certain situations in the future. These simulations cover all the Group's most relevant portfolios and are done systematically using a corporate methodology which:

- Determines the sensitivity of risk factors (PD, LGD) to certain macroeconomic variables.
- Defines reference scenarios (at the global level as well as for each of the Group's units).
- Identifies rupture scenarios (levels as of which the sensitivity of risk factors to macroeconomic variables is more accentuated) and the distance of these scenarios from the current situation and the reference scenarios.
- Estimates the expected loss of each scenario and the evolution of the risk profile of each portfolio in the face of movements in certain macroeconomic variables.

The simulation models use the data of a complete economic cycle to measure the performance of risk factors in the face of changes in macroeconomic variables.

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

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

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

The analysis of the baseline and add scenarios for the whole Group and for each unit, with a time frame of three years, shows the strength of the balance sheet to different market and macroeconomic situations.

### EU Stress test exercises

In order to assess the solvency and resistance of banks to an adverse scenario, the European Banking Authority (EBA), in cooperation with the Bank of Spain, the European Central Bank, the European Commission and the European Systemic Risk Board, conducted in 2011 a stress test on 91 banks representing 65% of the total assets of the European banking system.

The EBA's stress test analysed the level of capital that banks would reach in 2012 and their evolution since the end of 2010 (the starting point) in two types of scenario: a benchmark scenario and an adverse one. The exercise assumed that the balance sheet remained without changes over its starting position, the business model remained constant by countries and product strategies, and there are no acquisitions or disposals. It therefore does not reflect the estimate that the bank's management could have of the development of the Group's results over the next two years. The banks submitted to the test had to have, initially, a Tier 1 core ratio of at least 5% in the most adverse scenario.

In the case of Santander, the stress tests showed the strength and validity of its business model. The results published on July 15, 2011 show that even in the most adverse scenario, the Group is able to generate profits, distribute dividends and continue to generate capital. Santander will end 2012 with a Tier 1 capital of 8.4% in the most adverse scenario and 8.9% including generic provisions.

These results compare very well with those of our competitors. Santander will be the bank that will post the most profits in the most adverse scenario (EUR 8,092 million in 2011 and 2012).

Source: Santander 2011 Annual Report, page 172.

## Capital adequacy and risk-weighted assets

### 9. Scope of standardised and IRB approaches

Table 7: The scope of the Standardised and IRB approaches

Business	Credit Risk Weighted Assets	Counterparty Credit Risk Weighted Assets	Standardised Approach	Foundation IRB Approach	Advanced IRB Approach
UK Retail & Business Banking	£29,089m		Certain minor portfolios within personal accounts, mortgages and consumer loans	None	Most portfolios
Europe Retail & Business Banking	£15,838m	£2m	All other portfolios	None	Portugal mortgages, Italy mortgages, Spain mortgages, Spain cards, Italy personal loans
Africa RBB	£29,834m	£6m	All Barclays Africa portfolios (excluding Absa). Certain minor Absa portfolios.	Wholesale portfolios in Absa	Retail portfolios in Absa
Barclaycard	£29,429m		Non UK portfolios except Germany, UK Secured Lending, Partnerships, Recent Acquisitions	None	UK retail credit cards, Germany retail credit cards
Barclays Capital	£62,213m	£37,361m	Certain insurer and fund manager portfolios, certain non-UK or emerging market portfolios	None	Most portfolios
Barclays Corporate	£65,163m	£562m	Non UK portfolios, asset and sales finance, New Markets and Western Europe portfolios	None	Larger and Medium business portfolios, UK trade finance portfolios
Barclays Wealth	£11,394m	£153m	Most portfolios	None	Spain Mortgages
Head office Functions and other operations	£2,265m		None	None	All portfolios

Barclays continuously develops credit models for the calculation of regulatory capital and aims to use the Advanced Internal Ratings Based (AIRB) approach for all of its significant portfolios. To achieve this target, Barclays has a well developed AIRB roll-out plan which is discussed with our regulators and updated on a 6-monthly basis. The plan is based on current regulatory requirements with portfolios taken advanced as soon as practicable, recognising any data constraints and methodology challenges.

Source: Barclays 2011 Pillar 3 Report, page 32.

## 10. Credit risk by exposure class

### CREDIT RISK EXPOSURE: ANALYSIS BY EXPOSURE CLASS

As at 31 December 2011 the total credit risk exposures of the Group amounted to £807.6bn (2010: £878.5bn).

Credit risk exposures by exposure class are provided in the table below, together with the associated RWA, average risk weight and average credit risk exposure.

Exposure Class	2011 Credit Risk Exposure £m	2011 Risk Weighted Assets £m	2011 Average Risk Weight %	2011 Average Credit Risk Exposure <sup>[4]</sup> £m
<b>Exposures subject to the IRB Approach</b>				
<i>Foundation IRB Approach</i>				
Corporate - Main	100,796	60,405	60%	100,190
Corporate - SME	23,162	15,168	65%	25,631
Corporate - Specialised lending	8,028	6,683	83%	8,351
Central governments and central banks	17,714	1,299	7%	13,766
Institutions	11,892	2,426	20%	16,456
<i>Retail IRB Approach</i>				
Retail - Residential mortgages	361,121	58,926	16%	365,115
Retail - Qualifying revolving retail exposures	38,614	19,112	49%	40,449
Retail - Other retail	16,642	18,479	111%	18,366
Retail - SME	2,642	2,306	87%	2,593
<i>Other IRB Approaches<sup>[1]</sup></i>				
Corporate - Specialised lending	5,961	4,469	75%	6,006
Equities - Exchange traded	-	-	-	-
Equities - Private equity	-	-	-	-
Equities - Other	15	57	370%	8
Securitisation positions <sup>[2]</sup>	31,027	9,376	30%	36,112
<b>Total - IRB Approach</b>	<b>617,614</b>	<b>198,706</b>	<b>32%</b>	<b>633,043</b>
<b>Exposures subject to the Standardised Approach</b>				
Central governments and central banks	72,442	57	0%	71,471
Regional governments or local authorities	41	8	20%	53
Administrative bodies and non-commercial undertakings	371	361	97%	360
Multilateral development banks	83	-	-	28
Institutions	1,177	399	34%	1,163
Corporates	34,805	33,478	96%	38,823
Retail	8,032	6,030	75%	10,013
Secured on real estate property	38,037	31,473	83%	40,729
Past due items	8,678	9,907	114%	13,195
Items belonging to regulatory high risk categories	2,433	3,603	148%	2,367
Securitisation positions	-	-	-	9
Short term claims on institutions or corporates	456	451	99%	976
Collective investment undertakings	113	24	21%	77
Other items <sup>[3]</sup>	23,330	17,734	76%	25,764
<b>Total - Standardised Approach</b>	<b>189,998</b>	<b>103,525</b>	<b>54%</b>	<b>205,028</b>
<b>TOTAL</b>	<b>807,612</b>	<b>302,231</b>	<b>37%</b>	<b>838,071</b>

#### Notes

<sup>[1]</sup> Credit risk exposures subject to other IRB approaches include corporate specialised lending exposures risk weighted in accordance with supervisory slotting criteria, equity exposures risk weighted in accordance with the Simple Risk Weight Method and securitisation positions risk weighted in accordance with the Internal Assessment Approach, Ratings Based Approach or Supervisory Formula Approach.

<sup>[2]</sup> Securitisation positions exclude amounts allocated to the 1,250% risk weight category. These amounts are deducted from capital, after the application of value adjustments, rather than being risk weighted at 1,250%.

<sup>[3]</sup> Other items (Standardised Approach) predominantly relate to other balance sheet assets that have no associated credit risk. These comprise various non-financial assets, including fixed assets, cash, items in the course of collection, prepayments, sundry debtors and deferred tax assets.

<sup>[4]</sup> Average credit risk exposure represents the average exposure across the year to 31 December.

Source: Lloyds Banking Group 2011 Pillar 3 Report, page 32.

## **11. Credit risk metrics by line of business and PD grade** *(continued)*

### **6.3 Advanced IRBA Exposure**

The advanced IRBA requires differentiating a bank's credit portfolio into various regulatory defined exposure classes namely central governments, institutions, corporates and retail clients. The Group identifies the relevant regulatory exposure class for each exposure by taking into account factors like customer-specific characteristics, the rating system used as well as certain materiality thresholds which are regulatory defined.

The tables below show the Group's advanced IRBA exposures, excluding Postbank, distributed on a rating scale and separately for each regulatory IRBA exposure class. The EAD is presented in conjunction with exposures-weighted average PD, LGD and risk weight ("RW") information. The information is shown after credit risk mitigation obtained in the form of financial, physical and other collateral as well as guarantees and credit derivatives. The effect of double default, as far as applicable, is considered in the average risk weight. It implies that for a guaranteed exposure a loss only occurs if the primary obligor and the guarantor fail to meet their obligations at the same time.

It has to be noted that the EAD gross information for exposures covered by guarantees or credit derivatives is assigned to the exposure class of the original counterparty respectively whereas the EAD net information assigns the exposures to the protection seller. As a consequence the EAD net can be higher than the EAD gross.

*Source: Deutsche Bank 2011 Pillar 3 Report, page 73.*

**11. Credit risk metrics by line of business and PD grade (continued)**

Table 25 EAD of Advanced IRBA Credit Exposures by PD Grade

	Dec 31, 2011							
	AAA – AA 0.00 – 0.04 %	A 0.04 – 0.11 %	BBB 0.11 – 0.5 %	BB 0.5 – 2.27 %	B 2.27 – 10.22 %	CCC 10.22 – 99.99 %	Default <sup>1</sup>	Total
<b>Central Governments</b>								
EAD gross in € m.	102,638	2,712	2,280	1,669	759	380	163	110,601
EAD net in € m.	113,128	2,716	2,023	818	276	0	163	119,124
Average PD in %	0.00	0.07	0.27	1.37	5.28	21.82	100.00	0.17
Average LGD in %	48.01	42.12	46.68	11.14	35.45	50.00	5.00	47.51
Average RW in %	0.27	23.36	45.71	33.39	124.98	289.48	62.50	2.17
<b>Institutions</b>								
EAD gross in € m.	27,831	36,188	15,543	4,227	182	230	136	84,337
EAD net in € m.	29,482	43,156	13,539	3,287	148	224	136	89,972
Average PD in %	0.04	0.06	0.25	0.99	4.65	21.89	100.00	0.33
Average LGD in %	23.65	29.18	22.81	20.29	29.75	14.55	10.01	26.02
Average RW in %	7.10	11.75	26.28	48.34	98.72	84.20	61.08	14.15
<b>Corporates</b>								
EAD gross in € m.	98,278	69,659	74,786	50,666	24,246	10,784	7,519	335,939
EAD net in € m.	97,813	70,082	69,951	45,518	21,159	10,019	7,169	321,711
Average PD in %	0.03	0.07	0.24	1.14	4.65	23.14	100.00	3.49
Average LGD in %	26.79	35.86	31.83	26.35	25.94	14.25	26.58	29.35
Average RW in %	9.72	18.51	32.57	56.93	92.11	78.46	29.02	31.27
<b>Retail Exposures Secured by Real Estate Property</b>								
EAD gross in € m.	1,286	3,444	15,979	30,695	10,446	2,784	1,185	65,819
EAD net in € m.	1,286	3,444	15,971	30,657	10,409	2,764	1,171	65,703
Average PD in %	0.03	0.08	0.28	1.18	4.36	21.66	100.00	4.01
Average LGD in %	8.70	9.14	9.57	9.99	10.19	10.45	14.00	9.94
Average RW in %	0.94	1.92	5.09	14.61	31.89	60.46	0.83	15.78
<b>Qualifying Revolving Retail Exposures<sup>2</sup></b>								
EAD gross in € m.	277	1,208	1,722	1,023	307	73	53	4,664
EAD net in € m.	277	1,208	1,722	1,023	307	73	53	4,664
Average PD in %	0.03	0.08	0.24	1.04	4.45	20.24	100.00	2.09
Average LGD in %	40.27	40.37	39.40	37.59	38.78	38.31	42.37	39.28
Average RW in %	1.10	2.12	5.11	15.50	45.14	102.69	6.95	10.57
<b>Other Retail Exposures<sup>2</sup></b>								
EAD gross in € m.	175	691	5,239	9,568	4,777	2,021	1,024	23,495
EAD net in € m.	199	756	5,393	9,593	4,841	1,980	935	23,697
Average PD in %	0.03	0.08	0.29	1.14	4.64	21.61	100.00	7.23
Average LGD in %	30.74	33.36	42.31	41.91	43.67	35.35	49.74	41.75
Average RW in %	3.66	7.51	23.36	45.56	67.18	83.31	2.32	44.81
<b>Total IRBA Exposures</b>								
EAD gross in € m.	230,486	113,901	115,549	97,848	40,718	16,273	10,081	624,856
EAD net in € m.	242,185	121,362	108,599	90,895	37,140	15,062	9,628	624,871
Average PD in %	0.02	0.07	0.25	1.15	4.57	22.64	100.00	2.59
Average LGD in %	36.25	32.90	28.35	22.24	24.03	16.45	26.79	30.84
Average RW in %	4.92	15.51	27.10	40.47	71.87	76.00	23.90	21.99

<sup>1</sup> The relative low risk weights in the column "Default" reflect the fact that capital requirements for defaulted exposures are principally considered as a deduction from regulatory capital equal to the difference in expected loss and allowances.

<sup>2</sup> The changes in comparison to 2010 reflect predominantly an exposure reassignment from the exposure class "Qualifying Revolving Retail Exposures" to "Other Retail Exposures" following a revision of the allocation method.

Source: Deutsche Bank 2011 Pillar 3 Report, page 74.

## 11. Credit risk metrics by line of business and PD grade (continued)

	Dec 31, 2010								
	AAA – AA 0.00 – 0.04 %	A 0.04 – 0.11 %	BBB 0.11 – 0.5 %	BB 0.5 – 2.27 %	B 2.27 – 10.22 %	CCC 10.22 – 99.99 %	Default <sup>1</sup>	Total	
<b>Central Governments</b>									
EAD gross in € m.	47,437	2,973	2,270	1,570	936	449	–	55,636	
EAD net in € m.	57,821	2,973	2,193	666	450	1	–	64,104	
Average PD in %	0.00	0.07	0.32	1.12	3.93	22.00	–	0.05	
Average LGD in %	48.32	42.46	43.64	32.46	25.04	50.00	–	47.56	
Average RW in %	0.63	20.06	51.92	66.75	87.20	287.23	–	4.58	
<b>Institutions</b>									
EAD gross in € m.	44,182	56,871	22,617	6,328	2,230	983	628	133,839	
EAD net in € m.	46,160	61,583	20,735	4,837	1,576	870	601	136,363	
Average PD in %	0.04	0.06	0.25	0.97	4.65	18.72	100.00	0.73	
Average LGD in %	23.28	30.50	26.56	27.56	23.64	23.07	27.92	27.21	
Average RW in %	7.34	15.35	26.39	54.25	76.47	103.09	28.99	17.02	
<b>Corporates</b>									
EAD gross in € m.	174,234	60,496	61,596	49,510	17,345	10,465	8,079	381,726	
EAD net in € m.	175,342	58,069	58,665	45,993	15,112	9,826	7,857	370,864	
Average PD in %	0.03	0.07	0.25	1.15	4.42	24.18	100.00	3.13	
Average LGD in %	18.70	33.38	35.92	29.81	30.98	16.24	16.80	25.49	
Average RW in %	6.10	17.55	36.62	65.54	107.38	92.58	24.12	26.89	
<b>Retail Exposures Secured by Real Estate Property</b>									
EAD gross in € m.	1,509	5,094	12,308	27,332	9,746	1,962	1,199	59,150	
EAD net in € m.	1,509	5,093	12,303	27,305	9,697	1,943	1,184	59,035	
Average PD in %	0.03	0.08	0.27	1.20	4.31	21.70	100.00	4.05	
Average LGD in %	4.53	6.80	8.62	10.86	10.34	10.03	14.32	9.84	
Average RW in %	0.50	1.43	4.58	16.14	32.15	58.05	1.24	15.77	
<b>Qualifying Revolving Retail Exposures</b>									
EAD gross in € m.	5	20	38	43	31	7	12	156	
EAD net in € m.	5	20	38	43	31	7	12	156	
Average PD in %	0.04	0.08	0.25	1.15	5.03	21.67	100.00	10.36	
Average LGD in %	38.86	38.71	38.40	37.36	37.56	37.50	42.28	38.27	
Average RW in %	1.11	1.96	5.16	16.55	47.53	102.96	9.03	20.93	
<b>Other Retail Exposures</b>									
EAD gross in € m.	360	1,743	5,973	11,531	6,103	1,366	847	27,923	
EAD net in € m.	398	1,825	6,124	11,592	6,078	1,349	774	28,140	
Average PD in %	0.04	0.08	0.29	1.15	4.49	21.12	100.00	5.28	
Average LGD in %	36.41	33.39	33.56	32.74	34.85	38.21	43.48	34.03	
Average RW in %	4.61	7.21	18.12	35.71	53.52	89.59	3.49	35.14	
<b>Total IRBA Exposures</b>									
EAD gross in € m.	267,727	127,197	104,803	96,315	36,390	15,232	10,765	658,429	
EAD net in € m.	281,234	129,563	100,058	90,436	32,944	13,996	10,429	658,661	
Average PD in %	0.03	0.07	0.26	1.16	4.41	23.20	100.00	2.51	
Average LGD in %	25.49	31.17	30.64	24.35	25.19	17.93	19.17	26.96	
Average RW in %	5.14	15.78	29.75	46.18	73.49	88.17	20.26	22.03	

<sup>1</sup> The relative low risk weights in the column "Default" reflect the fact that capital requirements for defaulted exposures are principally considered as a deduction from regulatory capital equal to the difference in expected loss and allowances.

A year-on-year comparison reflects a decrease in EAD of advanced IRBA exposures in the Group's corporate and institutions segments which is largely driven by the inclusion of a larger percentage of securities financing transactions and to a lesser extent by derivative transactions under the expected positive exposure method ("EPE"). The EPE method considers the appropriate netting and collateral agreements in the EAD calculation and thereby reflecting the EAD net of collateral. The increase in the central governments segment is primarily due to increased interest earning deposits with central banks for liquidity purposes. The Group's securities financing transactions excluding Postbank are included in Table 25 "EAD of Advanced IRBA Credit Exposures by PD Grade" with a total EAD of € 80 billion as of December 31, 2011, and € 175 billion as of December 31, 2010. The corresponding RWA amounted to € 2.0 billion and € 3.2 billion at year end 2011 and 2010 respectively.

Source: Deutsche Bank 2011 Pillar 3 Report, pages 75 and 76.

## 12. Credit risk metrics by line of business and PD grade

### Credit risk *continued*

Tables 12 to 19 detail the key parameters of the advanced IRB RWA calculation for each of the exposure classes. They include OTC derivatives and repo products, which are also detailed in the counterparty credit risk disclosures. However, they exclude products where no PD exists such as securitisation positions and non-customer assets. The credit risk of such products is indicated by either external ratings or ratings derived using the standardised approach.

Table 12: Central governments and central banks by asset quality band

Asset quality band	EAD post CRM (1) £m	Exposure weighted average LGD (2) %	Exposure weighted average risk-weight (2) %	Undrawn commitments (3) £m	Undrawn weighted average CCF (4) %
<b>2011</b>					
AQ1	127,030	8.7	1.5	41,253	6.7
AQ2	762	44.5	10.0	55	28.1
AQ3	1,527	36.6	23.6	222	3.5
AQ4	530	36.6	33.8	62	89.9
AQ5	68	18.8	46.6	31	81.2
AQ6	13	23.4	59.1	2	30.3
AQ7	115	9.7	30.7	4	100.8
AQ8	12	51.3	232.4	-	-
AQ9	-	-	-	-	-
AQ10/default (5)	1,426	88.9	-	-	-
	<b>131,483</b>	<b>10.2</b>	<b>2.0</b>	<b>41,629</b>	<b>6.9</b>
<b>2010</b>					
AQ1	106,837	8.9	1.8	36,563	7.6
AQ2	590	51.9	15.7	183	4.8
AQ3	1,524	38.6	25.1	361	8.7
AQ4	2,047	47.3	59.4	577	14.5
AQ5	397	29.5	47.7	378	15.8
AQ6	55	19.7	54.8	106	38.0
AQ7	174	27.1	82.4	22	85.4
AQ8	8	9.8	45.7	-	-
AQ9	-	-	-	-	-
AQ10/default (5)	-	-	-	-	-
	<b>111,632</b>	<b>10.4</b>	<b>3.6</b>	<b>38,190</b>	<b>8.0</b>

Notes:

- (1) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (2) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (3) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (4) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.
- (5) For defaulted assets (AQ10), the best estimate of expected loss (BEEL) methodology, based on downturn LGD, has been used. For these assets the Group takes a capital deduction equal to the difference between expected loss and provisions, and this may result in nil RWAs.

#### Key points

- The £20.2 billion increase in exposure rated AQ1 was due to a combination of increased repo activity and inflows in STMF.
- In addition, the increase in the AQ1 band reflects significant increases in overnight placements with the US central bank as part of the Group's balance sheet strategy.
- The £1.4 billion increase in exposure rated AQ10 was due to the downgrade of the Greek sovereign exposures from AQ4 during 2011. The £3.4 billion increase in undrawn commitments was predominantly driven by an increase in the German central bank limit, in accordance with the expansion of secured funding and short-term trading activity with highly rated sovereigns detailed on page 22.

Source: RBS Group 2011 Pillar 3 Report, page 25.

**12. Credit risk metrics by line of business and PD grade** (continued)Credit risk *continued*

Table 13: Institutions by asset quality band

Asset quality band	EAD post CRM (1) £m	Exposure weighted average LGD (2) %	Exposure weighted average risk-weight (2) %	Undrawn commitments (3) £m	Undrawn weighted average CCF (4) %
2011					
AQ1	64,219	33.7	20.1	36,156	4.8
AQ2	2,354	48.0	43.0	681	13.7
AQ3	3,275	55.7	54.6	2,775	10.2
AQ4	1,797	56.0	93.8	1,102	10.0
AQ5	155	56.6	153.4	175	11.3
AQ6	96	40.9	164.2	29	10.6
AQ7	190	57.0	178.2	64	5.9
AQ8	88	61.8	372.9	33	8.1
AQ9	14	95.9	652.2	-	-
AQ10/default (5)	142	81.7	-	4	102.6
	72,330	36.0	25.6	41,019	5.5
2010					
AQ1	80,108	34.2	22.0	47,410	4.6
AQ2	1,659	48.1	44.7	1,106	11.0
AQ3	3,179	50.8	59.8	1,973	6.3
AQ4	1,433	51.2	80.3	1,810	12.8
AQ5	726	54.9	138.3	533	7.6
AQ6	95	60.4	227.5	101	7.1
AQ7	395	46.9	159.0	173	5.0
AQ8	44	54.2	286.1	41	6.3
AQ9	42	63.0	108.3	5	2.9
AQ10/default (5)	153	82.1	-	20	34.8
	87,834	35.7	26.7	53,172	5.2

## Notes:

- (1) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (2) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (3) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (4) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.
- (5) For defaulted assets (AQ10), the best estimate of expected loss (BEEL) methodology, based on downturn LGD, has been used. For these assets the Group takes a capital deduction equal to the difference between expected loss and provisions, and this may result in nil RWAs.

## Key points

- The decrease of £15.5 billion in EAD was due to lower STMF business activity, detailed on page 20, and the resulting decline in repo and OTC derivative trading activity. The impact of this reduction was most notable within the AQ1 asset quality band and it also drove a slight decrease in LGDs.
- There was a slight reduction in the overall average risk-weights due to improvements in the quality of origination.

Source: RBS Group 2011 Pillar 3 Report, page 26.

**12. Credit risk metrics by line of business and PD grade** (continued)Credit risk *continued*

Table 14: Corporates by asset quality band

Asset quality band	EAD post CRM (1) £m	Exposure weighted average LGD (2) %	Exposure weighted average risk-weight (2) %	Undrawn commitments (3) £m	Undrawn weighted average CCF (4) %
<b>2011</b>					
AQ1	99,497	28.3	14.1	62,935	29.5
AQ2	20,555	36.3	19.1	17,357	29.5
AQ3	29,285	35.5	26.3	23,643	32.0
AQ4	47,299	34.5	45.7	21,370	32.7
AQ5	49,530	28.7	64.1	11,771	35.9
AQ6	31,509	28.2	81.9	6,274	42.1
AQ7	22,341	41.6	150.1	4,379	48.3
AQ8	6,774	40.7	151.6	626	39.6
AQ9	10,550	40.8	261.9	700	55.5
AQ10/default (5)	36,346	58.9	0.2	2,065	75.2
	<b>353,686</b>	<b>34.8</b>	<b>49.9</b>	<b>151,120</b>	<b>32.7</b>
<b>Corporates under the project finance supervisory slotting approach (6)</b>					
Category 1 - strong	9,353		67.8	1,190	73.3
Category 2 - good	691		89.8	70	51.0
Category 3 - satisfactory	158		115.0	7	88.6
Category 4 - weak	716		250.0	39	90.3
Category 5 - defaulted	435		2.3	58	91.6
	<b>11,353</b>		<b>78.8</b>	<b>1,364</b>	<b>74.0</b>
<b>2010</b>					
AQ1	86,668	28.2	13.1	66,569	29.1
AQ2	21,026	34.7	18.8	17,726	28.3
AQ3	30,299	32.7	21.7	26,432	29.8
AQ4	50,602	33.4	43.3	26,290	30.6
AQ5	57,125	30.3	67.5	16,119	35.9
AQ6	39,712	29.8	87.3	8,326	39.7
AQ7	26,424	38.8	137.2	4,383	43.8
AQ8	8,971	38.8	179.9	637	53.6
AQ9	12,629	48.3	314.3	1,639	35.7
AQ10/default (5)	35,105	48.8	0.6	2,319	74.4
	<b>368,561</b>	<b>33.8</b>	<b>56.8</b>	<b>170,440</b>	<b>31.7</b>
<b>Corporates under the project finance supervisory slotting approach (6)</b>					
Category 1 - strong	11,612		65.5	1,571	59.9
Category 2 - good	574		84.8	118	54.3
Category 3 - satisfactory	840		115.0	129	87.8
Category 4 - weak	363		250.0	52	85.0
Category 5 - defaulted	22		-	-	-
	<b>13,411</b>		<b>74.3</b>	<b>1,870</b>	<b>62.2</b>

## Notes:

- (1) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (2) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (3) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (4) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.
- (5) For defaulted assets (AQ10), the best estimate of expected loss (BEEL) methodology, based on downturn LGD, has been used. For these assets the Group takes a capital deduction equal to the difference between expected loss and provisions, and this may result in nil RWAs.
- (6) For project finance, customers are split into five categories. Within each category, customers are also split into two maturity bands: below and above 2.5 years. The risk-weight applied to each exposure is based on a combination of the category and the maturity band. There are no RWAs associated with customers in category 5 as these are addressed via capital deductions.

Source: RBS Group 2011 Pillar 3 Report, page 27.

**12. Credit risk metrics by line of business and PD grade** (continued)**Credit risk** continued**Key points**

- Exposures to corporates, excluding those calculated using the project finance supervisory slotting approach, declined by £14.9 billion, driven by a decrease in on-balance sheet exposures arising from asset disposals and repayments in the Non-Core portfolios. This decline was seen in all AQ bands with the exception of AQ1 and AQ10, where there was a migration within AQ bands relating to the property sector.
- The overall reduction in exposure was partially offset by the movement of qualifying exposure from retail to corporates due to a new SME lending strategy. This was primarily offset by an increase in OTC derivative exposures to obligors in the insurers and funds sector in the AQ1 band.
- LGD rated AQ3 and AQ10 deteriorated, primarily as a result of the worsening outlook for the property sector. In contrast, the exposure-weighted average risk-weight improved as the mix of new business and existing exposure shifted towards lower AQ bands.
- Undrawn commitments fell in tandem with drawn exposure.
- The reduction in EAD to corporates as calculated under the project finance supervisory slotting approach reflects reductions in exposures in Non-Core term loans and OTC derivatives.

Table 15: Retail SMEs by asset quality band (1)

Asset quality band	EAD post CRM (2) £m	Exposure weighted average LGD (3) %	Exposure weighted average risk-weight (3) %	Undrawn commitments (4) £m	Undrawn weighted average CCF (5) %
<b>2011</b>					
AQ1	-	-	-	-	-
AQ2	15	49.4	8.6	10	100
AQ3	2	58.3	10.2	1	100
AQ4	1,176	71.8	29.9	779	100
AQ5	1,007	43.6	44.9	166	100
AQ6	5,478	43.1	61.7	798	100
AQ7	2,684	41.7	71.0	102	100
AQ8	1,717	41.5	85.7	111	100
AQ9	820	43.1	132.1	19	100
AQ10/default	1,842	56.6	49.5	-	-
	14,741	46.7	64.9	1,986	100
<b>2010</b>					
AQ1	-	-	-	-	-
AQ2	15	49.3	7.6	11	100
AQ3	2	58.3	9.1	1	100
AQ4	1,238	73.6	28.6	888	100
AQ5	1,338	42.2	42.3	200	100
AQ6	7,573	41.4	56.2	1,027	100
AQ7	5,276	39.4	64.3	150	100
AQ8	2,221	41.9	84.5	114	100
AQ9	1,139	43.2	128.7	27	100
AQ10/default	1,680	57.4	51.6	-	-
	20,482	44.4	62.4	2,418	100

## Notes:

- Consists primarily of loans and overdrafts to SMEs and are calculated using the retail IRB approach.
- EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.

Source: RBS Group 2011 Pillar 3 Report, page 28.

## 12. Credit risk metrics by line of business and PD grade (continued)

### Credit risk *continued*

#### Key points

- Retail SME exposures are concentrated within UK business banking, where the most notable reduction occurred within business loans. This was due to the migration of certain customers from retail SME to corporate SME, with a view to serving them better. This resulted in a £5.7 billion decline in total EAD post CRM exposures to retail SME, predominantly those assigned to the AQ6 and AQ7 bands.
- The marginal deterioration in LGD and risk-weight reflects the impact of the quality of the migrated exposures. The reduction in undrawn commitments reflects the benefit of active management of exposures.

Table 16: Retail secured by real estate collateral by asset quality band (1)

Asset quality band	EAD post CRM (2) £m	Exposure weighted average LGD (3) %	Exposure weighted average risk-weight (3) %	Undrawn commitments (4) £m	Undrawn weighted average CCF (5) %
2011					
AQ1	-	-	-	-	-
AQ2	2,946	6.5	0.8	1,724	100.0
AQ3	-	-	-	-	-
AQ4	25,452	7.9	4.1	3,926	99.9
AQ5	41,511	9.5	9.3	2,429	89.8
AQ6	29,471	16.7	27.2	535	99.3
AQ7	14,902	23.5	62.1	481	67.0
AQ8	1,762	13.7	72.3	10	100.0
AQ9	5,288	23.6	130.3	7	100.0
AQ10/default	4,801	23.2	104.9	23	100.0
	126,133	13.6	28.1	9,135	95.5
2010					
AQ1	-	-	-	-	-
AQ2	2,990	5.0	0.6	1,710	100.0
AQ3	-	-	-	-	-
AQ4	23,701	6.7	3.5	1,836	100.0
AQ5	40,749	10.1	10.2	2,885	89.4
AQ6	31,718	16.9	27.6	910	99.8
AQ7	12,788	17.8	51.3	135	99.5
AQ8	2,703	15.2	74.5	7	99.3
AQ9	3,799	19.7	114.4	-	-
AQ10/default	3,783	18.4	104.3	33	100.0
	122,231	12.6	25.1	7,516	95.9

#### Notes:

- (1) Consists of mortgages and is calculated using the IRB approach.
- (2) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (3) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (4) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (5) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.

#### Key points

- EAD increased by £3.9 billion, largely as a result of increases in exposure to borrowers in the AQ7 band. The increase was driven by new mortgage lending.
- The difficult economic conditions in Ireland were reflected in the Ulster Bank performance, which weighed on the overall portfolio risk profile and led to an increase in exposure to retail secured by real estate collateral in AQ10 from better AQ bands. However, the deterioration in the credit quality of these exposures was at least partially offset by improvements within UK Retail, most notable in improvements within AQ6.

Source: RBS Group 2011 Pillar 3 Report, page 29.

**12. Credit risk metrics by line of business and PD grade** (continued)Credit risk *continued*

Table 17: Qualifying revolving retail exposures by asset quality band (1)

Asset quality band	EAD post CRM (2) £m	Exposure weighted average LGD (3) %	Exposure weighted average risk-weight (3) %	Undrawn commitments (4) £m	Undrawn weighted average CCF (5) %
2011					
AQ1	126	9.1	0.2	2,911	4.3
AQ2	6,492	49.6	1.3	5,028	98.4
AQ3	561	53.9	2.9	275	100.0
AQ4	3,987	56.4	6.5	2,904	91.1
AQ5	5,319	63.4	18.3	16,492	18.9
AQ6	3,179	67.8	39.0	3,861	32.3
AQ7	2,780	69.9	74.6	1,284	48.6
AQ8	2,892	77.0	143.6	465	75.9
AQ9	454	72.0	233.7	33	90.5
AQ10/default	1,068	76.9	55.1	271	0.1
	26,858	61.9	38.9	33,524	39.9
2010					
AQ1	106	8.9	0.2	2,434	4.2
AQ2	6,087	77.0	2.2	4,666	100.0
AQ3	-	-	-	-	-
AQ4	3,844	74.8	7.7	2,940	88.8
AQ5	5,453	72.2	20.9	14,893	21.7
AQ6	3,652	72.3	41.1	6,294	28.7
AQ7	2,822	72.9	83.2	1,811	43.5
AQ8	3,721	77.6	154.2	742	68.4
AQ9	739	82.3	269.4	55	92.8
AQ10/default	1,113	77.7	24.5	265	0.1
	27,537	74.7	48.7	34,100	40.4

## Notes:

- (1) Consists primarily of personal credit card and overdraft exposures and are calculated using the retail IRB approach.
- (2) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (3) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (4) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (5) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.

## Key points

- The overall decrease in EAD was primarily the result of customers reducing their unsecured debt by paying down outstanding balances on revolving lines of credit.
- The apparent improvements in LGD and risk-weight were partially due to the implementation of a new unsecured LGD model during the fourth quarter of 2011.

Source: RBS Group 2011 Pillar 3 Report, page 30.

**12. Credit risk metrics by line of business and PD grade** (continued)**Credit risk** continued

Table 18: Other retail exposures by asset quality band (1)

Asset quality band	EAD post CRM (2) £m	Exposure weighted average LGD (3) %	Exposure weighted average risk-weight (3) %	Undrawn commitments (4) £m	Undrawn weighted average CCF (5) %
<b>2011</b>					
AQ1	-	-	-	-	-
AQ2	-	-	-	-	-
AQ3	-	-	-	-	-
AQ4	118	65.8	34.8	1	100.0
AQ5	1,265	69.0	66.2	1	100.0
AQ6	2,153	75.9	94.8	-	-
AQ7	1,718	77.7	119.5	-	-
AQ8	645	75.4	141.3	-	-
AQ9	240	75.5	212.0	-	-
AQ10/default	1,961	78.9	55.1	-	-
	<b>8,100</b>	<b>75.7</b>	<b>92.2</b>	<b>2</b>	<b>100.0</b>
<b>2010</b>					
AQ1	-	-	-	-	-
AQ2	-	-	-	-	-
AQ3	-	-	-	-	-
AQ4	140	78.4	43.3	1	100.0
AQ5	635	62.1	60.3	2	100.0
AQ6	2,929	74.9	93.4	1	100.0
AQ7	1,888	73.0	111.0	-	-
AQ8	1,535	74.1	132.3	-	-
AQ9	401	72.7	204.0	-	-
AQ10/default	2,158	80.3	24.4	-	-
	<b>9,686</b>	<b>74.7</b>	<b>89.3</b>	<b>4</b>	<b>100.0</b>

## Notes:

- (1) Consists primarily of unsecured personal loans and are calculated using the retail IRB approach.
- (2) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (3) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (4) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (5) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.

**Key points**

- The reduction in EAD within the AQ6 to AQ9 bands was due to the continued run-off of lower quality unsecured lending in UK Retail.
- The personal loan book saw contractions in the period, driven by difficult market conditions. This contributed to the reduction in EAD within the AQ10 band and overall EAD.

Source: RBS Group 2011 Pillar 3 Report, page 31.

## 12. Credit risk metrics by line of business and PD grade (continued)

### Credit risk continued

Table 19: Equities by asset quality band (1)

Asset quality band	EAD post CRM (2) £m	Exposure weighted average LGD (3) %	Exposure weighted average risk-weight (3) %	Undrawn commitments (4) £m	Undrawn weighted average CCF (5) %
2011					
AQ1	-	-	-	-	-
AQ2	-	-	-	-	-
AQ3	9	90	199	-	-
AQ4	-	-	-	-	-
AQ5	-	-	-	-	-
AQ6	383	90	345	-	-
AQ7	310	90	277	-	-
AQ8	13	90	679	-	-
AQ9	7	90	651	-	-
AQ10/default (6)	50	90	-	-	-
<b>Equities calculated using PD/LGD approach</b>	<b>772</b>	<b>90</b>	<b>302</b>	<b>-</b>	<b>-</b>
<b>Equities calculated using simple risk-weight approach</b>					
Exchange traded equity exposures	2	-	370	-	-
Private equity exposures	109	-	370	-	-
Other equity exposures	337	-	370	61	100
	<b>448</b>	<b>-</b>	<b>370</b>	<b>61</b>	<b>100</b>
	<b>1,220</b>				
2010					
AQ1	-	-	-	-	-
AQ2	-	-	-	-	-
AQ3	5	90	194	-	-
AQ4	-	-	-	-	-
AQ5	-	-	-	-	-
AQ6	760	90	279	-	-
AQ7	419	90	333	-	-
AQ8	6	90	570	-	-
AQ9	142	90	12	-	-
AQ10/default (6)	23	90	-	-	-
<b>Equities calculated using PD/LGD approach</b>	<b>1,355</b>	<b>90</b>	<b>264</b>	<b>-</b>	<b>-</b>
<b>Equities calculated using simple risk-weight approach</b>					
Private equity exposures	319	-	370	93	100
Other equity exposures	1	-	190	-	-
	<b>320</b>	<b>-</b>	<b>370</b>	<b>93</b>	<b>100</b>
	<b>1,675</b>				

Notes:

- (1) Exclude equity exposures calculated under the simple risk-weight approach.
- (2) EAD post CRM is exposure at default after the application of on-balance sheet netting and includes the advanced IRB element of counterparty credit risk, but excludes non-customer assets.
- (3) Exposure weighted average LGD for each of the AQ bands is derived by multiplying the EAD of each position in the band by the associated LGD, summing the resulting amounts, and then dividing the resulting amount by the sum of the EADs of the relevant AQ band. The same method applies when calculating weighted average PD.
- (4) Undrawn commitments are defined as the difference between the drawn balance and the relevant limit.
- (5) Undrawn weighted average credit conversion factor (CCF) is the sum of CCF undrawn commitments divided by the sum of undrawn commitments within each of the relevant AQ bands.
- (6) For defaulted assets (AQ10), the best estimate of expected loss (BEEL) methodology, based on downturn LGD, has been used. For these assets the Group takes a capital deduction equal to the difference between expected loss and provisions, and this may result in nil RWAs.

#### Key point

- Exposure decreased to £1.2 billion at 31 December 2011 from £1.7 billion at 31 December 2010, principally due to a decrease calculated using the PD/LGD approach, itself the result of disposals of equity positions, predominantly in the property and non-bank financial institutions sector. The decrease calculated using the PD/LGD approach was partially offset by an increase of £128 million in exposures calculated using the simple risk-weight (SRW) approach, resulting from a movement to the SRW approach for the EAD calculation of these exposures.

Source: RBS Group 2011 Pillar 3 Report, page 32.

## Liquidity

### 13. Liquidity buffer composition

#### Liquidity buffer composition

Q1 2012

According to Swedish FSA and Swedish Bankers' Association definition  
as well as Nordea definition

EURm	Currency distribution, market value in millions EUR				
	SEK	EUR	USD	Other	Sum
Cash and balances with central banks	1 387	9 349	8 845	9 182	28 762
Balances with other banks	0	0	0	0	0
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks *	2 329	5 284	2 081	9 241	18 936
Securities issued or guaranteed by municipalities or other public sector entities *	213	203	19	40	475
Covered bonds * :					
- Securities issued by other bank or financial institute	7 624	8 878		7 462	23 964
- Securities issued by the own bank or related unit	0	4 242		10 440	14 682
Securities issued by non financial corporates *	0	0	57	0	57
Securities issued by financial corporates, excluding covered bonds *	668	664	1 799	185	3 317
All other securities **	0	69	0	5	74
<b>Total (according to Swedish FSA and Swedish Bankers' Association definition)</b>	<b>12 222</b>	<b>28 691</b>	<b>12 800</b>	<b>36 555</b>	<b>90 267</b>
Adjustments to Nordea's official buffer *** :	-1 597	-9 724	-8 921	-9 713	-29 954
<b>Total (according to Nordea definition)</b>	<b>10 625</b>	<b>18 967</b>	<b>3 879</b>	<b>26 842</b>	<b>60 313</b>

Source: Nordea Q1 2012 Fact Book, page 73.

## 14. Aggregate of liquidity resources

### Aggregate Liquidity Resources

	Non-bank <sup>(1)</sup>		Significant bank entities		Other entities <sup>(2)</sup>		Total	
	Dec. 31, 2011	Dec. 31, 2010	Dec. 31, 2011	Dec. 31, 2010	Dec. 31, 2011	Dec. 31, 2010	Dec. 31, 2011	Dec. 31, 2010
<i>In billions of dollars</i>								
Cash at major central banks	\$29.1	\$22.7	\$ 70.7	\$ 77.4	\$ 27.6	\$ 32.5	\$127.4	\$132.6
Unencumbered liquid securities	69.3	71.8	129.5	145.3	79.3	77.1	278.1	294.2
<b>Total</b>	<b>\$98.4</b>	<b>\$94.5</b>	<b>\$200.2</b>	<b>\$222.7</b>	<b>\$106.9</b>	<b>\$109.6</b>	<b>\$405.5</b>	<b>\$426.8</b>

(1) Non-bank includes the parent holding company (Citigroup), Citigroup Funding Inc. (CFI) and one of Citi's broker-dealer entities, Citigroup Global Markets Holdings Inc. (CGMH).

(2) Other entities include Banamex and other bank entities.

As set forth in the table above, Citigroup's aggregate liquidity resources totaled \$405.5 billion at December 31, 2011, compared with \$426.8 billion at December 31, 2010. These amounts are as of period-end and may increase or decrease intra-period in the ordinary course of business. During the quarter ended December 31, 2011, the intra-quarter amounts did not fluctuate materially from the quarter-end amounts noted above.

At December 31, 2011, Citigroup's non-bank aggregate liquidity resources totaled \$98.4 billion, compared with \$94.5 billion at December 31, 2010. This amount included unencumbered liquid securities and cash held in Citi's U.S. and non-U.S. broker-dealer entities.

Citigroup's significant bank entities had approximately \$200.2 billion of aggregate liquidity resources as of December 31, 2011. This amount included \$70.7 billion of cash on deposit with major central banks (including the U.S. Federal Reserve Bank, European Central Bank, Bank of England, Swiss National Bank, Bank of Japan, the Monetary Authority of Singapore and the Hong Kong Monetary Authority), compared with \$77.4 billion at

December 31, 2010. The significant bank entities' liquidity resources also included unencumbered highly liquid government and government-backed securities. These securities are available-for-sale or secured funding through private markets or by pledging to the major central banks. The liquidity value of these liquid securities was \$129.5 billion at December 31, 2011, compared with \$145.3 billion at December 31, 2010. As shown in the table above, overall, liquidity at Citi's significant bank entities was down at December 31, 2011, as compared to December 31, 2010, as Citi deployed some of its excess bank liquidity into loan growth within Citicorp (see "Balance Sheet Review" above) and paid down long-term bank debt.

Citi estimates that its other entities and subsidiaries held approximately \$106.9 billion in aggregate liquidity resources as of December 31, 2011. This included \$27.6 billion of cash on deposit with major central banks and \$79.3 billion of unencumbered liquid securities. Including these amounts, Citi's aggregate liquidity resources as of December 31, 2011 were approximately \$405.5 billion.

Source: Citigroup 2011 Annual Report, page 47.

## Funding

### 15. Assets pledged and collateral held

#### 45 Assets pledged

Assets are pledged as collateral to secure liabilities under repurchase agreements, securitisations and stock lending agreements or as security deposits relating to derivatives. The following table summarises the nature and carrying amount of the assets pledged as security against these liabilities:

	2011 £m	2010 £m
Trading portfolio assets	86,677	111,703
Loans and advances	40,613	30,584
Available for sale investments	19,974	22,941
Other	2	45
<b>Assets pledged</b>	<b>147,266</b>	<b>165,273</b>

As at 31 December 2011, Barclays has an additional £16bn loans and advances with its asset backed funding programmes that can readily be used to raise additional secured funding and available to support future issuance.

#### Collateral held as security for assets

Under certain transactions, including reverse repurchase agreements and stock borrowing transactions, the Group is allowed to resell or repledge the collateral held. The fair value at the balance sheet date of collateral accepted and repledged to others was as follows:

	2011 £m	2010 £m
Fair value of securities accepted as collateral	391,287	422,890
Of which fair value of securities repledged/transferred to others	341,060	347,557

Source: Barclays 2011 Annual Report, page 271.

### 16. Additional collateral or termination payments that may be required

We allocate a portion of our GCE to ensure we would be able to make the additional collateral or termination payments that may be required in the event of a two-notch reduction in our long-term credit ratings, as well as collateral that has not been called by counterparties, but is available to them. The table below presents the additional collateral or termination payments that could have been called at the reporting date by counterparties in the event of a one-notch and two-notch downgrade in our credit ratings.

<i>in millions</i>	As of December	
	2011	2010
Additional collateral or termination payments for a one-notch downgrade	\$1,303	\$1,353
Additional collateral or termination payments for a two-notch downgrade	2,183	2,781

Source: Goldman Sachs 2011 Annual Report, page 83.

## 17. Maturity analysis of assets and liabilities

### Maturity distribution, Swedbank Group, 31 March 2012 1)

SEKm	Payable on demand	<30 days.	<3 mths.	3 mths-1 yr.	1-2 yrs.	2-3 yrs.	3-5 yrs.	5-10 yrs.	>10 yrs.	Discount effect/ no maturity	Total
<b>Assets</b>											
Treasury bills and other bills eligible for refinancing		2 410	2 426	1 954	184	3 221	1 490	4 283	3 107	3 971	23 046
Loans to credit institutions	6 543	79 424	2 236	3 583	2 686	2 230	264	239	311	857	98 373
Loans to the public	10 250	69 188	40 389	85 535	50 847	45 590	85 228	93 276	726 658	5 603	1 212 564
of which Swedbank Mortgage		540	5 560	7 390	7 380	7 360	14 578	32 750	642 668	4 363	722 589
Bonds and other interest-bearing securities		5 363	9 208	20 038	22 081	39 546	24 087	3 860	870	3 579	128 632
Other assets 2)	169 795	22 012	62 340	19 536	19 732	15 766	18 253	15 295	37 332	45 844	425 905
<b>Total</b>	<b>186 588</b>	<b>178 397</b>	<b>116 599</b>	<b>130 646</b>	<b>95 530</b>	<b>106 353</b>	<b>129 322</b>	<b>116 953</b>	<b>768 278</b>	<b>59 854</b>	<b>1 888 520</b>
<b>Liabilities</b>											
Amounts owed to credit institutions, short-term	63 814	48 477	12 918	1 050							126 259
Amounts owed to credit institutions, long-term		218	375	1 803	1 611	808	241	303		-1 618	3 741
Deposits and borrowings from the public	438 375	86 998	34 030	38 382	2 969	1 610	1 035	110	118	146	603 773
Debt securities in issue etc, short-term		48 144	66 205	16 787							131 136
of which Swedbank Mortgage		1 009	4 728	1 833							7 570
Debt securities in issue etc, long-term		8 436	19 968	54 687	83 486	204 231	216 852	41 881	18 077	5 853	653 471
of which Swedbank Mortgage		300	17 611	19 733	73 618	168 124	187 244	41 787	18 063	3 764	530 244
Subordinated liabilities								9 887	7 692	1 080	18 659
Other liabilities 2)		13 293	112 360	29 350	20 090	14 042	18 416	16 898	40 162	-8 533	256 078
<b>Total</b>	<b>502 189</b>	<b>205 566</b>	<b>245 856</b>	<b>142 059</b>	<b>108 156</b>	<b>220 691</b>	<b>236 544</b>	<b>69 079</b>	<b>66 049</b>	<b>-3 072</b>	<b>1 793 117</b>

1) In the table, undiscounted contractual cash flows are distributed according to the contracts' remaining maturity. Loans with amortisation are distributed according to amortisation schedule. Impaired loans are distributed based on assessed repayment schedule. Differences between undiscounted cash flows and carrying amount are reported together with items without an agreed maturity date, where the anticipated realisation date has not been determined, in the column Discount effect/ no maturity.

2) Other assets contents among others of Fund shares where customers bear the investment risk, intangible and tangible assets.  
Other liabilities contents among others of Financial liabilities where customers bear the investment risk and Sold, not held, securities

Source: Swedbank Group Q1 2012 Fact Book, page 72.

## Market risk

### 18. Decomposition of relevant risk factors

#### Interest Rate Risk

Interest rate risk represents exposures to instruments whose values vary with the level or volatility of interest rates. These instruments include, but are not limited to, loans, debt securities, certain trading-related assets and liabilities, deposits, borrowings and derivatives. Hedging instruments used to mitigate these risks include derivatives such as options, futures, forwards and swaps.

#### Foreign Exchange Risk

Foreign exchange risk represents exposures to changes in the values of current holdings and future cash flows denominated in currencies other than the U.S. dollar. The types of instruments exposed to this risk include investments in non-U.S. subsidiaries, foreign currency-denominated loans and securities, future cash flows in foreign currencies arising from foreign exchange transactions, foreign currency-denominated debt and various foreign exchange derivatives whose values fluctuate with changes in the level or volatility of currency exchange rates or non-U.S. interest rates. Hedging instruments used to mitigate this risk include foreign exchange options, currency swaps, futures, forwards, foreign currency-denominated debt and deposits.

#### Mortgage Risk

Mortgage risk represents exposures to changes in the value of mortgage-related instruments. The values of these instruments are sensitive to prepayment rates, mortgage rates, agency debt ratings, default, market liquidity, government participation and interest rate volatility. Our exposure to these instruments takes several forms. First, we trade and engage in market-making activities in a variety of mortgage securities including whole loans, pass-through certificates, commercial mortgages and collateralized mortgage obligations including CDOs using mortgages as underlying collateral. Second, we originate a variety of MBS which involves the accumulation of mortgage-related loans in anticipation of eventual securitization. Third, we may hold positions in mortgage securities and residential mortgage loans as part of the ALM portfolio. Fourth, we create MSRMs as part of our mortgage origination activities. See *Note 1 – Summary of Significant Accounting Principles* and *Note 25 – Mortgage Servicing Rights* to the Consolidated Financial Statements for additional information on MSRMs. Hedging instruments used to mitigate this risk include foreign exchange options, currency swaps, futures, forwards and foreign currency-denominated debt.

#### Equity Market Risk

Equity market risk represents exposures to securities that represent an ownership interest in a corporation in the form of domestic and foreign common stock or other equity-linked instruments. Instruments that would lead to this exposure include, but are not limited to, the following: common stock, exchange-traded funds, American Depositary Receipts, convertible bonds, listed equity options (puts and calls), OTC equity options, equity total return swaps, equity index futures and other equity derivative products. Hedging instruments used to mitigate this risk include options, futures, swaps, convertible bonds and cash positions.

Table 57 presents average, high and low daily trading VaR for 2011 and 2010.

**Table 57** Market Risk VaR for Trading Activities

(Dollars in millions)	2011			2010		
	Average	High <sup>(1)</sup>	Low <sup>(1)</sup>	Average	High <sup>(1)</sup>	Low <sup>(1)</sup>
Foreign exchange	\$ 20.0	\$ 48.6	\$ 5.6	\$ 23.8	\$ 73.1	\$ 4.9
Interest rate	50.6	82.7	29.2	64.1	128.3	33.2
Credit	109.9	155.3	54.8	171.5	287.2	122.9
Real estate/mortgage	80.0	139.5	31.5	83.1	138.5	42.9
Equities	50.5	88.9	25.1	39.4	90.9	20.8
Commodities	18.9	33.8	8.4	19.9	31.7	12.8
Portfolio diversification	(163.1)	—	—	(200.5)	—	—
<b>Total market-based trading portfolio</b>	<b>\$ 166.8</b>	<b>\$ 318.6</b>	<b>\$ 75.0</b>	<b>\$ 201.3</b>	<b>\$ 375.2</b>	<b>\$ 123.0</b>

<sup>(1)</sup> The high and low for the total portfolio may not equal the sum of the individual components as the highs or lows of the individual portfolios may have occurred on different trading days.

The \$35 million decrease in average VaR during 2011 was primarily due to a reduction in risk during the year. This was driven primarily by a decrease in credit exposures where average VaR decreased \$62 million compared to 2010. In addition, for 2010

and 2011, data from the more volatile periods of 2007 and 2008 were no longer included in our three-year historical dataset. These impacts were partially offset by a reduction in portfolio diversification VaR of \$37 million.

Source: Bank of America 2011 Annual Report, pages 112 and 115.

## 19. Discussion of non-traded portfolios

### Non-trading portfolios

Audited For the purposes of our disclosure, the market risks associated with our non-trading portfolios are quantified using sensitivity analysis. This includes an aggregate measure of our exposures to interest rate risk in the banking book and additional information for certain significant portfolios and positions that are not included in our management VaR or in our interest risk in the banking book table.

### Interest rate risk in the banking book

Audited The banking book consists of *Available-for-sale instruments, Loans and receivables, certain Instruments designated at fair value through profit or loss*, derivatives measured at fair value through profit or loss and derivatives employed for cash flow hedge accounting purposes, as well as related funding transactions. These positions may impact other comprehensive income or profit or loss, due to differences in accounting treatment.

All interest rate risk is subject to independent risk control. When not included in our VaR measure, interest rate risk is subject to specific monitoring, which may include interest rate sensitivity analysis, earnings-at-risk, capital-at-risk and combined stress testing metrics. Interest rate risk sensitivity figures are provided for the impact of a 1-basis-point parallel increase and the +/-100-basis-points parallel moves in yield curves on present values of future cash flows, irrespective of accounting treatment.

Audited Our largest banking book interest rate risk exposures arise primarily from activities such as retail banking and lending in our Wealth Management & Swiss Bank division, as well as our treasury activities, which are mainly hedged.

Interest rate risks arising in Wealth Management & Swiss Bank are transferred either by means of back-to-back transactions or, in the case of products with no contractual maturity date or direct market-linked rate, by "replicating" portfolios from the originating business into one of two centralized interest rate risk management units of Group Treasury or the Investment Bank's fixed income, currencies and commodities (FICC) unit. These units manage these risks as part of their risk portfolios within their allocated market risk limits and controls, exploiting the netting potential across interest rate risks from different sources.

The Investment Bank's portfolio of assets that were reclassified to *Loans and receivables* from *Held-for-trading* in the fourth quar-

Audited ter of 2008 and the first quarter of 2009, and certain other debt securities held as *Loans and receivables*, also give rise to non-trading interest rate risk.

Interest rate risk within Wealth Management Americas arises from the business division's investment portfolio in addition to its lending and deposit products offered to clients.

This interest rate risk is closely measured, monitored and managed within approved risk limits and controls, taking into account Wealth Management Americas balance sheet items that naturally offset risk.

Audited The interest sensitivity of non-contractual maturity products is modeled using historical behavior patterns from a complete interest rate cycle.

Group Treasury manages two main types of interest rate risk positions. One type is the risk transferred from Wealth Management & Swiss Bank's banking operations (mentioned above). The other type arises from investing or funding non-monetary corporate balance sheet items that have indefinite lives, such as equity and goodwill. For these items we have defined specific target durations based on which we fund and invest as applicable. These targets are defined by replication portfolios, which establish rolling benchmarks to execute against. The table below includes any residual risk in the Group Treasury books against these benchmarks. This activity and associated sensitivities of these replication portfolios are further discussed in the Group Treasury section.

In addition to its regular risk management activities, Group Treasury manages portfolios that aim to economically hedge negative effects on the firm's net interest income stemming from the extraordinarily low yield environment. These activities included our strategic investment portfolio which we sold during the third quarter of 2011. The sale of this portfolio was the main driver behind the decrease in sensitivity compared with year end 2010.

→ Refer to the "Interest rate and currency management" section of this report for more information

The table "Interest rate sensitivity – banking book" shows the impact on present value for an immediate +/-100-basis-points parallel move in yield curves. Due to the low level of interest rates the downward moves are capped to ensure that the resulting interest rates are not negative. This effect, combined with pre-payment risk on US mortgage products and impact of low interest

### Audited Impact of a 1-basis-point parallel increase in yield curves on present value of future cash flows<sup>1</sup>

CHF million	31.12.11	31.12.10
CHF	(0.7)	(0.7)
EUR	(1.6)	(2.1)
GBP	0.1	(2.9)
USD	(3.7)	(10.7)
Other	(0.1)	(0.3)
<b>Total impact on interest rate-sensitive banking book positions</b>	<b>(6.0)</b>	<b>(16.6)</b>

<sup>1</sup> Does not include interest rate sensitivities for CVA on monoline credit protection, US and non-US RLN and our option to acquire equity of the SNB StabFund for which the interest rate sensitivities are separately disclosed. Also not included are the interest rate sensitivities of our inventory of student loan ARS, as from an economic perspective these exposures are not materially affected by parallel shifts in USD interest rates, holding other factors constant.

Source: UBS 2011 Annual Report, page 136.

## 19. Discussion of non-traded portfolios (continued)

rates on client deposit behavior, results in non-linear behavior of the exposure.

The impact of an adverse parallel shift in interest rates of 200 basis points on our banking book interest rate risk exposures is significantly below the threshold of 20% of eligible regulatory capital set by regulators.

### Interest rate sensitivity of available-for-sale debt investments

Debt financial instruments classified as *Financial investments available-for-sale* amounted to CHF 52.5 billion on 31 December 2011 compared with CHF 73.9 billion on 31 December 2010. From an accounting perspective, the sensitivity of this position (excluding hedges) to a 1-basis-point parallel increase in the yields of the respective instruments is approximately negative CHF 6 million, which would be posted to other comprehensive income. The interest rate sensitivity of this position including the associated hedges is included within the table "Impact of a 1-basis-point parallel increase in yield curves on present value of future cash flows", some elements of which are additionally disclosed in VaR.

→ Refer to "Note 13 Financial investments available-for-sale" in the "Financial information" section of this report for more information

→ Refer to "Debt investments" in the "Credit risk" section of this report for more information

### Interest rate sensitivity of interest rate swaps designated in cash flow hedges

To the extent effective, interest rate swaps designated in cash flow hedges are accounted for at fair value through equity under IFRS. Amounts deferred in equity are released to the income statement on the occurrence of the underlying hedged interest cash flows. Interest rate swaps designated in cash flow hedges are denominated in US dollar, euro, British pound, Swiss franc and Canadian dollar. As of 31 December 2011, the fair value of interest rate swaps amounted to CHF 7.5 billion (positive replacement values) and CHF 3.6 billion (negative replacement values). The impact on other comprehensive income under IFRS of a 1-basis-point increase of underlying LIBOR curves would have decreased equity by approximately CHF 25 million. This estimate excludes economically offsetting positions and is included in the above table on interest rate sensitivities in the banking book, together with hedge and funding effects that are partially offsetting.

### Non-trading portfolios – valuation and sensitivity information by instrument category

This section includes a description of the valuation of certain significant product categories and related valuation techniques and models. In addition, sensitivity information is provided for certain significant instrument categories that are excluded from management VaR and the interest rate risk in the banking book as disclosed in the "Risk and treasury management" section of this report. Numbers are stated in US dollar, with the Swiss franc equivalent shown in brackets for comparative purposes.

### Credit valuation adjustments on monoline credit protection

Included within our residual risk positions are negative basis trades, whereby we purchased credit default swap (CDS) protection from monolines against UBS-held underlyings, including residential mortgage-backed securities (RMBS) collateralized debt obligations (CDO) and commercial mortgage-backed securities (CMBS) CDO, transactions with collateralized loan obligations, and asset-backed securities CDO. Since the start of the financial crisis, the credit valuation adjustments (CVA) relating to these monoline exposures have been a source of valuation uncertainty, given market illiquidity, and the contractual terms of these exposures relative to other monoline-related instruments.

CVA amounts related to monoline credit protection are based on a methodology that uses CDS spreads on the monolines as a key input in determining an implied level of expected loss. Where a monoline has no observable CDS spread, a judgment is made on the most comparable monoline or combination of monolines, and the corresponding spreads are used instead. For RMBS CDO, CMBS CDO, and collateralized loan obligations asset categories, cash flow projections are used in conjunction with current fair values of the underlying assets to provide estimates of expected future exposure levels. For other asset categories, future exposure is derived from current exposure levels.

To assess the sensitivity of the monoline CVA calculation to alternative assumptions, the impact of a 10% increase in monoline credit default swaps spreads (e.g. from 1,000 basis points to 1,100 basis points for a specific monoline) was considered. On 31 December 2011, such an increase would have resulted in an increase in the monoline CVA of approximately USD 39 million

### Interest rate sensitivity – banking book<sup>1</sup>

CHF million	31.12.11	
	-100 bps	+100 bps
CHF	17.5	(66.9)
EUR	169.6	(160.3)
GBP	(9.4)	13.2
USD	(105.5)	(364.9)
Other	(7.2)	(5.5)
<b>Total impact on interest rate-sensitive banking book positions</b>	<b>65.0</b>	<b>(584.3)</b>

<sup>1</sup> Does not include interest rate sensitivities for CVA on monoline credit protection, US and non-US RLN and our option to acquire equity of the SNB StabFund for which the interest rate sensitivities are separately disclosed. Also not included are the interest rate sensitivities of our inventory of student loan ARS, as from an economic perspective these exposures are not materially affected by parallel shifts in USD interest rates, holding other factors constant.

Source: UBS 2011 Annual Report, page 137.

## 19. Discussion of non-traded portfolios (continued)

**Audited** (CHF 37 million) compared with USD 45 million (CHF 42 million) on 31 December 2010. After taking into account the impact of the potential commutation transaction discussed in "Note 32 Events after the reporting period" in the "Financial Information" section, this sensitivity reduces from USD 39 million (CHF 37 million) to USD 33 million (CHF 31 million), respectively.

The sensitivity of the monoline CVA to a decrease of one percentage point in the monoline recovery rate assumptions (e.g. from 30% to 29% for a specific monoline, conditional on default occurring) was estimated to result in an increase of approximately USD 11 million (CHF 10 million) in the CVA, compared with USD 9 million (CHF 8 million) on 31 December 2010. After taking into account the impact of the potential commutation transaction discussed in "Note 32 Events after the reporting period" in the "Financial Information" section, this sensitivity reduces from USD 11 million (CHF 10 million) to USD 3 million (CHF 3 million), respectively. The sensitivity to credit spreads and recovery rates is substantially linear.

### US reference-linked notes

**Audited** The US reference-linked notes (RLN) consist of a series of transactions whereby UBS purchased credit protection, predominantly in note form, on a notional portfolio of fixed income assets. The referenced assets are comprised of USD asset-backed securities. These are primarily CMBS and subprime RMBS and/or corporate bonds and loans across all rating categories. While the assets in the portfolio are marked to market, the credit protection embedded in the RLN is fair valued using a market standard approach to the valuation of portfolio credit protection (Gaussian copula). This approach is intended to effectively simulate correlated defaults within the portfolio, where the expected losses and defaults of the individual assets are closely linked to the observed market prices (spread levels) of those assets. Key assumptions of the model include correlations and recovery rates. We apply fair value adjustments related to potential uncertainty in each of these parameters, which are only partly observable. In addition, we apply fair value adjustments for uncertainties associated with the use of observed spread levels as the primary inputs. These fair value adjustments are calculated by applying shocks to the relevant parameters and revaluing the credit protection. These shocks for correlation, recovery and spreads are set to various levels depending on the asset type and/or region and may vary over time depending on the best judgment of the relevant trading and control personnel. Correlation and recovery shocks are generally in the reasonably possible range of 5 to 15 percentage points. Spread shocks vary more widely and depend on whether the underlying protection is funded or unfunded to reflect cash or synthetic basis effects.

On 31 December 2011, the fair value of the US RLN credit protection was approximately USD 319 million (CHF 299 million) compared with USD 629 million (CHF 588 million) on 31 December 2010. The reduction in protection value was due to the reduction of notional of the notes primarily due to writedowns of the reference assets across the RLN deals. This fair value included fair value adjustments which were calculated by applying the shocks de-

scribed above of approximately USD 22 million (CHF 21 million). This compared with USD 31 million (CHF 29 million) on 31 December 2010. The fair value adjustments may also be considered a measurement of sensitivity.

### Non-US reference-linked notes

The same valuation model and approach to the calculation of fair value adjustments are applied to the non-US RLN credit protection and the US RLN credit protection as described above, except that the spread is shocked by 10% for European corporate names.

On 31 December 2011, the fair value of the non-US RLN credit protection was approximately USD 468 million (CHF 439 million) compared with USD 660 million (CHF 616 million) on 31 December 2010. This fair value included fair value adjustments which were calculated by applying the shocks described above of approximately USD 46 million (CHF 43 million) compared with USD 72 million (CHF 67 million) on 31 December 2010. This adjustment may also be considered a measurement of sensitivity.

### Option to acquire equity of the SNB StabFund

**Audited** Our option to purchase the SNB StabFund's equity is recognized on the balance sheet as a derivative at fair value (*positive replacement values*) with changes to fair value recognized in profit or loss. On 31 December 2011, the fair value (after adjustments) of the call option held by UBS was approximately USD 1,736 million (CHF 1,629 million) compared with USD 1,906 million (CHF 1,781 million) on 31 December 2010. The decline in the value of the option reflected lower forecast cash flows and increased risk premia for the fund's assets.

The model incorporates cash flow projections for all assets within the fund across various scenarios. It is calibrated to market levels by setting the spread above the one-month Libor rates used to discount future cash flows such that the model-generated price of the underlying asset pool equals our assessed fair value of the asset pool. The model incorporates a model reserve (fair value adjustment) to address potential uncertainty in this calibration. On 31 December 2011, this adjustment was USD 131 million (CHF 123 million) compared with USD 250 million (CHF 234 million) on 31 December 2010. The decline in the reserve amount reflects greater convergence of valuations across the scenarios, consistent with lesser dependence of the valuation on projections of future cash flows.

On 31 December 2011, a 100-basis-point increase in the discount rate would have decreased the option value by approximately USD 139 million (CHF 130 million) compared with USD 167 million (CHF 156 million) on 31 December 2010; and a 100-basis-point decrease would have increased the option value by approximately USD 155 million (CHF 145 million) compared with USD 188 million (CHF 176 million).

### Market risk – stress loss

To complement VaR and other measures of market risk, we run macro stress scenarios, combining various market moves to reflect the most common types of potential stress events, as well as more

Source: UBS 2011 Annual Report, page 138.

## 19. Discussion of non-traded portfolios (continued)

targeted stress tests for our concentrated exposures and vulnerable portfolios. Targeted stress tests are typically applied to specific asset classes or to specific markets and products. We continued to enhance our market risk stress framework in 2011, in order to increase the scope and detail of the analysis. Our scenarios capture the liquidity characteristics of different markets, asset classes and positions.

Our market risk stress testing framework is designed to provide a control framework that is forward-looking and responsive to changing market conditions. Our stress scenarios are therefore reviewed regularly in the context of the macroeconomic and geopolitical environment by a committee comprised of representatives from the business divisions, Risk Control and Economic Research. In response to changing market conditions and new developments around the world, we develop and run ad hoc stress scenarios to assess the potential impact on our portfolio.

→ Refer to the discussion on stress loss in this section for more information

### Equity investments

Under IFRS, equity investments not in the trading book may be classified as *Financial investments available-for-sale*, *Financial assets designated at fair value through profit or loss* or *Investments in associates*.

We make investments for a variety of purposes, including revenue generation or as part of strategic initiatives. Other investments, such as exchange and clearing house memberships, are held to support our business activities. We may also make investments in funds that we manage, in order to fund or "seed" them at inception, or to demonstrate that our interests concur with those of investors. We also buy, and are sometimes required by agreement to buy, securities and units from funds that we have sold to clients. These may include purchases of illiquid assets such as interests in hedge funds.

We may make direct investments in a variety of entities or buy equity holdings in both listed and unlisted companies, if such investments are illiquid. The fair value of equity investments tends

to be dominated by factors specific to the individual stocks, and our equity investments are generally intended to be held for the medium or long term and may be subject to lockup agreements. For these reasons, we generally do not control these exposures using the market risk measures applied to trading activities. Such equity investments are, however, subject to a different range of controls, including pre-approval of new investments by business management and Risk Control and regular monitoring and reporting. They are also included in our firm-wide earnings-at-risk, capital-at-risk and combined stress testing metrics.

Investments made as part of an ongoing business are also subject to our standard controls, including portfolio and concentration limits. Seed money and co-investments in UBS-managed funds made by Global Asset Management are, for example, subject to a portfolio limit. All investments must be approved by delegated authorities and are monitored and reported to senior management.

### Composition of equity investments

On 31 December 2011, we held equity investments totaling CHF 2.2 billion, of which CHF 0.7 billion were classified as *Financial investments available-for-sale*, CHF 0.7 billion as *Financial assets designated at fair value* and CHF 0.8 billion as *Investments in associates*.

This compares with 31 December 2010, when we held equity investments totaling CHF 2.6 billion, of which CHF 0.9 billion classified as *financial investments available-for-sale*, CHF 0.9 billion as *financial assets designated at fair value* and CHF 0.8 billion as *investments in associates*.

The vast majority of the CHF 0.7 billion of *Financial assets designated at fair value* represented the assets of trust entities associated with employee compensation schemes. They are broadly offset by liabilities to plan participants included in *Other liabilities*. The equivalent positions on 31 December 2010 amounted to CHF 0.9 billion.

→ Refer to "Note 12 Financial assets designated at fair value", "Note 13 Financial investments available-for-sale" and "Note 14 Investments in associates" in the "Financial information" section of this report for more information

Source: UBS 2011 Annual Report, page 139.

## 20. Sensitivity and VaR analysis

### Interest rate risk

The banking book consists of interest bearing assets, liabilities and derivative instruments used to mitigate risks which are accounted for on an accrual basis, as well as non-interest bearing balance sheet items, which are not subjected to fair value accounting.

The Group provides financial products to satisfy a variety of customer requirements. Loans and deposits are designed to meet customer objectives with regard to repricing frequency, tenor, index, prepayment, optionality and other features. When aggregated, they form portfolios of assets and liabilities with varying degrees of sensitivity to changes in market rates.

However, mismatches in these sensitivities give rise to net interest income (NII) volatility as interest rates rise and fall. For example, a bank with a floating rate loan portfolio and largely fixed rate deposits will see its NII rise as interest rates rise and fall as rates decline. Due to the long-term nature of many banking book portfolios, varied interest rate repricing characteristics and maturities, it is likely the NII will vary from period to period, even if interest rates remain the same. New business volumes originated in any period will alter the interest rate sensitivity of a bank if the resulting portfolio differs from portfolios originated in prior periods.

The Group assesses interest rate risk in the banking book (IRRBB) using a set of standards to define, measure and report the market risk. It is the Group's policy to minimise interest rate sensitivity in banking book portfolios and where interest rate risk is retained, to ensure that appropriate measures and limits are applied. Key measures used to evaluate IRRBB are subjected to approval of divisional Asset and Liability Management Committees (ALCOs) and the Group Asset and Liability Management Committee (GALCO).

Limits on IRRBB are proposed by the Group Treasurer for approval by the Executive Risk Forum annually.

The Group uses a variety of approaches to quantify its interest rate risk. IRRBB is measured using a version of the same value-at-risk (VaR) methodology that is used for the Group's trading portfolios. Net interest income exposures are measured in terms of sensitivity over time to movements in interest rates. Additionally, Citizens measures the sensitivity of the market value of equity to changes in forward interest rates.

With the exception of Citizens and GBM, divisions are required to manage IRRBB through internal transactions with Group Treasury, to the greatest extent possible. Residual risks in divisions must be measured and reported as described below.

Group Treasury aggregates exposures arising from its own external activities and positions transferred to it from divisions. Where appropriate Group Treasury nets off-setting risk exposures to determine a residual exposure to interest rate movements. Hedging transactions using cash and derivative instruments are executed to manage IRRBB exposures, within the GALCO approved VaR limits.

Citizens and GBM manage their own IRRBB exposures within approved limits to satisfy their business objectives.

IRRBB VaR for the Group's retail and commercial banking activities at a 99% a confidence level was as follows:

	Average £m	Period end £m	Maximum £m	Minimum £m
2011	63	51	80	44
2010	58	96	96	30
2009	86	101	123	53

A breakdown of the Group's IRRBB VaR by currency is shown below.

Currency	2011 £m	2010 £m	2009 £m
Euro	26	33	32
Sterling	57	79	111
US dollar	61	121	42
Other	5	10	9

### Key points

- Interest rate exposure at 31 December 2011 was considerably lower than at 31 December 2010 but average exposure was 9% higher in 2011 than in 2010.
- The reduction in US dollar VaR reflects, in part, changes in holding period assumptions following changes in Non-Core assets.\*

Source: RBS Group 2011 Annual Report, page 131.

## 20. Sensitivity and VaR analysis (continued)

### Balance sheet management: Interest rate risk continued

#### Sensitivity of net interest income\*

The Group seeks to mitigate the effect of prospective interest rate movements, which could reduce future net interest income (NII) in the Group's businesses, whilst balancing the cost of such activities on the current net revenue stream. Hedging activities also consider the impact on market value sensitivity under stress.

The following table shows the sensitivity of NII, over the next twelve months, to an immediate upward or downward change of 100 basis points to all interest rates. In addition, the table includes the impact of a gradual 400 basis point steepening and a gradual 300 basis point flattening of the yield curve at tenors greater than a year. This scenario differs from that applied in the previous year in both the severity of the rate shift and the tenors to which this is applied.

Potential favourable/(adverse) impact on NII	2011 £m	2010 £m	2009 £m
+ 100 basis points shift in yield curves	244	232	510
- 100 basis points shift in yield curves	(183)	(352)	(687)
Bear steepener	443		
Bull flattener	(146)		

#### Key points\*

- The Group's interest rate exposure remains slightly asset sensitive, driven in part by changes to underlying business assumptions as rates rise. The impact of the steepening and flattening scenarios is largely driven by the investment of net free reserves.
- The reported sensitivity will vary over time due to a number of factors such as market conditions and strategic changes to the balance sheet mix and should not therefore be considered predictive of future performance.

Source: RBS Group 2011 Annual Report, page 132.

## 20. Sensitivity and VaR analysis (continued)

### Structural foreign currency exposures

Structural foreign exchange exposures represent net investment in subsidiaries, associates and branches, the functional currencies of which are currencies other than sterling. The Group hedges structural foreign currency exposures only in limited circumstances. The Group's objective is to ensure, where practical, that its consolidated capital ratios are largely protected from the effect of changes in exchange rates. The Group seeks to limit the sensitivity to its Core Tier 1 ratio to 20 basis points in a 10% rate shock scenario. The Group's structural foreign currency position is reviewed by GALCO regularly.

The table below shows the Group's structural foreign currency exposures.

	Net assets of overseas operations £m	RFS MI £m	Net investments in foreign operations £m	Net investment hedges £m	Structural foreign currency exposures pre-economic hedges £m	Economic hedges (1) £m	Residual structural foreign currency exposures £m
<b>2011</b>							
US dollar	17,570	1	17,569	(2,049)	15,520	(4,071)	11,449
Euro	8,428	(3)	8,431	(621)	7,810	(2,236)	5,574
Other non-sterling	5,224	272	4,952	(4,100)	852	—	852
	<b>31,222</b>	<b>270</b>	<b>30,952</b>	<b>(6,770)</b>	<b>24,182</b>	<b>(6,307)</b>	<b>17,875</b>
<b>2010</b>							
US dollar	17,137	2	17,135	(1,820)	15,315	(4,058)	11,257
Euro	8,443	33	8,410	(578)	7,832	(2,305)	5,527
Other non-sterling	5,320	244	5,076	(4,135)	941	—	941
	<b>30,900</b>	<b>279</b>	<b>30,621</b>	<b>(6,533)</b>	<b>24,088</b>	<b>(6,363)</b>	<b>17,725</b>
<b>2009</b>							
US dollar	15,589	(2)	15,591	(3,846)	11,745	(5,696)	6,049
Euro	21,900	13,938	7,962	(2,351)	5,611	(3,522)	2,089
Other non-sterling	5,706	511	5,195	(4,001)	1,194	—	1,194
	<b>43,195</b>	<b>14,447</b>	<b>28,748</b>	<b>(10,198)</b>	<b>18,550</b>	<b>(9,218)</b>	<b>9,332</b>

Note:

(1) The economic hedges represent US dollar and euro preference shares in issue that are treated as equity under IFRS, and do not qualify as hedges for accounting purposes.

### Key points

- The Group's structural foreign currency exposure at 31 December 2011 was £24.2 billion and £17.9 billion before and after economic hedges respectively, broadly unchanged from the end of 2010 position.
- Changes in foreign currency exchange rates will affect equity in proportion to structural foreign currency exposure. A 5% strengthening in foreign currencies against sterling would result in a gain of £1.27 billion (2010 - £1.27 billion; 2009 - £0.98 billion) in equity, while a 5% weakening would result in a loss of £1.15 billion (2010 - £1.15 billion; 2009 - £0.88 billion) in equity.

### Equity risk

The Group holds equity positions in the banking book in order to achieve strategic objectives, such as membership of an exchange or clearing house, or to support venture capital transactions or customer restructuring arrangements. The Group is exposed to market risk on these banking book equity positions because they are measured at fair value. Fair values are based on available market prices where possible. In the event that market prices are not available, fair value is based on appropriate valuation techniques or management estimates.

The table below sets out the Group's banking book equity positions.

	Listed £m	Unlisted £m	Total £m
<b>2011</b>			
Group	576	1,768	2,344
<b>2010</b>			
Group	535	2,080	2,615
<b>2009</b>			
Group before RFS Holdings minority interest	401	2,388	2,789
RFS Holdings minority interest	60	211	271
Group	461	2,599	3,060

Note:

(1) The table above excludes equity exposures held-for-trading and those held by insurance/assurance entities.

Source: RBS Group 2011 Annual Report, page 133.

## 20. Sensitivity and VaR analysis (continued)

### Risk management: Market risk continued

#### Non-trading portfolios

The table below analyses the risk for the Group's non-trading portfolios.

VaR is not always the most appropriate measure of risk for assets in the banking book and particularly for those in Non-Core, which will diminish over time as the asset inventory is sold down.

In order to better represent the risk of the non-traded portfolios, the table below analyses the VaR for the non-trading portfolios but excludes the

Non-Core structured credit portfolio (SCP). These assets are shown separately on a drawn notional and fair value basis by maturity profile and asset class. The risk in this portfolio is managed on both a third party asset and RWA basis.

Also excluded from the non-traded VaR are the loans and receivable products that are managed within the credit risk management framework.

Non-trading VaR	2011				2010				2009			
	Average £m	Period end £m	Maximum £m	Minimum £m	Average £m	Period end £m	Maximum £m	Minimum £m	Average £m	Period end £m	Maximum £m	Minimum £m
Interest rate	8.8	9.9	11.1	5.7	8.7	10.4	20.5	4.4	13.0	13.9	26.3	7.7
Credit spread	18.2	13.6	39.3	12.1	32.0	16.1	101.2	15.4	81.7	100.3	131.5	39.7
Currency	2.1	4.0	5.9	0.1	2.1	3.0	7.6	0.3	1.4	0.6	7.0	0.2
Equity	2.1	1.9	3.1	1.6	1.2	3.1	4.6	0.2	3.3	2.2	5.8	1.6
Diversification (1)		(13.6)				(15.9)				(20.4)		
	19.7	15.8	41.6	13.4	30.9	16.7	98.0	13.7	80.4	96.6	126.9	46.8
Core	19.3	15.1	38.9	13.5	30.5	15.6	98.1	12.8	78.4	95.9	126.9	46.8
Non-Core	3.4	2.5	4.3	2.2	1.3	2.8	4.1	0.2	3.5	1.9	16.9	—

Note:

(1) The Group benefits from diversification, which reflects the risk reduction achieved by allocating investments across various financial instrument types, industry counterparties, currencies and regions. The extent of diversification benefit depends on the correlation between the assets and risk factors in the portfolio at a particular time. Diversification has an inverse relationship with correlation. The diversification factor is the sum of the VaR on individual risk types less the total portfolio VaR.

#### Key points

- The Group's total non-trading VaR at 31 December 2011 was significantly lower than at 31 December 2010, due to the exceptional volatility of the 2008/2009 financial crisis dropping out of the two-year time series data used in the VaR calculation.
- The maximum credit spread VaR was considerably lower in 2011 than in 2010. This was due to the implementation in early 2011 of the relative price-based mapping scheme for the Dutch RMBS portfolio. The availability of more granular data provided a better reflection of the risk in the portfolio.

Source: RBS Group 2011 Annual Report, page 234.

## 21. Year-on-year variance analysis

### Analysis of traded market risk exposures (Audited)

The trading environment in 2011 was characterised by weak underlying economic growth as well as uncertain market direction resulting in lower client activity particularly in the second half of 2011. In this environment, Barclays Capital's market risk exposure, as measured by average total DVaR, increased 8% to £57m (2010: £53m).

The three main risk factors affecting DVaR were spread, interest rate and equity risk. From 2010 levels, average DVaR for spread risk fell by £3m (6%) and interest rate DVaR fell by £16m (48%) reflecting cautious positioning. Equity DVaR increased by £4m (29%) on continued growth of the global equities business and product offerings.

The diversification effect fell 38% to an average of £40m in 2011 due to increasing cross asset correlation as the European crisis worsened. However, the tail risk indicated by the expected shortfall and 3W measures fell 9% to £71m and 16% to £121m respectively from 2010 levels.

Source: Barclays 2011 Annual Report, page 123.

## 22. Changes in VaR model

We use the same VaR model for risk management and regulatory capital purposes, except for the confidence level and holding period used. We regularly review our VaR model to ensure that it remains appropriate given evolving market conditions and the composition of our trading portfolio. As part of the ongoing review to improve risk management approaches and methodologies, we implemented a significantly revised VaR methodology for both risk management VaR and regulatory VaR in the second quarter of 2011. We believe these changes make VaR a more useful risk management tool and improve the responsiveness of the model to market volatility. We have approval from FINMA to use this revised VaR methodology for both risk management and regulatory capital purposes. We have restated risk management VaR for prior periods to show meaningful trends. The methodology changes were implemented in June 2011 and are fully reflected in risk management VaR. For regulatory VaR, these methodology changes have been reflected from implementation only. The revisions to the VaR methodology included:

- Historical dataset changed to two years (from three years);
- Exponential weighting to give emphasis to more recent market data and volatility (previously: equal weighting of market data and the use of scaled VaR);
- Expected shortfall calculation based on average losses (previously: losses from a single event);
- One-day holding period for risk management VaR (from a ten-day holding period adjusted to one day, with regulatory VaR continuing to be based on a ten-day holding period); and
- Confidence level changed to 98% for risk management VaR (from 99%, with regulatory VaR continuing to be based on a 99% confidence level).

In addition, we also made asset-class methodology changes, including changing the non-investment grade model to a spread-based rather than a price-based model to better capture issuer-specific basis and maturity risk and modifying the traded loans model to better capture basis risk. We also implemented a single stock volatility model to better capture equity exposures. Additionally, we enhanced the VaR methodology for non-agency RMBS exposures to reflect the risk of assets traded on a price-basis instead of a spread-basis and to better capture non-linear effects and basis risk.

We have approval from FINMA, as well as from certain other regulators of our subsidiaries, to use our regulatory VaR model in the calculation of trading book market risk capital requirements. We continue to receive regulatory approval for ongoing enhancements to the methodology, and the model is subject to regular reviews by regulators.

For risk management VaR, we use a one-day holding period and a 98% confidence level. This means there is a 1-in-50 chance of incurring a daily mark-to-market trading loss at least as large as the reported VaR. For regulatory VaR, we present one-day, 99% VaR, which is a ten-day VaR adjusted to a one-day holding period. In order to show the aggregate market risk in our trading books, the chart entitled "Daily risk management VaR" shows the trading-related market risk on a consolidated basis.

Source : Credit Suisse 2011 Annual Report, pages 117 and 118.

**22. Changes in VaR model (continued)****One-day, 98% risk management VaR and one-day, 99% regulatory VaR (CHF)**

in / end of	Interest rate & credit spread	Foreign exchange	Commodity	Equity	Diversi- fication benefit	Risk management	Regulatory
						VaR (98%)	VaR (99%)
						<b>Total</b>	<b>Total</b>
<b>2011 (CHF million)</b>							
Average	73	13	10	23	(44)	75	94
Minimum	54	5	2	14	- <sup>1</sup>	54	49
Maximum	99	25	26	47	- <sup>1</sup>	107	161
End of period	73	12	4	25	(40)	74	79
<b>2010 (CHF million)</b>							
Average	102	18	22	27	(67)	102	142
Minimum	78	6	10	15	- <sup>1</sup>	68	103
Maximum	127	43	32	50	- <sup>1</sup>	142	205
End of period	90	21	18	25	(63)	91	124
<b>2009 (CHF million)</b>							
Average	150	21	25	31	(83)	144	143
Minimum	94	6	16	17	- <sup>1</sup>	85	80
Maximum	245	63	40	60	- <sup>1</sup>	237	269
End of period	104	12	18	32	(71)	95	131

Excludes risks associated with counterparty and own credit exposures. In June 2011, we made significant changes to our VaR methodology. Risk management VaR for periods prior to implementation has been restated in order to show meaningful trends. For regulatory VaR, these methodology changes have been reflected from implementation only.

<sup>1</sup> As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit.

**One-day, 98% risk management VaR and one-day, 99% regulatory VaR (USD)**

in / end of	Interest rate & credit spread	Foreign exchange	Commodity	Equity	Diversi- fication benefit	Risk management	Regulatory
						VaR (98%)	VaR (99%)
						<b>Total</b>	<b>Total</b>
<b>2011 (USD million)</b>							
Average	82	14	11	26	(48)	85	105
Minimum	64	6	2	15	- <sup>1</sup>	65	55
Maximum	107	29	29	51	- <sup>1</sup>	117	177
End of period	77	13	4	27	(42)	79	84
<b>2010 (USD million)</b>							
Average	91	16	20	24	(60)	91	136
Minimum	68	6	9	14	- <sup>1</sup>	64	95
Maximum	111	38	28	44	- <sup>1</sup>	124	210
End of period	78	18	16	22	(54)	80	132
<b>2009 (USD million)</b>							
Average	137	19	23	29	(77)	131	128
Minimum	93	6	13	17	- <sup>1</sup>	83	78
Maximum	217	54	38	52	- <sup>1</sup>	210	226
End of period	100	11	17	31	(67)	92	126

Excludes risks associated with counterparty and own credit exposures. In June 2011, we made significant changes to our VaR methodology. Risk management VaR for periods prior to implementation has been restated in order to show meaningful trends. For regulatory VaR, these methodology changes have been reflected from implementation only.

<sup>1</sup> As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit.

Source: Credit Suisse 2011 Annual Report, pages 119 and 120.

### 23. Graph of daily VaR and P&L

#### Backtesting

**Audited** Backtesting compares 1-day 99% regulatory VaR calculated for positions at the close of each business day with the revenues which actually arise on those positions on the following business day. Our backtesting revenues exclude non-trading revenues, such as fees and commissions and estimated revenues from intraday trading. A backtesting exception occurs when backtesting revenues are negative and the absolute value of those revenues is greater than the previous day's VaR.

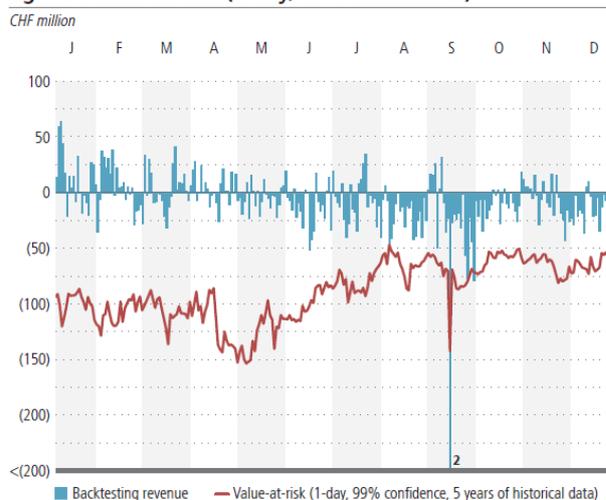
We experienced three backtesting exceptions in 2011 compared with one backtesting exception in 2010. All three exceptions occurred in the third quarter 2011 due to extreme market moves and the unauthorized trading incident.

The chart "Investment Bank: development of backtesting revenues against value-at-risk" shows the 12-month development of 1-day 99% VaR against backtesting revenues in the Investment Bank for the whole year of 2011. The histogram "Investment Bank: all revenue distribution" shows the Investment Bank's full trading revenues distribution in 2011.

We investigate all backtesting exceptions and any exceptional revenues on the profit side of the VaR distribution. In addition, we report all backtesting results to senior business management, the Group Chief Risk Officer and business division Chief Risk Officers.

**Audited** Backtesting exceptions are also reported to internal and external auditors and to the relevant regulators.

#### Investment Bank: development of backtesting revenues<sup>1</sup> against value-at-risk (1-day, 99% confidence)



<sup>1</sup> Excludes non-trading revenues, such as commissions and fees, and revenues from intraday trading.  
<sup>2</sup> Backtesting exception as a result of the unauthorized trading incident.

Source: UBS 2011 Annual Report, page 135.

## 24. VaR limitations

Among their benefits, VaR models permit estimation of a portfolio's aggregate market risk exposure, incorporating a range of varied market risks and portfolio assets. One key element of the VaR model is that it reflects risk reduction due to portfolio diversification or hedging activities. However, VaR risk measures should be interpreted carefully in light of the methodology's limitations, which include but are not limited to: past changes in market risk factors may not always yield accurate predictions of the distributions and correlations of future market movements; changes in portfolio value in response to market movements (especially for complex derivative portfolios) may differ from the responses calculated by a VaR model; VaR using a one-day time horizon does not fully capture the market risk of positions that cannot be liquidated or hedged within one day; the historical market risk factor data used for VaR estimation may provide only limited insight in losses that could be incurred under market conditions that are unusual relative to the historical period used in estimating the VaR; and published VaR results reflect past trading positions while future risk depends on future positions. A small proportion of market risk generated by trading positions is not included in VaR. The modelling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. The Company is aware of these and other limitations and, therefore, uses VaR as only one component in its risk management oversight process. As explained above, this process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis, and control at the trading desk, division and Company levels.

Source: *Morgan Stanley 2011 Annual Report, page 104.*

## 25. Alternative risk measures

### Risk measurement

Barclays uses a range of complementary technical approaches to measure and control traded market risk including: Daily Value at Risk (DVaR), Expected Shortfall, 3W, primary and secondary stress testing and combined scenario stress testing.

The daily average, maximum and minimum values of DVaR, Expected Shortfall and 3W were calculated as below:

The daily average, maximum and minimum values of DVaR, Expected Shortfall and 3W (audited)	Year ended 31 December 2011			Year ended 31 December 2010		
	Average £m	High <sup>a</sup> £m	Low <sup>a</sup> £m	Average £m	High <sup>a</sup> £m	Low <sup>a</sup> £m
<b>DVaR (95%)</b>						
Interest rate risk	17	47	7	33	50	21
Spread risk	45	69	25	48	62	30
Commodity risk	12	18	7	16	25	9
Equity risk	18	34	9	14	29	6
Foreign exchange risk	5	8	2	6	15	2
Diversification effect	(40)	na	na	(64)	na	na
Total DVaR	57	88	33	53	75	36
Expected Shortfall	71	113	43	78	147	47
3W	121	202	67	144	311	72

Source: *Barclays 2011 Annual Report, pages 122 and 123.*

## 26. Stress testing scenarios and results

### STRESS TESTING

The Group performs a range of stress tests to simulate the impact of extreme market conditions on the value of trading portfolios at the global level of the Group. Stress tests cover all market activities: Fixed Income, Forex, Equity Derivatives, Commodities and Treasury (except banking portfolios of sovereign debt) and a range of different market conditions. These 'top down' macro scenarios are referred to as "Global CMRC" scenarios and they are presented to and reviewed by the CMRC at each meeting.

- scenario 5: emerging markets crisis driven from Latin America;
- scenario 6: credit crunch, leading to a general risk aversion;
- scenario 7: Hedge Fund systemic crisis, leading to sharp moves in all markets where hedge funds are active (CDO correlation, convertibles, etc.);
- scenario 8: Euro confidence crisis;
- scenario 9: Middle East crisis with severe consequences on energy markets;
- scenario 10: major terrorist attack in Western countries;
- scenario 11: change in Japanese monetary policy, with surge and flattening of the JPY interest rate curve and a strongly negative impact on the JPY currency;
- scenario 12: major earthquake in California with consequences on EUR/USD exchange rate and interest rate differentials;

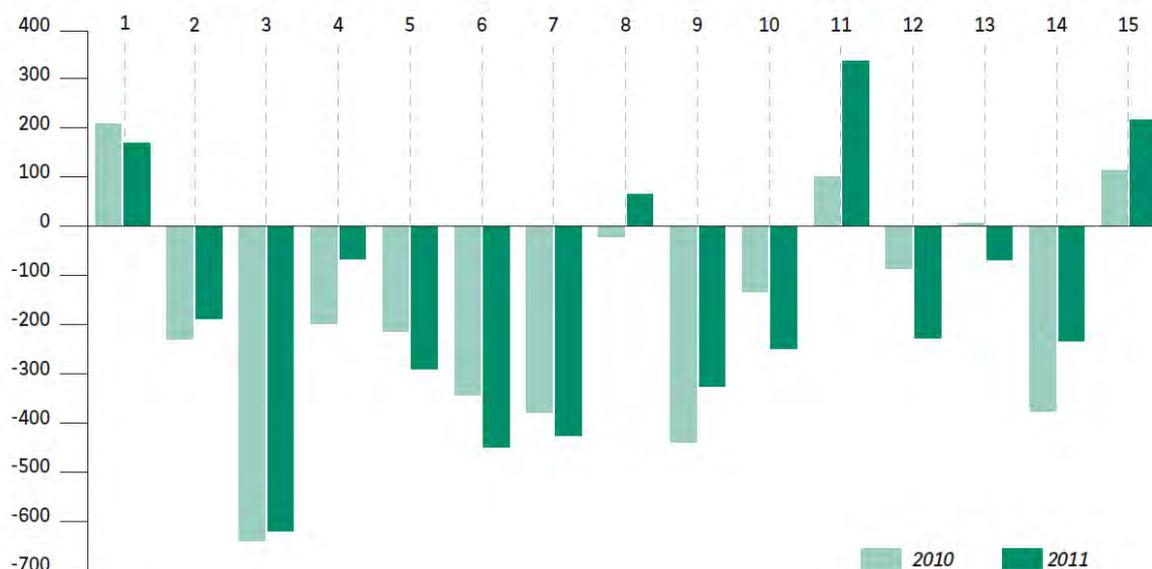
The "Global CMRC" stress scenarios currently comprise a range of fifteen different stress tests.

- scenario 1: sharp increase in inflation expectations, driving rates higher with a steepening of the interest rate curve;
- scenario 2: unexpected rate hike by central banks, driving short-term rates higher with a flattening of the interest rate curve;
- scenario 3: stock market crash, coupled with a flight to quality and central bank intervention, leading to a drop and a steepening of the interest rate curve;
- scenario 4: emerging market crisis driven from Asia;

- scenario 13: collapse of US dollar;
- scenario 14: eruption of flu pandemic leading to a general risk aversion and sharp fall in equity and credit markets;
- scenario 15: mild rally in equity and emerging markets, low realised volatility and drop in implied volatility in all markets.

Risk-IM also produces 'bottom up' stress tests which quantify the risk coming from specific portfolios or concentrations of risk. These 'micro' scenarios can capture more complicated market movements which may not occur in the global level macro scenarios (such as a dislocation of a particular point on an interest rate curve or one market credit sector behaving differently to another whereas both would usually have a strong correlation).

### ► AVERAGE ANNUAL DECREASE IN 2010 AND 2011 REVENUES FROM MARKET ACTIVITIES TRADING PORTFOLIOS AS A RESULT OF EACH OF THE 15 STRESS SCENARIOS (IN MILLIONS OF EUROS)



Results of the micro and macro market risk stress testing scenarios can be used to construct an adverse case for the BNP Paribas trading books.

Source : BNP Paribas 2011 Annual Report, pages 270 and 271.

## Credit risk

## 27. Credit risk by industry

## Note 38 Credit Risk (continued)

## Maximum Exposure to Credit Risk by Industry and Asset Class before Collateral Held or Other Credit Enhancements

The below tables detail the concentration of credit exposure assets by significant geographical locations and counterparty types. Disclosures do not take into account collateral held and other credit enhancements.

	Group									
	At 30 June 2012									
	Sovereign	Agri- culture	Bank & Other Financial	Home Loans	Constr- uction	Personal	Asset Financing	Other Comm & Indust.	Other	Total
	\$M	\$M	\$M	\$M	\$M	\$M	\$M	\$M	\$M	\$M
<b>Australia</b>										
Credit risk exposures relating to on balance sheet assets:										
Cash and liquid assets	-	-	7,519	-	-	-	-	-	-	7,519
Receivables due from other financial institutions	-	-	6,135	-	-	-	-	-	-	6,135
Assets at fair value through Income Statement:										
Trading	5,560	-	975	-	-	-	-	2,416	-	8,951
Insurance <sup>(1)</sup>	929	-	8,476	-	-	-	-	3,413	-	12,818
Other	-	-	6	-	-	-	-	-	-	6
Derivative assets	311	66	29,508	-	31	-	-	4,846	-	34,762
Available-for-sale investments	25,639	-	26,604	-	-	-	-	479	-	52,722
Loans, bills discounted and other receivables <sup>(2)</sup>	1,619	5,250	10,225	320,570	2,796	21,772	8,214	106,679	-	477,125
Bank acceptances	3	2,886	191	-	603	-	-	6,032	-	9,715
Other assets <sup>(3)</sup>	37	61	184	1,165	11	32	17	480	14,023	16,010
<b>Total on balance sheet Australia</b>	<b>34,098</b>	<b>8,263</b>	<b>89,823</b>	<b>321,735</b>	<b>3,441</b>	<b>21,804</b>	<b>8,231</b>	<b>124,345</b>	<b>14,023</b>	<b>625,763</b>
Credit risk exposures relating to off balance sheet assets:										
Guarantees	1,241	34	258	14	903	-	-	2,766	-	5,216
Loan commitments	1,117	814	2,082	57,158	1,903	18,923	-	32,674	-	114,671
Other commitments	96	13	1,770	4	725	-	-	2,042	-	4,650
<b>Total Australia</b>	<b>36,552</b>	<b>9,124</b>	<b>93,933</b>	<b>378,911</b>	<b>6,972</b>	<b>40,727</b>	<b>8,231</b>	<b>161,827</b>	<b>14,023</b>	<b>750,300</b>
<b>Overseas</b>										
Credit risk exposures relating to on balance sheet assets:										
Cash and liquid assets	-	-	12,147	-	-	-	-	-	-	12,147
Receivables due from other financial institutions	-	-	4,751	-	-	-	-	-	-	4,751
Assets at fair value through Income Statement:										
Trading	407	-	859	-	-	-	-	3,599	-	4,865
Insurance <sup>(1)</sup>	-	-	1,707	-	-	-	-	-	-	1,707
Other	967	-	7	-	-	-	-	-	-	974
Derivative assets	225	1	3,157	-	-	-	-	792	-	4,175
Available-for-sale investments	6,948	-	1,156	-	-	-	-	1	-	8,105
Loans, bills discounted and other receivables <sup>(2)</sup>	10,235	5,198	3,156	30,063	345	656	468	5,134	-	55,255
Bank acceptances	-	-	-	-	-	-	-	2	-	2
Other assets <sup>(3)</sup>	19	1	5,378	1	-	-	1	37	1,746	7,183
<b>Total on balance sheet overseas</b>	<b>18,801</b>	<b>5,200</b>	<b>32,318</b>	<b>30,064</b>	<b>345</b>	<b>656</b>	<b>469</b>	<b>9,565</b>	<b>1,746</b>	<b>99,164</b>
Credit risk exposures relating to off balance sheet assets:										
Guarantees	-	1	2	-	12	-	-	127	-	142
Loan commitments	392	375	197	3,849	168	1,172	-	7,009	-	13,162
Other commitments	71	1	-	-	3	-	-	1,032	-	1,107
<b>Total overseas</b>	<b>19,264</b>	<b>5,577</b>	<b>32,517</b>	<b>33,913</b>	<b>528</b>	<b>1,828</b>	<b>469</b>	<b>17,733</b>	<b>1,746</b>	<b>113,575</b>
<b>Total gross credit risk</b>	<b>55,816</b>	<b>14,701</b>	<b>126,450</b>	<b>412,824</b>	<b>7,500</b>	<b>42,555</b>	<b>8,700</b>	<b>179,560</b>	<b>15,769</b>	<b>863,875</b>

(1) In most cases the credit risk of insurance assets is borne by policyholders. However, on certain insurance contracts the Group retains exposure to credit risk.

(2) Loans, bills discounted and other receivables is presented gross of provisions for impairment and unearned income on lease receivables in line with Note 13.

(3) Other assets predominantly comprises assets which do not give rise to credit exposure, including intangible assets, property and plant and equipment, which are shown in "Other" for the purpose of reconciling to the Balance Sheet.

Source: Commonwealth Bank of Australia 2012 Annual Report, page 182.

## 28. Credit exposure by business division

Audited	Credit exposure by business division									
	Wealth Management & Swiss Bank		Wealth Management Americas		Investment Bank		Other <sup>1</sup>		UBS	
CHF million	31.12.11	31.12.10	31.12.11	31.12.10	31.12.11	31.12.10	31.12.11	31.12.10	31.12.11	31.12.10
Balances with central banks	3,370	10,727	2,161		31,743	13,732	1,290		38,565	24,459
Due from banks	4,395	2,678	1,594	2,157	18,182	13,924	655	315	24,826	19,075
Loans	210,375	201,942	27,894	22,472	18,552 <sup>2</sup>	17,679 <sup>2</sup>	155	158	256,977 <sup>2</sup>	242,250 <sup>2</sup>
Guarantees	11,797	10,505	406	370	5,551	4,820	129	123	17,884	15,819
Loan commitments	7,955	7,276	1,076	1,066	46,927	46,216			55,958	54,558
Banking products <sup>3</sup>	237,893	233,128	33,131	26,065	120,955	96,371	2,229	596	394,209	356,161
OTC derivatives	5,709	4,048	74	56	45,759	47,452	330	284	51,871	51,840
Exchange-traded derivatives	984	978	877	1,114	7,938	14,599			9,799	16,691
Securities financing transactions			155	156	20,051	20,279			20,206	20,435
Traded products	6,693	5,026	1,106	1,326	73,748	82,330	330	284	81,877	88,966
<b>Total credit exposure</b>	<b>244,585</b>	<b>238,155</b>	<b>34,238</b>	<b>27,391</b>	<b>194,703</b>	<b>178,701</b>	<b>2,559</b>	<b>880</b>	<b>476,086</b>	<b>445,127</b>
<b>Total credit exposure, net<sup>4</sup></b>	<b>243,476</b>	<b>236,488</b>	<b>34,235</b>	<b>27,389</b>	<b>163,057</b>	<b>143,364</b>	<b>2,559</b>	<b>876</b>	<b>443,328</b>	<b>408,117</b>

<sup>1</sup> Includes Global Asset Management and Corporate Center. <sup>2</sup> Does not include reclassified securities and similar acquired securities. <sup>3</sup> Excludes loans designated at fair value. <sup>4</sup> Net of allowances, provisions, CVA and hedges.

Source: UBS 2011 Annual Report, page 119.

## 29. Risk of credit-related losses

*We may suffer additional credit-related losses in the future if our borrowers are unable to repay their loans as expected or if the measures we take in reaction to, or in anticipation of, our borrowers' deteriorating repayment abilities prove inappropriate or insufficient.*

When we lend money or commit to lend money, we incur credit risk, or the risk of losses if our borrowers do not repay their loans. We may incur significant credit losses or have to provide for a significant amount of additional allowance for credit losses if:

- large borrowers become insolvent or must be restructured;
- domestic or global economic conditions, either generally or in particular industries in which large borrowers operate, deteriorate;
- the value of the collateral we hold, such as real estate or securities, declines; or
- we are adversely affected by corporate credibility issues among our borrowers, to an extent that is worse than anticipated.

As a percentage of total loans, nonaccrual and restructured loans and accruing loans contractually past due 90 days or more ranged from 1.70% to 2.36% as of the five recent fiscal year-ends, reaching its highest level of 2.36% as of March 31, 2011 and 2012. Nonaccrual and restructured loans and accruing loans contractually past due 90 days or more increased to ¥2.2 trillion at March 31, 2012, from ¥2.1 trillion at March 31, 2011, primarily due to an increase in such loans in our domestic loan portfolio. If the recession in Japan worsens again, our problem loans and credit-related expenses may increase. An increase in problem loans and credit-related expenses would adversely affect our results of operations, weaken our financial condition and erode our capital base. For a discussion of our problem loans, see “Item 5.B. Operating and Financial Review and Prospects—Liquidity and Capital Resources—Financial Condition” and “Selected Statistical Data—Loan Portfolio.”

*Source: Mitsubishi UFJ Financial Group 2012 Annual Report, pages 8 and 9.*

### 30. Impairment and cash loss projections

#### Impairment and cash loss projections

*(Unaudited)*

At each reporting date, management undertakes a stress analysis. This exercise comprises a shift of projections of future loss severities, default rates and prepayment rates. The results of the analysis at 30 June 2011 indicated that further impairment charges of US\$900m and expected cash losses of US\$400m could arise over the next two to three years.

This exercise was re-performed at 31 December 2011 and the results remain consistent with the June 2011 guidance.

For the purposes of identifying impairment at the reporting date, the future projected cash flows reflect the effect of loss events that have occurred at or prior to the reporting date. For the purposes of performing stress tests to estimate potential future impairment charges, the projected future cash flows reflect additional assumptions about future loss events after the balance sheet date.

This analysis makes assumptions in respect of the future behaviour of loss severities, default rates and prepayment rates. Movements in the parameters are not independent of each other. For example, increased default rates and increased loss severities, which would imply greater impairments, generally arise under economic conditions that give rise to reduced levels of prepayment, reducing the potential for impairment charges. Conversely, economic conditions which increase the rates of prepayment are generally associated with reduced default rates and decreased loss severities.

At 31 December 2011, the incurred and projected impairment charges, measured in accordance with accounting requirements, significantly exceeded the expected cash losses on the securities. Over the lives of the available-for-sale ABSs the cumulative impairment charges will converge towards the level of cash losses. In respect of the SICs, in particular, the capital notes held by third parties are expected to absorb the cash losses arising in the vehicles.

*Source: HSBC Holdings 2011 Annual Report, page 151.*

### 31. Quantitative information on undrawn amounts

**Table 4.1 Specification of on-balance sheet and off-balance sheet items for the Nordea Group, 31 December 2011**

EURm	Balance sheet (accounting)	Items related to market risk	Repos, derivatives, securities lending	Life insurance operations	Other	Original Exposure	Credit Conversion Factor %	Exposure
<b>On-balance</b>								
<b>On-balance sheet items</b>								
Cash and balances with central banks	3,765			-1		3,764	100%	3,764
Treasury bills, other interest-bearing securities and pledged instruments	100,746	-26,019		-23,419		51,308	100%	51,308
Loans to credit institutions <sup>1</sup>	51,865		-5,513		-563	45,789	100%	45,789
Loans to the public <sup>2</sup>	337,203		-26,784	-878	2,747	312,288	100%	312,049
Derivatives	171,943		-171,929	-14				
Intangible assets	3,321			-335	-2,986			
Other assets and prepaid expenses	47,361	-20,122	-30	-20,073	-443	6,693	100%	6,693
<b>Total</b>	<b>716,204</b>	<b>-46,141</b>	<b>-204,256</b>	<b>-44,720</b>	<b>-1,245</b>	<b>419,842</b>		<b>419,603</b>
<b>Off-balance</b>								
	Off-balance sheet (accounting)	Life insurance operations	Included in derivatives & sec fin	Included in CRD off-balance				
<b>Off-balance sheet items in Annual Report</b>								
Assets pledged as security for own liabilities	146,894	-21,755	-125,139					
Other assets pledged	6,090	0	-6,090					
Contingent liabilities	24,468	-176		24,292				
Commitments	86,970	-201	-996	85,773				
<b>Total</b>	<b>264,422</b>	<b>-22,132</b>	<b>-132,225</b>	<b>110,065</b>				
<b>Off-balance items in CRD</b>								
				Included in CRD off bal (from AR)	Included in CRD (not in AR) <sup>3</sup>	Original Exposure	Credit Conversion Factor %	Exposure
Credit facilities				47,600	5,557	53,157	48%	25,343
Checking accounts				25,038		25,038	23%	5,636
Loan commitments				13,112	1,674	14,786	41%	6,085
Guarantees				23,114	1	23,115	62%	14,315
Other (leasing and documentary credits)				1,201		1,201	28%	340
<b>Total</b>				<b>110,065</b>	<b>7,232</b>	<b>117,297</b>		<b>51,719</b>
<b>Derivatives and Securities Financing</b>								
						Original Exposure	Credit Conversion Factor %	Exposure
Derivatives						42,962	100%	42,959
Securities Financing Transactions & Long Settlement Transactions						2,084	100%	2,084
<b>Total credit risk (CRD definition)</b>						<b>582,185</b>		<b>516,365</b>

1) Corresponding figure before allowances EUR 51,919m

2) Corresponding figure before allowances EUR 339,646m

3) Off-balance exposures included in the CRD but not included in the Annual Report (AR), such as exposures related to undrawn credit facilities which are unconditionally cancellable.

Source: Nordea Group 2011 Pillar 3 Report, page 15.

## 32. Renegotiated loans and forbearance

### Renegotiated loans and forbearance

(Audited)



Current policies and procedures regarding renegotiated loans and forbearance are described in the Appendix to Risk on page 188.

The contractual terms of a loan may be modified for a number of reasons including changing market conditions, customer retention and other factors not related to the current or potential credit deterioration

more stringent impaired loan disclosure convention for portfolios with significant levels of forbearance as described on page 133.

of a customer. When the contractual payment terms of a loan have been modified because we have significant concerns about the borrower's ability to meet contractual payments when due, these loans are classified as 'renegotiated loans'. For the purposes of this disclosure the term 'forbearance' is synonymous with the renegotiation of loans for these purposes.

In the *Annual Report and Accounts 2011*, the Group has separately presented all renegotiated loans by credit quality classification and has adopted a

The following tables show the Group's holdings of renegotiated loans and advances to customers by industry sector, geography and credit quality classification.

### Renegotiated loans and advances to customers

(Audited)

	At 31 December 2011				At 31 December 2010			
	Neither past due nor impaired US\$m	Past due but not impaired US\$m	Impaired US\$m	Total US\$m	Neither past due nor impaired US\$m	Past due but not impaired US\$m	Impaired US\$m	Total US\$m
Retail .....	8,133	4,401	19,125	31,659	7,690	4,339	23,406	35,435
Residential Mortgages.....	5,916	3,560	15,932	25,408	5,244	3,381	18,137	26,762
Other personal .....	2,217	841	3,193	6,251	2,446	958	5,269	8,673
Commercial real estate .....	2,793	9	3,248	6,050	2,877	12	2,401	5,290
Corporate and commercial .....	3,432	461	3,376	7,269	4,125	186	2,501	6,812
Financial .....	249	–	491	740	17	–	565	582
Governments .....	113	2	132	247	51	–	7	58
	<b>14,720</b>	<b>4,873</b>	<b>26,372</b>	<b>45,965</b>	<b>14,760</b>	<b>4,537</b>	<b>28,880</b>	<b>48,177</b>
Total renegotiated loans and advances to customers as a percentage of total gross loans and advances to customers .....				<b>4.8%</b>				5.0%

### Renegotiated loans and advances to customers by geography

(Unaudited)

	2011 US\$m	2010 US\$m
Europe .....	11,464	10,692
Hong Kong .....	447	420
Rest of Asia-Pacific .....	448	679
Middle East and North Africa .....	2,655	1,866
North America .....	28,475	31,990
Latin America .....	2,476	2,530
Total .....	<b>45,965</b>	<b>48,177</b>
Total impairment allowances on renegotiated loans .....	7,670	7,482
Individually assessed .....	2,311	1,657
Collectively assessed .....	5,359	5,825

### 2011 compared with 2010

(Unaudited)

Renegotiated loans totalled US\$46.0bn at 31 December 2011 (2010: US\$48.1bn). The most significant volume of renegotiation activity took place in North America and, at 31 December 2011, amounted to US\$28.5bn or 62% of total renegotiated loans (2010: US\$32.0bn or 66%), substantially all of which were retail loans held by HSBC Finance. Of the total renegotiated loans in North America, US\$17.8bn were presented as impaired at 31 December 2011 (2010: US\$22.0bn), and the ratio of total impairment allowances to impaired loans at 31 December 2011 was 28% (2010: 25%).

Europe was the next largest region for renegotiation activity which, at 31 December 2011, amounted to US\$11.5bn (2010: US\$10.7bn), constituting 25% of total renegotiated loans (2010:

22%). Of the total renegotiated loans in Europe, US\$6.0bn were presented as impaired at 31 December 2011 (2010: US\$4.8bn), and the ratio of total impairment allowances to impaired loans at 31 December 2011 was 30% (2010: 28%). The renegotiated loans in Europe were largely concentrated in the commercial real estate sector 41% (2010: 39%) and the corporate and commercial sector 32% (2010: 31%). The commercial real estate sector, particularly in the UK, faced a weakening in property values and a reduction in institutions funding commercial real estate lending. The commercial real estate mid-market sector continued to experience higher levels of renegotiation activity than is evident with larger corporates, where borrowers are generally better capitalised and have access to wider funding market opportunities. In all cases, in assessing the acceptability of renegotiated loans, we consider the ability to service interest as a

Source: HSBC Holdings 2011 Annual Report, pages 129 and 130.

### 32. Renegotiated loans and forbearance (continued)

minimum and reduce capital repayments as available. Despite Europe, and the UK in particular, holding the single largest retail lending portfolio in the Group, renegotiations of retail loans in this region were limited due to the quality of the residential mortgage book.

Forbearance activity within the Middle East and Latin America (primarily in Mexico and Brazil) was predominately undertaken in the commercial real estate and corporate and commercial sectors. Forbearance activity within Hong Kong and Rest of Asia-Pacific was insignificant.

#### HSBC Finance loan modifications and re-ageing (Unaudited)

HSBC Finance maintains loan modification and re-age ('loan renegotiation') programmes in order to manage customer relationships, improve collection opportunities and, if possible, avoid foreclosure.

Since 2006, HSBC Finance has implemented an extensive loan renegotiation programme, and a significant portion of its loan portfolio has been subject to renegotiation at some stage in the life of the customer relationship as a consequence of the economic conditions in the US and the nature of HSBC Finance's customer base.

From late 2009 and continuing into 2011, the volume of loans that qualify for a new modification has reduced significantly. We expect this to continue to decline as HSBC Finance believes a decreasing percentage of its customers with unmodified loans would benefit from loan modification in a way that would avoid non-payment of future cash flows. In addition, volumes of new loan modifications are expected to decrease due to improvements in economic conditions over the long-term, the cessation of new real estate secured and personal non-credit card receivables originations, the continued run-off of the portfolio and, beginning in the second quarter of 2010, more stringent qualifying payment requirements for loan modifications.

#### Overview by type of loan renegotiation programme in HSBC Finance

- A temporary modification is a change to the contractual terms of a loan that results in the giving up of a right to contractual cash flows over a pre-defined period of time. With a temporary modification the loan is expected to revert back to the original contractual terms including the interest rate charged after the modification period. An example is reduced interest payments.

A substantial number of HSBC Finance modifications involve interest rate reductions. These modifications lower the amount of interest income HSBC Finance is contractually entitled to receive in future periods. Historically, modifications have generally been for a period of six months although extended modification periods are now more common.

Loans that have been temporarily modified within HSBC Finance remain classified as impaired until they have demonstrated a history of payment performance against the original terms for typically 18 months after the modification date.

- A permanent modification is a change to the contractual terms of a loan that results in giving up a right to contractual cash flows over the life of the loan. An example is a permanent reduction in the interest rate charged.

Permanent or very long-term modifications, which are due to an underlying hardship event, remain classified as impaired for their full life.

- The term 're-age' is a renegotiation whereby the contractual delinquency status of a loan is reset to current after demonstrating payment performance. The overdue principal and/or interest is deferred and paid at a later date. Loan re-ages enable customers who have been unable to make a small number of payments to have their loan delinquency status reset to current, thus remediating overdue balances that affect their credit score.

Loans that have been re-aged remain classified as impaired until they have demonstrated a history of payment performance against the original contractual terms for at least 12 months.

A temporary or permanent modification may also lead to a re-ageing of the loan although a loan may be re-aged without any modification to the original terms and conditions of the loan.

#### Qualifying criteria

For an account to qualify for renegotiation it must meet certain criteria. However, HSBC Finance retains the right to decline a renegotiation. The extent to which HSBC Finance renegotiates accounts that are eligible under its existing policies will vary depending upon its view of prevailing economic conditions and other factors which may change from year to year. In addition, exceptions to policies and practices may be made in specific situations in response to legal or regulatory agreements or orders.

Source: HSBC Holdings 2011 Annual Report, page 131.

### 32. Renegotiated loans and forbearance (continued)

Renegotiated real estate secured and personal non-credit card receivables are not eligible for a subsequent renegotiation until 12 or 6 months, respectively, with a maximum of five renegotiation actions within a five-year period. Borrowers must be approved for a modification and generally make two minimum qualifying monthly payments within 60 days to activate a modification.

In certain circumstances where the debt has been restructured in bankruptcy proceedings, fewer or no payments may be required. Accounts whose borrowers are subject to a Chapter 13 plan filed with a bankruptcy court generally may be re-aged upon receipt of one qualifying payment, whereas accounts whose borrowers have filed for Chapter 7 bankruptcy protection may be re-aged upon receipt of a signed reaffirmation agreement. In addition, for some products, accounts may be re-aged without receipt of a payment in certain special circumstances (e.g. in the event of a natural disaster or a hardship programme).

#### Review of loan classification methodology

In the third quarter of 2011, HSBC Finance undertook a review of its loan classification methodology to provide greater differentiation of loans based on their credit risk characteristics. This review was performed partly as a result of updated

US guidance on 'troubled debt restructurings' and because an increasing percentage of the portfolio has been subject to forbearance in recent years, with the closure of the portfolio to new business. The review involved extensive statistical analysis of actual default experience in the portfolio. Amongst other improvements, this review resulted in changes to further differentiate the credit characteristics of forbearance cases, including those which return to performing status following forbearance. The review included consideration of the application of the Group's accounting policy for the recognition of impairment allowances for the CML portfolio, and changes to improve assumptions about default and severity rates for the purposes of measuring impairment allowances. The consequent changes did not result in a material change to impairment allowances recorded by HSBC Finance under IFRSs. However, the Group's revised impaired loan disclosure convention was adopted.

At 31 December 2011, renegotiated real estate secured accounts represented 86% (2010: 85%) of North America's total renegotiated loans, and US\$16bn (2010: US\$18.2bn) of renegotiated real estate secured loans in HSBC Finance were classified as impaired. Further details of HSBC Finance's real estate secured accounts and renegotiation programmes are provided below.

#### Gross loan portfolio of HSBC Finance real estate secured accounts (Unaudited)

	Re-aged <sup>22</sup> US\$m	Modified and re-aged US\$m	Modified US\$m	Total re- negotiated loans US\$m	Total non- renegotiated loans US\$m	Total gross loans US\$m	Total impair- ment allowances US\$m	Impair- ment allowances/ gross loans %
31 December 2011 .....	10,265	12,829	1,494	24,588	19,540	44,128	5,088	12
31 December 2010 .....	10,693	14,053	2,286	27,032	23,902	50,934	4,311	8

For footnote, see page 185.

#### Number of renegotiated real estate secured accounts remaining in HSBC Finance's portfolio (Unaudited)

	Number of renegotiated loans			
	Re-aged (000s)	Modified and re-aged (000s)	Modified (000s)	Total (000s)
31 December 2011 .....	121	112	14	246
31 December 2010 .....	123	115	20	258

During 2011, the aggregate number of renegotiated loans reduced, despite renegotiation activity continuing, due to the run-off of the portfolio. Within the constraints of our Group credit policy, HSBC Finance's policies allow for multiple renegotiations under certain circumstances, and a number of accounts received a second (or further)

renegotiation during the year which did not appear in the statistics presented above. These statistics present a loan as an addition to the volume of renegotiated loans on its first renegotiation only. At 31 December 2011, renegotiated loans were 56% (2010: 53%) of HSBC Finance's real estate secured accounts.

Source: HSBC Holdings 2011 Annual Report, page 132.

### 33. Impairment information

#### Note 6: Loans and Allowance for Credit Losses (continued)

The allowance for credit losses consists of the allowance for loan losses and the allowance for unfunded credit commitments. Changes in the allowance for credit losses were:

(in millions)	Year ended December 31,				
	2011	2010	2009	2008	2007
<b>Balance, beginning of year</b>	\$ 23,463	25,031	21,711	5,518	3,964
Provision for credit losses	7,899	15,753	21,668	15,979	4,939
Interest income on certain impaired loans (1)	(332)	(266)	-	-	-
Loan charge-offs:					
Commercial:					
Commercial and industrial	(1,598)	(2,775)	(3,365)	(1,653)	(629)
Real estate mortgage	(636)	(1,151)	(670)	(29)	(6)
Real estate construction	(351)	(1,189)	(1,063)	(178)	(14)
Lease financing	(38)	(120)	(229)	(65)	(33)
Foreign	(173)	(198)	(237)	(245)	(265)
Total commercial	(2,796)	(5,433)	(5,564)	(2,170)	(947)
Consumer:					
Real estate 1-4 family first mortgage	(3,883)	(4,900)	(3,318)	(540)	(109)
Real estate 1-4 family junior lien mortgage	(3,763)	(4,934)	(4,812)	(2,204)	(648)
Credit card	(1,449)	(2,396)	(2,708)	(1,563)	(832)
Other revolving credit and installment	(1,724)	(2,437)	(3,423)	(2,300)	(1,913)
Total consumer	(10,819)	(14,667)	(14,261)	(6,607)	(3,502)
Total loan charge-offs	(13,615)	(20,100)	(19,825)	(8,777)	(4,449)
Loan recoveries:					
Commercial:					
Commercial and industrial	419	427	254	114	119
Real estate mortgage	143	68	33	5	8
Real estate construction	146	110	16	3	2
Lease financing	24	20	20	13	17
Foreign	45	53	40	49	65
Total commercial	777	678	363	184	211
Consumer:					
Real estate 1-4 family first mortgage	405	522	185	37	22
Real estate 1-4 family junior lien mortgage	218	211	174	89	53
Credit card	251	218	180	147	120
Other revolving credit and installment	665	718	755	481	504
Total consumer	1,539	1,669	1,294	754	699
Total loan recoveries	2,316	2,347	1,657	938	910
Net loan charge-offs (2)	(11,299)	(17,753)	(18,168)	(7,839)	(3,539)
Allowances related to business combinations/other (3)	(63)	698	(180)	8,053	154
<b>Balance, end of year</b>	\$ 19,668	23,463	25,031	21,711	5,518
Components:					
Allowance for loan losses	\$ 19,372	23,022	24,516	21,013	5,307
Allowance for unfunded credit commitments	296	441	515	698	211
Allowance for credit losses (4)	\$ 19,668	23,463	25,031	21,711	5,518
Net loan charge-offs as a percentage of average total loans (2)	1.49 %	2.30	2.21	1.97	1.03
Allowance for loan losses as a percentage of total loans (4)	2.52	3.04	3.13	2.43	1.39
Allowance for credit losses as a percentage of total loans (4)	2.56	3.10	3.20	2.51	1.44

(1) Certain impaired loans with an allowance calculated by discounting expected cash flows using the loan's effective interest rate over the remaining life of the loan recognize reductions in allowance as interest income.

(2) For PCI loans, charge-offs are only recorded to the extent that losses exceed the purchase accounting estimates.

(3) Includes \$693 million for the year ended December 31, 2010, related to the adoption of consolidation accounting guidance on January 1, 2010.

(4) The allowance for credit losses includes \$231 million, \$298 million and \$333 million at December 31, 2011, 2010 and 2009, respectively, related to PCI loans acquired from Wachovia. Loans acquired from Wachovia are included in total loans net of related purchase accounting net write-downs.

Source: Wells Fargo 2011 Annual Report, page 144.

### 34. Quantitative disclosure on derivatives

#### Counterparty risk - collaterals

(€ '000)

COUNTERPARTY RISK - COLLATERALS	EAD AMOUNT AS AT 12.31.2011	EAD AMOUNT AS AT 12.31.2010
<b>Standardized approach</b>		
- derivatives contracts	154,600	105,516
- SFT transactions and long settlement transactions	41,088,017	40,383,622

#### Counterparty risk

(€ '000)

COUNTERPARTY RISK	EAD AMOUNT AS AT 12.31.2011	WEIGHTED AMOUNT AS AT 12.31.2011	EAD AMOUNT AS AT 12.31.2010	WEIGHTED AMOUNT AS AT 12.31.2010
<b>Standardized approach</b>				
- derivatives contracts	10,116,366	2,951,936	7,170,250	3,023,302
- SFT transactions and long settlement transactions	8,335,646	801,009	3,584,579	851,530
- contractual cross product netting	185,152	88,090	149,234	51,676
<b>IRB approaches</b>				
- derivatives contracts	37,471,015	14,741,638	34,600,302	13,191,256
- SFT transactions and long settlement transactions	22,422,073	781,187	17,266,403	561,472
- contractual cross product netting	1,205,953	806,596	1,560,100	865,016

#### Regulatory trading portfolio: end of period notional amounts

(€ '000)

DERIVATIVE INSTRUMENT TYPES/UNDERLYINGS	AMOUNTS AS AT 12.31.2011		AMOUNTS AS AT 12.31.2010	
	OVER THE COUNTER	CLEARING HOUSE	OVER THE COUNTER	CLEARING HOUSE
<b>1. Debt securities and interest rate indexes</b>	<b>2,788,920,415</b>	<b>129,818,988</b>	<b>2,783,798,699</b>	<b>124,183,006</b>
a) Options	485,235,976	59,935,000	460,532,927	127,000
b) Swap	2,130,239,046	162,034	2,101,719,708	-
c) Forward	76,225,278	-	106,230,045	-
d) Futures	34,393	69,721,954	119,665	124,056,006
e) Others	97,185,722	-	115,196,354	-
<b>2. Equity instruments and stock indexes</b>	<b>77,502,727</b>	<b>37,880,312</b>	<b>87,522,480</b>	<b>53,743,814</b>
a) Options	64,749,878	32,188,310	67,574,121	49,068,627
b) Swap	11,931,000	-	19,464,522	-
c) Forward	8,292	-	4,688	-
d) Futures	54,095	5,691,854	30,079	4,675,064
e) Others	759,462	148	449,070	123
<b>3. Gold and currencies</b>	<b>583,716,358</b>	<b>102,702</b>	<b>629,445,644</b>	<b>602,483</b>
a) Options	105,846,192	-	102,931,682	-
b) Swap	222,136,546	-	219,844,708	-
c) Forward	255,733,620	-	306,602,774	-
d) Futures	-	102,702	-	602,483
e) Others	-	-	66,480	-
<b>4. Commodities</b>	<b>3,697,013</b>	<b>1,147,178</b>	<b>3,028,501</b>	<b>1,491,426</b>
<b>5. Other underlyings</b>	<b>2,524,207</b>	<b>-</b>	<b>4,034,675</b>	<b>-</b>
<b>Total</b>	<b>3,456,360,720</b>	<b>168,949,180</b>	<b>3,507,829,999</b>	<b>180,020,729</b>

Source: UniCredit 2011 Pillar 3 Report, page 179.

### 35. Quantitative disclosure on derivatives

#### Update on Key Credit Market Exposures

The following is an update on the development of certain credit positions (including protection purchased from monoline insurers) of certain CB&S businesses on which we have previously provided additional risk disclosures. There have been no significant developments since December 31, 2011, with respect to our commercial paper holdings in Ocala or those mortgage related exposures described in our 2011 Financial Report – Management Report: Operating and Financial Review. Our gross exposure to U.S. subprime and Alt-A RMBS and CDO declined from € 2.4 billion at December 31, 2011 to € 2.3 billion at March 31, 2012. Net of hedges and other protection purchased, we had negative exposures (i.e., we would recognize a gain were all of the gross positions to default) of € 146 million at December 31, 2011 and € 62 million at March 31, 2012.

The following is an update on the development on protection purchased from monoline insurers.

Monoline exposure related to U.S. residential mortgages <sup>1,2</sup>	Mar 31, 2012				Dec 31, 2011			
	Notional amount	Fair value prior to CVA <sup>3</sup>	CVA <sup>3</sup>	Fair value after CVA <sup>3</sup>	Notional amount	Fair value prior to CVA <sup>3</sup>	CVA <sup>3</sup>	Fair value after CVA <sup>3</sup>
in € m.								
AA Monolines: <sup>4</sup>								
Other subprime	118	63	(17)	46	124	65	(20)	45
Alt-A	3,335	1,519	(255)	1,264	3,662	1,608	(353)	1,255
<b>Total AA Monolines</b>	<b>3,453</b>	<b>1,582</b>	<b>(272)</b>	<b>1,310</b>	<b>3,786</b>	<b>1,673</b>	<b>(373)</b>	<b>1,300</b>

Source: Deutsche Bank 31 March 2012 Interim Report, page 20.

## Other risks

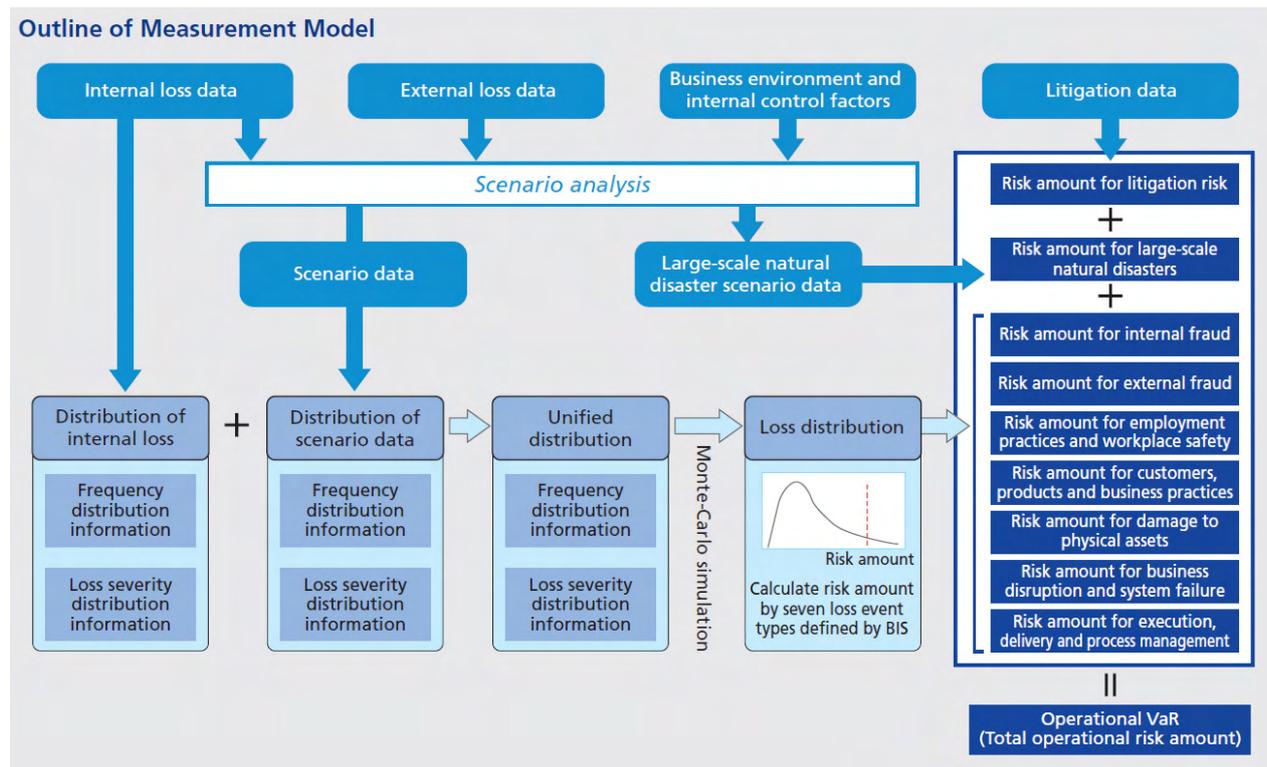
### 36. Definition of operational risks

	Definition	Principal Risk Management Methods
<b>Information Technology Risk</b>	Risk that customers may suffer service disruptions, or that customers or the group may incur losses arising from system defects such as failures, faults, or incompleteness in computer operations, or illegal or unauthorized use of computer systems.	<ul style="list-style-type: none"> <li>Identify and evaluate the risk by setting specific standards that need to be complied with and implementing measures tailored based on evaluation results to reduce the risk.</li> <li>Ensure ongoing project management in systems development and quality control.</li> <li>Strengthen security to prevent information leaks.</li> <li>Improve effectiveness of emergency responses by improving backup systems and holding drills.</li> </ul>
<b>Operations Risk</b>	Risk that customers may suffer service disruptions, as well as the risk that customers or the group may incur losses because senior executives or employees fail to fulfill their tasks properly, cause accidents or otherwise act improperly.	<ul style="list-style-type: none"> <li>Establish clearly defined procedures for handling operations.</li> <li>Periodically check the status of operational processes.</li> <li>Conduct training and development programs by headquarters.</li> <li>Introduce information technology, office automation and centralization for operations.</li> <li>Improve the effectiveness of emergency responses by holding drills.</li> </ul>
<b>Legal Risk</b>	Risk that the group may incur losses due to violation of laws and regulations, breach of contract, entering into improper contracts or other legal factors.	<ul style="list-style-type: none"> <li>Review and confirm legal issues, including the legality of material decisions, agreements and external documents, etc.</li> <li>Collect and distribute legal information and conduct internal training programs.</li> <li>Analyze and manage issues related to lawsuits.</li> </ul>
<b>Human Resources Risk</b>	Risk that the group may incur losses due to drain or loss of personnel, deterioration of morale, inadequate development of human resources, inappropriate working schedule, inappropriate working and safety environment, inequality or inequity in human resource management or discriminatory conduct.	<ul style="list-style-type: none"> <li>Conduct employee satisfaction surveys.</li> <li>Understand the status of vacation days taken by personnel.</li> <li>Understand the status of voluntary resignations.</li> </ul>
<b>Tangible Asset Risk</b>	Risk that the group may incur losses from damage to tangible assets or a decline in the quality of working environment as a result of disasters, criminal actions or defects in asset maintenance.	<ul style="list-style-type: none"> <li>Manage the planning and implementation of construction projects related to the repair and replacement of facilities.</li> <li>Identify and evaluate the status of damage to tangible assets caused by natural disasters, etc., and respond appropriately to such damage.</li> </ul>
<b>Regulatory Change Risk</b>	Risk that the group may incur losses due to changes in various regulations or systems, such as those related to law, taxation and accounting.	<ul style="list-style-type: none"> <li>Understand important changes in regulations or systems that have significant influence on our business operations or financial condition in a timely and accurate manner.</li> <li>Analyze degree of influence of regulatory changes and establish countermeasures.</li> <li>Continuously monitor our regulatory change risk management mentioned above.</li> </ul>
<b>Reputational Risk</b>	Risk that the group may incur losses due to damage to our credibility or the value of the "Mizuho" brand when market participants or others learn about, or the media reports on, various adverse events, including actual materialization of risks or false rumors.	<ul style="list-style-type: none"> <li>Establish framework to identify and manage, on an integrated basis, information that may have a serious impact on group management and respond to such risk in a manner appropriate to its scale and nature.</li> <li>Swiftly identify rumors and devise appropriate responses depending on the urgency and possible impact of the situation to minimize possible losses.</li> </ul>

We also recognize and manage "Information Security Risk" and "Compliance Risk", which constitute a combination of more than one of the above components of operational risk, as operational risk.

Source: Mizuho Financial Group 2011 Annual Report, page 67.

37. Operational risk management model



Source: Mizuho Financial Group 2011 Annual Report, page 68.