

## Basel II Pillar 3 Report 2010

*Passion to Perform*





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## 1. Introduction

Since 2008 Deutsche Bank Group operates under the Basel II capital framework (“Basel II”), the revised international capital adequacy standards as recommended by the Basel Committee on Banking Supervision in 2004. This framework consists of three pillars each of them concentrating on a different aspect of banking regulation.

- Pillar 1 makes recommendations for calculation of minimum capital requirements.
- Pillar 2 discusses the key principles of supervisory review and risk management guidance.
- Pillar 3 complements the first two pillars of Basel II by requiring a range of disclosures on capital and risk assessment processes, aimed at encouraging and reinforcing market discipline.

The European Union enacted the Capital Requirements Directive, which adopted the Basel II capital framework. Germany adopted the Capital Requirements Directive into national law and codified the disclosure requirements related to Pillar 3 in Section 26a of the German Banking Act (“Kreditwesengesetz” or “KWG”) and in Part 5 of the German Regulation on Solvency (“Solvabilitätsverordnung”, “Solvency Regulation” or “SolvV”).

Effective December 3, 2010, Deutsche Bank consolidated Deutsche Postbank Group (“Postbank”). This report therefore provides a comprehensive view on the risk profile of Deutsche Bank Group, after consolidation of Postbank. In particular, the quantitative information generally reflects Deutsche Bank Group including Postbank for the reporting date December 31, 2010, or the respective reporting period from December 3, 2010. In the limited instances where a consolidated view has not been presented, a separate Postbank risk disclosure or applicable qualitative commentary is provided where appropriate.

Postbank currently conducts its own risk management activities under its own statutory responsibilities. Deutsche Bank Group provides advisory services to Postbank with regard to specific risk management areas. It is intended to increase the convergence of risk management principles across Deutsche Bank Group and Postbank over time. This also responds to regulatory requirements that are applicable to Deutsche Bank AG as the parent company of the combined group.

The Deutsche Bank group of institutions (also referred to as “the Group”) has applied the revised capital framework for the majority of its risk exposures on the basis of the Group’s internal models for measuring credit risk, market risk and operational risk, as approved by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, referred to as “BaFin”). This report is the Group’s third Basel II Pillar 3 report. It is published for the financial year ending December 31, 2010.

As it is not required by regulation, this report has not been audited by the Group’s external auditors. However, it also includes information that is contained within the audited consolidated financial statements as reported in the Group’s Financial Report 2010.

The disclosure requirements in relation to remuneration as codified in the Instituts-Vergütungsverordnung (“InstitutsVergV”) are addressed and provided in the Group’s Remuneration Report 2010.

## 2. Scope of Application

Deutsche Bank Aktiengesellschaft (“Deutsche Bank AG”), headquartered in Frankfurt am Main, Germany, is the parent institution of the Deutsche Bank group of institutions (“Group”), which is subject to the supervisory provisions of the KWG and the SolvV. Under the KWG, a regulatory group of institutions consists of a credit institution (also referred to as “bank”) or financial services institution, as the parent company, and all other banks, financial services institutions, investment management companies, financial enterprises, payment institutions and ancillary services enterprises which are subsidiaries in the meaning of Section 1 (7) KWG. Such entities are fully consolidated for the Group’s regulatory reporting. Additionally, the Group can also include certain companies which are not subsidiaries on a pro-rata basis. Insurance companies and companies outside the finance sector are not included.

For financial conglomerates, however, insurance companies are included in an additional capital adequacy (also “solvency margin”) calculation. The Group has been designated by the BaFin as a financial conglomerate in October 2007. The Group’s solvency margin as a financial conglomerate remains dominated by its banking activities.

The regulatory principles of consolidation are not identical to those for the Group’s financial statements, which are prepared in accordance with the International Financial Reporting Standards (“IFRS”). Nonetheless, the majority of subsidiaries according to the Banking Act are also fully consolidated in accordance with IFRS in the Group’s consolidated financial statements and vice versa. For more detailed information about the Group’s accounting policies on consolidation please see Note 01 “Significant Accounting Policies” in the Group’s Financial Report 2010.

The main differences between regulatory and accounting consolidation are:

- Entities which do not form part of the regulatory group of institutions because they do not belong to the banking industry, but which are controlled by the Group according to IFRS, are included in the consolidated financial statements.
- Most of the Group’s Special Purpose Entities (“SPEs”) consolidated under IFRS do not meet the specific consolidation requirements pursuant to Section 10a KWG and are consequently not consolidated within the regulatory Group. However, the risks resulting from the Group’s exposures to such entities are reflected in the Group’s regulatory capital requirements.
- Some entities included in the regulatory scope of application are not consolidated for accounting purposes but are treated differently, in particular using the equity method of accounting. There are two entities within the Group which are jointly controlled by its owners and consolidated on a pro-rata basis. One entity is voluntarily consolidated on a pro-rata basis. All three entities are accounted for under the equity method in the Group’s financial statements.

Section 10 (6) No. 1, 2, 3 and 5 KWG requires the deduction of participating interests in unconsolidated banking, financial and insurance entities from the Group’s own funds when the Group holds more than 10 % of the capital (in case of insurance entities 20 % either of the capital or of voting rights unless included in the solvency margin calculation of the financial conglomerate). Since the Group is classified as a financial conglomerate, material investments in insurance entities amounting to at least 20 % of capital or voting rights are not deducted from the Group’s own funds as they are included in the solvency calculation at financial conglomerate level.

Section 31 (3) KWG allows the exclusion of small entities in the regulatory scope of application from consolidated regulatory reporting if either their total assets are below € 10 million or below 1 % of total assets of the Group. The Group has used this exemption rule for those small entities that comply with this rule and have not been included in the Group's consolidated financial statements in accordance with IFRS.

The Group comprised 1,274 subsidiaries as per year end 2010, of which 3 were consolidated on a pro-rata basis. The Group comprised 188 credit institutions, 108 financial services institutions, 817 financial enterprises, 15 investment management companies and 146 ancillary services enterprises.

93 entities were exempted from regulatory consolidation pursuant to Section 31 (3) KWG. None of these entities was consolidated for accounting purposes. The book values of the Group's participation in their equity were deducted from the Group's regulatory capital. The same treatment was applied to further 306 unconsolidated entities which the Group deducted from its regulatory capital pursuant to Section 10 (6) KWG.

For information on the Group consolidated for accounting purposes please refer to Note 42 "Shareholdings" in the Group's Financial Report for the year 2010.

In the following chapters the quantitative information presented refers to the regulatory Group unless another relevant scope is explicitly stated.

## 3. Capital Adequacy

### 3.1 Regulatory Capital

A bank's total regulatory capital, also referred to as "Own Funds", is divided into three tiers: Tier 1, Tier 2 and Tier 3 capital, and the sum of Tier 1 and Tier 2 capital is also referred to as "Regulatory Banking Capital" or "Modified available capital".

- Tier 1 capital consists primarily of common share capital, additional paid-in capital, retained earnings and certain hybrid capital components such as noncumulative trust preferred securities, also referred to as "Additional Tier 1 capital". Common shares in treasury, goodwill and other intangible assets are deducted from Tier 1. Other regulatory adjustments entail the exclusion of capital from entities outside the group of institutions and the reversal of capital effects under the fair value option on financial liabilities due to own credit risk. Tier 1 capital without hybrid capital components is referred to as Core Tier 1 capital.
- Tier 2 capital consists primarily of cumulative trust preferred securities, certain profit participation rights and long-term subordinated debt, as well as 45 % of unrealized gains on certain listed securities.

Certain items must be deducted from Tier 1 and Tier 2 capital. Primarily these include deductible investments in unconsolidated banking, financial and insurance entities where the Group holds more than 10 % of the capital (in case of insurance entities 20 % either of the capital or of voting rights unless included in the solvency margin calculation of the financial conglomerate), the amount by which the expected loss for exposures to central governments, institutions and corporate and retail exposures as measured under the bank's internal ratings based approach ("IRBA") model exceeds the value adjustments and provisions for such exposures, the expected losses for certain equity exposures, securitization positions not included in the risk-weighted assets and the value of securities delivered to a counterparty plus any replacement cost to the extent the required payment by the counterparty has not been made within five business days after delivery provided the transaction has been allocated to the bank's trading book.

- Tier 3 capital consists mainly of certain short-term subordinated debt.

The amount of subordinated debt that may be included as Tier 2 capital is limited to 50 % of Tier 1 capital. Total Tier 2 capital is limited to 100 % of Tier 1 capital.

The regulatory banking capital and Tier 3 capital (together, "own funds") excluding transitional items pursuant to Section 64h (3) KWG are set forth further below and summarized in the following table.

**Table 1 Regulatory Capital**

in € m.

	Dec 31, 2010	Dec 31, 2009
<b>Tier 1 capital</b>		
<b>Core Tier 1 capital</b>		
Common shares	2,380	1,589
Additional paid-in capital	23,515	14,830
Retained earnings, common shares in treasury, equity classified as obligation to purchase common shares, foreign currency translation, noncontrolling interests	24,797	21,807
Items to be fully deducted from Tier 1 capital pursuant to Section 10 (2a) KWG (inter alia goodwill and intangible assets)	(14,489)	(10,238)
Items to be partly deducted from Tier 1 capital pursuant to Section 10 (6) and (6a) KWG		
Deductible investments in banking, financial and insurance entities	(954)	(2,120)
Securitization positions not included in risk-weighted assets	(4,850)	(1,033)
Excess of expected losses over risk provisions	(427)	(1,045)
Items to be partly deducted from Tier 1 capital pursuant to Section 10 (6) and (6a) KWG	(6,231)	(4,198)
<b>Core Tier 1 capital</b>	<b>29,972</b>	<b>23,790</b>
<b>Additional Tier 1 capital</b>		
Noncumulative trust preferred securities <sup>1</sup>	12,593	10,616
<b>Additional Tier 1 capital</b>	<b>12,593</b>	<b>10,616</b>
<b>Total Tier 1 capital pursuant to Section 10 (2a) KWG</b>	<b>42,565</b>	<b>34,406</b>
<b>Tier 2 capital</b>		
Unrealized gains on listed securities (45 % eligible)	224	331
Profit participation rights	1,151	–
Cumulative preferred securities	299	294
Qualified subordinated liabilities	10,680	7,096
Items to be partly deducted from Tier 2 capital pursuant to Section 10 (6) and (6a) KWG	(6,231)	(4,198)
<b>Total Tier 2 capital pursuant to Section 10 (2b) KWG</b>	<b>6,123</b>	<b>3,523</b>
<b>Total Tier 3 capital pursuant to Section 10 (2c) KWG</b>	<b>–</b>	<b>–</b>
<b>Total regulatory capital</b>	<b>48,688</b>	<b>37,929</b>

<sup>1</sup> Included € 20 million silent participations as of December 31, 2010.

Common shares consist of Deutsche Bank AG's common shares issued in registered form without par value. Under German law, each share represents an equal stake in the subscribed capital. Therefore, each share has a nominal value of € 2.56, derived by dividing the total amount of share capital by the number of shares. As of December 31, 2010, 929,499,640 shares were issued and fully paid, of which the Group held 10,437,280 shares, leaving 919,062,360 shares outstanding. There are no issued ordinary shares that have not been fully paid. Related share premium is included in additional paid-in capital.

In addition, the Group has issued the following hybrid capital instruments which qualify as Tier 1 capital:

**Table 2 Terms and Conditions of the outstanding hybrid Tier 1 Capital Instruments**

Issuer	Amount in m.	Currency	Interest payment obligations	Termination right of Issuer	Step-up clauses or other early redemption- incentives
DB Capital Trust I	318	USD	<ul style="list-style-type: none"> <li>Until March 30, 2009: 3-Month LIBOR plus 1.7% p.a.</li> <li>From March 30, 2009: 5-Year U.S. Dollar Swap Rate plus 2.7%</li> </ul>	Since March 30, 2009 and on March 30 of each fifth year thereafter with period of 30 days.	yes, see interest payment obligations
DB Capital Trust II	20,000	JPY	<ul style="list-style-type: none"> <li>Until April 27, 2029: 5.2% p.a.</li> <li>From April 27, 2029: 5-Year Japanese Yen Swap Rate plus 1.62% p.a.</li> </ul>	At the earliest April 27, 2029 with period of 30 days.	yes, see interest payment obligations
DB Capital Trust III	118	USD	<ul style="list-style-type: none"> <li>Until June 30, 2014: 3-Month LIBOR plus 1.9% p.a.</li> <li>From June 30, 2014: 5-Year U.S. Dollar Swap Rate plus 2.9%</li> </ul>	At the earliest June 30, 2028 with period of 30 days.	yes, see interest payment obligations
DB Capital Trust IV	162	USD	<ul style="list-style-type: none"> <li>Until June 30, 2011: 3-Month LIBOR plus 1.8%.</li> <li>From June 30, 2011: 5-Year U.S. Dollar Swap Rate plus 2.8%</li> </ul>	At the earliest June 30, 2026 with period of 30 days.	yes, see interest payment obligations
DB Capital Trust V	225	USD	<ul style="list-style-type: none"> <li>Until June 30, 2010: 3-Month LIBOR plus 1.8%.</li> <li>From June 30, 2010: 5-Year U.S. Dollar Swap Rate plus 2.8% for correspondent period.</li> </ul>	At the earliest June 30, 2025 with period of 30 days.	yes, see interest payment obligations
DB Capital Funding Trust I	650	USD	<ul style="list-style-type: none"> <li>Until June 30, 2009: 7.872% p.a.</li> <li>From June 30, 2009: 3-Month LIBOR p.a. plus 2.97%.</li> </ul>	Since June 30, 2009 with period of 30 days.	yes, see interest payment obligations
DB Capital Funding Trust IV	1,000	EUR	<ul style="list-style-type: none"> <li>Until September 19, 2013: 5.33% p.a.</li> <li>From September 19, 2010: 3-Month EURIBOR p.a. plus 1.99%.</li> </ul>	At the earliest September 19, 2013 with period of 30 days.	yes, see interest payment obligations
DB Capital Funding Trust V	300	EUR	<ul style="list-style-type: none"> <li>6.15% p.a.</li> </ul>	Since December 2, 2009 with period of 30 days.	none
DB Capital Funding Trust VI	900	EUR	<ul style="list-style-type: none"> <li>Fixed interest rate during first five periods of interest payments at 6% p.a.</li> <li>Thereafter four times the difference between 10-Year and 2-Year-CMS-Rate, capped at 10% and floored at 3.5%</li> </ul>	Since January 28, 2010 with period of 30 days.	none
DB Capital Funding Trust VII	800	USD	<ul style="list-style-type: none"> <li>Until January 19, 2016: 5.628% p.a.</li> <li>From January 19, 2016: 5.628% plus 100 bps</li> </ul>	At the earliest January 19, 2016 with period of 30 days.	yes, see interest payment obligations
DB Capital Funding Trust VIII	600	USD	<ul style="list-style-type: none"> <li>6.375% p.a.</li> </ul>	At the earliest October 18, 2011 with period of 30 days.	none
DB Capital Funding Trust IX	1,150	USD	<ul style="list-style-type: none"> <li>6.625% p.a.</li> </ul>	At the earliest August 20, 2012 with period of 30 days.	none
DB Capital Funding Trust X	805	USD	<ul style="list-style-type: none"> <li>7.350% p.a.</li> </ul>	At the earliest December 15, 2012 with period of 30 days.	none
DB Capital Funding Trust XI	1,300	EUR	<ul style="list-style-type: none"> <li>9.5% p.a.</li> </ul>	At the earliest March 31, 2015 with period of 30 days.	none
DB Contingent Capital Trust II	800	USD	<ul style="list-style-type: none"> <li>6.55% p.a.</li> </ul>	At the earliest May 23, 2017 with period of 30 days.	none
DB Contingent Capital Trust III	1,975	USD	<ul style="list-style-type: none"> <li>7.6% p.a.</li> </ul>	At the earliest February 20, 2018 with period of 30 days.	none
DB Contingent Capital Trust IV	1,000	EUR	<ul style="list-style-type: none"> <li>8.0% p.a.</li> </ul>	At the earliest May 15, 2018 with period of 30 days.	none
DB Contingent Capital Trust V	1,265	EUR	<ul style="list-style-type: none"> <li>8.05% p.a.</li> </ul>	At the earliest June 30, 2018 with period of 30 days.	none
Deutsche Postbank Funding Trust I	300	EUR	<ul style="list-style-type: none"> <li>Until December 2, 2005: 6% p.a.</li> <li>From December 2, 2005: 10-Year EUR Swap Rate plus 0.025%, max. 8%</li> </ul>	Since December 2, 2010 at each subsequent coupon date.	yes, see interest payment obligations
Deutsche Postbank Funding Trust II	500	EUR	<ul style="list-style-type: none"> <li>Until December 23, 2009: 6% p.a.</li> <li>From December 23, 2009: Four times difference between 10-Year and 2-Year-CMS-Rate, with min. CMS-Rate 3.75% and max. CMS-Rate 10%</li> </ul>	Since December 23, 2009 at each subsequent coupon date.	yes, see interest payment obligations
Deutsche Postbank Funding Trust III	300	EUR	<ul style="list-style-type: none"> <li>Until June 7, 2008: 7% p.a.</li> <li>From June 7, 2008: 10-Year EUR Swap Rate plus 0.125%, max. 8%</li> </ul>	At the earliest June 7, 2011 at each subsequent coupon date.	yes, see interest payment obligations
Deutsche Postbank Funding Trust IV	500	EUR	<ul style="list-style-type: none"> <li>Until June 29, 2017: 5.983% p.a.</li> <li>From June 29, 2017: 3-Month EURIBOR plus 2.07%</li> </ul>	At the earliest June 29, 2017 at each subsequent coupon date.	yes, see interest payment obligations
Deutsche Postbank AG – silent participation	10	EUR	<ul style="list-style-type: none"> <li>8.15% p.a.</li> </ul>	Fixed maturity December 31, 2018	none
Deutsche Postbank AG – silent participation	10	EUR	<ul style="list-style-type: none"> <li>8.15% p.a.</li> </ul>	Fixed maturity December 31, 2018	none

Of the € 12,593 million additional Tier 1 capital € 9,631 million have no step-up clauses or other early redemption-incentives. No instrument has the option to be converted into ordinary shares. All additional Tier 1 capital instruments qualify as Tier 1 capital according to Section 64m (1) KWG. In the event of the initiation of insolvency proceedings or of liquidation, they will not be repaid until all creditors have been satisfied.

The Group's Tier 2 capital instruments qualify as regulatory capital according to Section 10 (5) and (5a) KWG, except for € 500 million profit participation rights issued by Deutsche Postbank AG which qualify as Tier 2 capital according to Section 64m (1) KWG. Accordingly, all Tier 2 capital instruments have a minimum original maturity of 5 years. The majority of the volume of the Group's Tier 2 instruments, however, has an original maturity of 10 years or more and call rights for the issuer after 5 years or more. In the last two years before the maturity of an instrument only 40 % of the paid-in capital qualifies as regulatory capital.

The several hundred individual Tier 2 capital instruments can be clustered as follows:

**Table 3 Terms and Conditions of the outstanding Tier 2 Capital Instruments**

Issuer	Maturity (year)	Amount in m.	Currency	Type of Tier 2 capital instrument	Early redemption-option	Interest payment obligations
DB Capital Finance Trust I	perpetual	300	EUR	Cumulative trust preferred securities	At the earliest on June 27, 2015 and thereafter on each yearly coupon date (June 27) with period of 30 days.	Fixed interest rate during first five periods of interest payments at 7 % p.a., thereafter ten times the difference between 10-Year- and 2-Year-CMS-Rate, capped at 10-Year-CMS and floored at 1,75 %
Deutsche Postbank AG	2014	100	EUR	Profit participation rights	none	6.0 % – 6.26 %
Deutsche Postbank AG	2015	197	EUR	Profit participation rights	none	5.125 % – 5.65 %
Deutsche Postbank AG	2016	676	EUR	Profit participation rights	none	4.4 % – 4.723 %
Deutsche Postbank AG	2017	21	EUR	Profit participation rights	none	5.12 %
Deutsche Postbank AG	2018	91	EUR	Profit participation rights	none	5.135 % – 5.535 %
Deutsche Postbank AG	2020	14	EUR	Profit participation rights	none	5.10 %
Deutsche Postbank AG	2021	24	EUR	Profit participation rights	none	4.53 % – 4.725 %
Deutsche Postbank AG	2023	10	EUR	Profit participation rights	none	5.50 %
Deutsche Postbank AG	2027	20	EUR	Profit participation rights	none	5.25 %
Bankers Trust Corporation – New York	2011	150	USD	Subordinated liability	none	7.25 %
Bankers Trust Corporation – New York	2015	141	USD	Subordinated liability	none	7.50 %
BHF-BANK AG	2015	77	EUR	Subordinated liability	none	4.46 %
BHF-BANK AG	2019	12	EUR	Subordinated liability	none	4.80 %
BHF-BANK AG	2020	86	EUR	Subordinated liability	none	4.59 % – 4.63 %
BHF-BANK AG	2025	29	EUR	Subordinated liability	none	4.75 %
Deutsche Bank AG	2012	8,000	JPY	Subordinated liability	none	1.72 %
Deutsche Bank AG	2012	105	EUR	Subordinated liability	none	5.50 %
Deutsche Bank AG	2013	1,165	EUR	Subordinated liability	none	5.125 % – 5.35 %
Deutsche Bank AG	2013	6,000	JPY	Subordinated liability	none	1.08 %
Deutsche Bank AG	2014	287	AUD	Subordinated liability	Early redemption at the issuer's option since 2009 at each coupon date	5.513 % – 6.5 %
Deutsche Bank AG	2014	1,176	EUR	Subordinated liability	1,156 m.: Early redemption at the issuer's option since 2009 at each coupon-date	1.76 % (var.) – 6.0 %

Issuer	Maturity (year)	Amount in m.	Currency	Type of Tier 2 capital instrument	Early redemption-option	Interest payment obligations
Deutsche Bank AG	2014	3,000	JPY	Subordinated liability	Early redemption at the issuer's option since 2009 at each coupon date	0.97 %
Deutsche Bank AG	2014	218	NZD	Subordinated liability	Early redemption at the issuer's option since 2009 at each coupon date	4.08 %
Deutsche Bank AG	2015	335	USD	Subordinated liability	Early redemption at the issuer's option since 2010 at each coupon date	1.084 % (var.)
Deutsche Bank AG	2015	765	EUR	Subordinated liability	Early redemption at the issuer's option since 2010 at each coupon date	1.72 – 1.86 % (var.)
Deutsche Bank AG	2015	225	GBP	Subordinated liability	Early redemption at the issuer's option since 2010 at each coupon date	1.64 % (var.)
Deutsche Bank AG	2016	300	CAD	Subordinated liability	Early redemption at the issuer's option in 2011	4.90 %
Deutsche Bank AG	2016	468	EUR	Subordinated liability	Early redemption at the issuer's option in 2011	1.324 % (var.)
Deutsche Bank AG	2017	529	EUR	Subordinated liability	489 m.: Early redemption at the issuer's option in 2012	3.625 % (var.) – 5.815 %
Deutsche Bank AG	2018	110	EUR	Subordinated liability	10 m.: Early redemption at the issuer's option in 2013	5.1 % – 6.5 %
Deutsche Bank AG	2019	249	EUR	Subordinated liability	238 m.: Early redemption at the issuer's option in 2014	5.0 % – 6.0 %
Deutsche Bank AG	2020	1,235	EUR	Subordinated liability	85 m.: Early redemption at the issuer's option in 2015	4.0 % – 5.0 %
Deutsche Bank AG	2024	20	EUR	Subordinated liability	none	5.10 %
Deutsche Bank AG	2027	15,000	JPY	Subordinated liability	none	5.35 %
Deutsche Bank AG	2033	15	EUR	Subordinated liability	Early redemption at the issuer's option in 2013	6.30 %
Deutsche Bank AG	2035	50	EUR	Subordinated liability	Early redemption at the issuer's option since 2010 at each coupon date	6.00 %
Deutsche Bank Financial Inc.	2015	778	USD	Subordinated liability	none	5.38 %
Deutsche Bank S.A.E.	2013	41	EUR	Subordinated liability	none	3.72 %
Deutsche Bank S.A.E.	2014	40	EUR	Subordinated liability	none	5.72 %
Deutsche Bank S.p.A.	2018	500	EUR	Subordinated liability	Early redemption at the issuer's option in 2013	0.892 % (var.)
Deutsche Morgan Grenfell Group PLC	perpetual	6	USD	Subordinated liability	Early redemption at the issuer's option since 1991 at each coupon date with minimum period of 30 days	0.736 % (var.)
BHW Bausparkasse AG	2011	57	EUR	Subordinated liability	none	2.23 % (var.); 5.15 % – 5.99 %
BHW Bausparkasse AG	2012	1	EUR	Subordinated liability	none	5.22 %
BHW Bausparkasse AG	2013	91	EUR	Subordinated liability	none	4.9 % – 5.8 %
BHW Bausparkasse AG	2014	55	EUR	Subordinated liability	none	2.66 % (var.); 5.47 % – 5.6 %
BHW Bausparkasse AG	2017	5	EUR	Subordinated liability	none	5.69 %
BHW Bausparkasse AG	2018	6	EUR	Subordinated liability	none	6.08 %

Issuer	Maturity (year)	Amount in m.	Currency	Type of Tier 2 capital instrument	Early redemption-option	Interest payment obligations
BHW Bausparkasse AG	2019	48	EUR	Subordinated liability	none	2.43 % (var.); 5.83 %
BHW Bausparkasse AG	2023	40	EUR	Subordinated liability	none	5.45 % – 6.13 %
BHW Bausparkasse AG	2024	10	EUR	Subordinated liability	none	5.64 %
Deutsche Postbank AG	2011	175	EUR	Subordinated liability	none	5.5 % – 5.95 %
Deutsche Postbank AG	2012	250	EUR	Subordinated liability	none	2.86 % (var.); 5.4 % – 6.28 %
Deutsche Postbank AG	2013	227	EUR	Subordinated liability	none	4.92 % – 6.0 %
Deutsche Postbank AG	2014	83	EUR	Subordinated liability	none	4.5 % – 6.0 %
Deutsche Postbank AG	2015	508	EUR	Subordinated liability	500 m.: Early redemption at the issuer's option in 2011	1.31 % (var.); 5.39 % – 5.5 %
Deutsche Postbank AG	2016	30	EUR	Subordinated liability	none	4.92 % – 5.01 %
Deutsche Postbank AG	2017	60	EUR	Subordinated liability	none	5.21 % – 5.83 %
Deutsche Postbank AG	2018	313	EUR	Subordinated liability	none	5.19 % – 6.63 %
Deutsche Postbank AG	2019	65	EUR	Subordinated liability	none	5.14 % – 5.46 %
Deutsche Postbank AG	2022	15	EUR	Subordinated liability	none	4.63 %
Deutsche Postbank AG	2023	98	EUR	Subordinated liability	none	5.6 % – 6.01 %
Deutsche Postbank AG	2024	43	EUR	Subordinated liability	none	5.15 % – 5.45 %
Deutsche Postbank AG	2027	13	EUR	Subordinated liability	none	6.50 %
Deutsche Postbank AG	2036	24,000	JPY	Subordinated liability	none	2.76 % – 2.84 %
Deutsche Postbank Home Finance Ltd.	2012	160	INR	Subordinated liability	none	6.34 % (var.) – 6.81 % (var.)
Deutsche Postbank Home Finance Ltd.	2013	160	INR	Subordinated liability	none	5.76 % (var.)
Deutsche Postbank Home Finance Ltd.	2014	160	INR	Subordinated liability	none	5.68 % (var.)
Deutsche Postbank Home Finance Ltd.	2016	847	INR	Subordinated liability	none	9.97 % – 10.1 %
Deutsche Postbank Home Finance Ltd.	2020	710	INR	Subordinated liability	none	9.8 % – 9.97 %
Deutsche Postbank Home Finance Ltd.	2023	153	INR	Subordinated liability	Early redemption at the issuer's option in 2018	11.35 %

The following table reconciles shareholders' equity according to IFRS to Tier 1 capital pursuant to Section 10a KWG excluding transitional items pursuant to Section 64h (3) KWG.

**Table 4 Reconciliation of IFRS Shareholders' Equity to Tier 1 Capital**

in € m.

	Dec 31, 2010	Dec 31, 2009
<b>Total shareholders' equity</b>	<b>48,843</b>	<b>36,647</b>
Total net gains (losses) not recognized in the income statement excluding foreign currency translation	298	257
Accrued future dividend	(697)	(466)
<b>Active book equity</b>	<b>48,444</b>	<b>36,438</b>
Goodwill and intangible assets	(15,594)	(10,169)
Noncontrolling interest	1,549	1,322
Other (consolidation and regulatory adjustments)	1,804	397
Noncumulative trust preferred securities <sup>1</sup>	12,593	10,616
Items to be partly deducted from Tier 1 capital	(6,231)	(4,198)
<b>Tier 1 capital</b>	<b>42,565</b>	<b>34,406</b>

<sup>1</sup> Included € 20 million silent participations as of December 31, 2010.

## 3.2 Regulatory Capital Requirements

Under the Basel II framework, overall capital requirements have to be calculated and compared with the regulatory capital described above. The overall capital requirements are frequently expressed in risk-weighted asset terms whereby capital requirements are 8 % of risk-weighted assets ("RWA").

In December 2007 the BaFin approved the use of the advanced IRBA for the majority of the Group's counterparty credit risk positions which excludes the exposures consolidated from Postbank. Additional advanced IRBA-related BaFin approvals have been obtained in the course of 2008 till 2010. The advanced IRBA constitutes the most sophisticated approach available under the Basel II regime. Postbank has BaFin approval for the IRBA to be applied to the retail business, which is assigned to the advanced IRBA for consolidation on Group level, and the foundation IRBA for most of the other counterparty credit risk exposures.

The remaining IRBA eligible exposures are covered within the standardized approach either temporarily (where the Group seeks regulatory approval over time) or permanently (where exposures are treated under the standardized approach in accordance with Section 70 SolvV). More details on this topic are provided in Chapter 6 "Counterparty Credit Risk: Regulatory Assessment".

The table below shows a breakdown of the total capital requirements and RWA by risk type. The counterparty credit risk within the advanced IRBA, the foundation IRBA and the standardized approach is broken down into different regulatory exposure classes. The capital requirement for securitization positions is separately displayed and is calculated substantially using the IRBA approach; only minor exposures within the Group are captured under the standardized approach. More details on the treatment of securitization positions can be found in Chapter 7 "Securitization".

For equity investments entered into before January 1, 2008, the Group uses the transitional arrangement to exempt these positions from an IRBA treatment and applies the grandfathering rule, using a 100 % risk weighting. For more recent investments in equity positions entered into since January 1, 2008, the Group applies various approaches. For the Group's exposures excluding Postbank the simple risk weight approach within the IRBA is used. Equity investments consolidated from Postbank are also mainly covered with the simple risk weight approach. The remainder of these investments is calculated following a probability of default approach. For more details regarding equity investments please refer to Chapter 9.1 "Equity Investments in the Banking Book".

The calculation of regulatory market risk capital requirements (for general and specific market risk) is generally based on an internal value-at-risk model, which was approved by the BaFin in October 1998 for the Group's market risk exposures excluding Postbank. Market risk positions covered under the standardized approach are primarily relating to Postbank. More details on the internal value-at-risk model are provided in Chapter 8 "Trading Market Risk".

In December 2007, the Group excluding Postbank obtained approval to apply the advanced measurement approach ("AMA") to determine its regulatory operational risk capital requirements. Details on this respective Group's AMA model are given in Chapter 10 "Operational Risk". On December 31, 2010, Postbank obtained also the approval to apply the advanced measurement approach. The table below shows the capital requirement for operational risk for the Group excluding Postbank, and separately for Postbank.

Table 5 Regulatory Capital Requirements and RWA

	Capital requirements	Dec 31, 2010	Capital requirements	Dec 31, 2009
		RWA		RWA
in € m.				
<b>Counterparty credit risk</b>				
Advanced IRBA				
Central governments	235	2,939	139	1,739
Institutions	1,857	23,211	1,319	16,485
Corporates	7,978	99,728	8,688	108,598
Retail (excluding Postbank)	1,538	19,230	1,754	21,930
Retail (Postbank)	1,017	12,718	—	—
Other non-credit obligation assets	1,035	12,931	266	3,324
<b>Total advanced IRBA</b>	<b>13,661</b>	<b>170,757</b>	<b>12,166</b>	<b>152,076</b>
Foundation approach				
Central governments	3	43	—	—
Institutions	568	7,097	—	—
Corporates	1,528	19,100	—	—
Other non-credit obligation assets	216	2,694	—	—
<b>Total foundation approach</b>	<b>2,315</b>	<b>28,933</b>	<b>—</b>	<b>—</b>
Standardized approach				
Central governments	1	14	4	45
Regional governments and local authorities	9	116	6	72
Other public sector entities	47	589	4	48
Multilateral development banks	—	—	—	—
International organizations	—	—	—	—
Institutions	69	857	37	465
Covered bonds issued by credit institutions	9	114	14	174
Corporates	1,997	24,966	1,614	20,179
Retail	936	11,699	664	8,295
Claims secured by real estate property	246	3,076	79	987
Collective investment undertakings	212	2,655	—	—
Other items	14	171	15	193
Past due items	240	2,996	96	1,206
<b>Total standardized approach</b>	<b>3,780</b>	<b>47,252</b>	<b>2,533</b>	<b>31,664</b>
Risk from securitization positions				
Securitizations (IRBA)	1,359	16,990	1,451	18,135
Securitizations (standardized approach)	234	2,920	102	1,271
<b>Total risk from securitization positions</b>	<b>1,593</b>	<b>19,910</b>	<b>1,553</b>	<b>19,406</b>
Risk from equity positions				
Equity positions (grandfathered)	354	4,420	361	4,508
Equity positions (IRBA simple risk-weight approach)	1,098	13,725	735	9,192
Exchange-traded	78	970	148	1,852
Non-exchange-traded	967	12,082	587	7,340
Non-exchange-traded but sufficiently diversified	54	674	—	—
Equity positions (Probability of default approach)	15	181	—	—
<b>Total risk from equity positions</b>	<b>1,466</b>	<b>18,326</b>	<b>1,096</b>	<b>13,700</b>
Settlement risk	34	429	13	157
<b>Total counterparty credit risk</b>	<b>22,849</b>	<b>285,607</b>	<b>17,361</b>	<b>217,003</b>
Market risk in the trading book				
Internal model approach	1,537	19,211	1,990	24,880
Standardized approach	356	4,450	—	—
Interest Rate Risk	268	3,350	—	—
Equity price risk	—	—	—	—
Foreign exchange risk	41	513	—	—
Commodity price risk	—	—	—	—
Other market risk	47	587	—	—
<b>Total market risk in the trading book</b>	<b>1,893</b>	<b>23,660</b>	<b>1,990</b>	<b>24,880</b>
Operational risk				
Advanced measurement approach (excluding Postbank)	2,634	32,922	2,527	31,593
Advanced measurement approach (Postbank)	352	4,405	—	—
<b>Total operational risk</b>	<b>2,986</b>	<b>37,327</b>	<b>2,527</b>	<b>31,593</b>
<b>Total regulatory capital requirements and RWA</b>	<b>27,728</b>	<b>346,594</b>	<b>21,878</b>	<b>273,476</b>

Total regulatory capital requirements and RWA increased between December 31, 2010, and December 31, 2009, by € 5.9 billion and € 73.1 billion respectively. The RWA increase is materially from counterparty credit risk positions following the consolidation of Postbank and to a lesser extend to the consolidation of Sal. Oppenheim/ BHF-BANK and parts of the commercial banking activities in the Netherlands acquired from ABN AMRO.

### 3.3 Regulatory Capital Ratios

The KWG and the SolvV reflect the capital adequacy rules of Basel II and require German banks to maintain an adequate level of capital in relation to their regulatory capital requirements comprising counterparty credit risk, operational risk and market risk. Counterparty credit risk and operational risk must be covered with Tier 1 capital and Tier 2 capital (together “regulatory banking capital”). Market risk must be covered with regulatory banking capital (to the extent not required to cover counterparty credit and operational risk) or Tier 3 capital (together with regulatory banking capital, “own funds”).

The following table shows the Group’s eligible regulatory capital available to cover the minimum capital requirements by risk type.

**Table 6 Coverage of Minimum Capital Requirements**

in € m.	Regulatory capital requirements	Dec 31, 2010	Regulatory capital requirements	Dec 31, 2009
	Available regulatory capital		Available regulatory capital	
Counterparty credit risk and operational risk	25,803	48,688	19,887	37,929
Market risk	1,893	22,885	1,991	18,041

As of December 31, 2010, and as of December 31, 2009, the Group held regulatory capital well above the required minimum standards. The regulatory capital increase of € 10.8 billion was driven by the capital increase from authorized capital against cash contributions as well as retained earnings.

Other principal measures to assess the capital adequacy of a credit institution from a regulatory perspective are regulatory capital ratios, defined as regulatory capital divided by risk-weighted assets. As of December 31, 2010, the Core Tier 1 capital ratio, the Tier 1 capital ratio and the total capital ratio for the Group amounted to 8.7%, 12.3% and 14.1%, respectively. As of December 31, 2009, the three ratios amounted to 8.7%, 12.6% and 13.9%, respectively.

Basel II requires the deduction of goodwill from Tier 1 capital. However, for a transitional period the partial inclusion of certain goodwill components in Tier 1 capital is allowed pursuant to Section 64h (3) KWG. While such goodwill components are not included in the regulatory capital and capital adequacy ratios shown above, the Group makes use of this transition rule in its capital adequacy reporting to the German regulatory authorities.

As of December 31, 2010, the transitional item amounted to € 390 million compared to € 462 million as of December 31, 2009. In the Group's reporting to the German regulatory authorities, the Tier 1 capital, total regulatory capital and the total risk-weighted assets shown above were increased by this amount. Correspondingly, the Group's Tier 1 and total capital ratios reported to the German regulatory authorities including this item were 12.4 % and 14.2 %, respectively, on December 31, 2010, compared to 12.7 % and 14.0 %, respectively, on December 31, 2009.

As of December 31, 2010, regulatory capital ratios for Deutsche Bank AG on a standalone basis and for its subsidiaries Deutsche Bank Privat- und Geschäftskunden AG, norisbank GmbH, DWS Finanz-Service GmbH, Deutsche Bank Europe GmbH and Sal.Oppenheim jr. & Cie. AG & Co.KGaA are not disclosed as they have applied the exemptions codified in Section 2a KWG. As a result, these companies are exempted from the obligation to comply with certain regulatory requirements of the Banking Act on a standalone basis, including solvency calculations and reporting of regulatory capital ratios and hence do not calculate and report capital ratios due to the application of this exemption. These exemptions can only be applied if, among other things, there is no material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from Deutsche Bank AG to the respective subsidiaries or from all subsidiaries in the Group to Deutsche Bank AG.

Deutsche Postbank AG, consolidated since December 3, 2010, is considered a significant subsidiary of the Group. Here, "significant" is defined as an entity whose relative individual contribution to the Group's risk-weighted assets exceeds 5 % of the Group's overall RWA and for which the exemptions codified in Section 2a KWG are not applied. As of December 31, 2010, the exemptions codified in Section 2a KWG were not yet met with respect to Deutsche Postbank AG. The Tier 1 capital ratio as of December 31, 2010 and the total capital ratio for the Deutsche Postbank Group including Deutsche Postbank AG with goodwill components allowed pursuant to Section 64h (3) KWG amounted to 8.1 % and 11.3 %, respectively.

Failure to meet minimum capital requirements can result in orders to suspend or reduce dividend payments or other profit distributions on regulatory capital and discretionary actions by the BaFin that, if undertaken, could have a direct material effect on the Group's businesses. The Group complied with the regulatory capital adequacy requirements in 2010. The Group's subsidiaries which are not included in the regulatory consolidation did not report any capital deficiencies in 2010.

The financial crisis resulted in tighter regulatory requirements for capital, leverage and liquidity. As to capital requirements, the Basel Committee of Banking Supervision provided further guidance in the course of 2010. The Group simulated the impact of the Basel 2.5 and Basel III rules on the Group's capital and risk weighted assets. For further information please refer to the presentation "3Q2010 results" of October 27, 2010, pages 28 and 29, available on the Group's investor relations website.

### 3.4 Internal Capital Adequacy Assessment

As an element of its Internal Capital Adequacy Assessment Process (ICAAP) the Group not only reviews its regulatory capital ratios in line with the set targets, but it also assesses and continuously monitors its risk bearing capacity. The Group's primary internal measure to assess the impact of very severe unexpected losses across the different risk types is economic capital, which is also planned as part of the risk and capital strategy as described further below. Economic capital is also a key component to allocate the Group's book equity to the business divisions. For further details on the Group's economic capital please refer to Chapter 4.5 "Economic Capital Requirements".

A primary measure the Group uses to assess its risk bearing capacity is a ratio of its active book equity divided by the economic capital usage (shown in Table 7 "Economic Capital Requirements") plus goodwill and intangibles (€ 42.8 billion and € 31.0 billion as of December 31, 2010, and 2009, respectively). Active book equity, which was € 48.4 billion and € 36.4 billion as of December 31, 2010, and 2009, respectively, is calculated by adjusting total shareholders' equity for unrealized net gains (losses) on financial assets available for sale and on cash flow hedges as well as for accrued future dividends (for a reconciliation, please refer to Note 36 "Regulatory Capital" of the consolidated financial statements). A ratio of more than 100 % signifies that the active book equity adequately covers the aforementioned risk positions. This ratio was 113 % as of December 31, 2010, compared to 118 % as of December 31, 2009, as effects from the increase in economic capital and goodwill overcompensated the increase of active book equity, which was primarily attributable to the capital raise related to Postbank, retained earnings and foreign exchange effects.

The above capital adequacy measures apply for the consolidated Group as a whole (including Postbank) and form an integral part of the Group's Risk and Capital Management framework, further described in the other chapters of this report.

## 4. Risk and Capital Management of the Group

### The Global Economy

Following the marked contraction in 2009, with a decline of almost 1 % in global GDP, the world economy grew again by an estimated 4.75 % in 2010. Three factors played a major role in this development: stimuli from expansive monetary and fiscal policies, investments that had been postponed in 2009 and were subsequently made in 2010, and the building up of inventory. However, momentum has slowed since around autumn 2010 as the effect of these factors tailed off.

While the U.S. economy is estimated to have grown by almost 3 % on average during 2010, the eurozone continued to lag behind in the global economic recovery with real growth of just 1.75 %. In some countries of the eurozone, the dampening effects of massive consolidation programs, and structural adjustments, especially in the real estate sector, made themselves felt. In addition, despite financial aid for Greece and Ireland and plans to establish a permanent crisis mechanism, by the end of the year concerns had increased in the financial markets about the long-term solvency of some countries of the eurozone. In line with this, there was a dramatic widening in yield spreads between government bonds from these countries and German government bonds. By contrast, the German economy – supported by strong stimuli stemming from external trade and also from a recovering domestic economy – expanded by 3.6 %, the highest growth rate since reunification. The German labor market continued to develop extremely favorably compared with that of other countries.

The emerging market economies grew by an estimated 7.5 % last year, compared with 2.5 % in 2009. Growth in the Asian emerging markets was probably even close to 9.5 %. In China, where the pace of growth had slowed only slightly in 2009 to 8.7 %, the economy grew by 10.3 % in 2010.

### The Banking Industry

Three key issues dominated the global banking sector in the past year – business recovery after the slump during the financial crisis, preparations for the most extensive legal and regulatory reforms in decades, as well as the growing risks associated with high sovereign debt in many industrial countries.

In operating terms, banks made good progress overall, albeit from a low base. In traditional lending business, loan loss provisions reduced significantly, though the absolute burden was still high. At the same time, 2010 saw a stabilization in loan volumes, which had contracted the year before, thanks to a slight rise in demand. This was at least in part attributable to central banks' continuing expansionary monetary policies.

Capital markets business produced mixed results compared with the very good performance of 2009. The volume of corporate and sovereign bond issues fell slightly over the high prior year figure, though high-yield paper issuance volumes rose. Equity issuance stayed robust, with growth especially strong in initial public offerings. The M&A business gained traction, but remained weak. Overall, investment banking saw a return of market participants who had cut back their activities during the financial crisis. This led to more intense competition and narrower margins.

In asset management, banks benefited from rising valuations in most asset classes and from higher inflows. In transaction business they profited from the economic recovery and a dynamic rebound in world trade, nearly to pre-crisis levels.

Despite this growth, the banking industry continued to be only moderately profitable overall, recording single digit returns on equity for the most part. Almost all major European and U.S. banks reported net profits, while the share of unprofitable, smaller banks decreased significantly.

Alongside operating performance, 2010 was shaped primarily by far-reaching regulatory measures planned by legislators and supervisory authorities. The Basel III reform of capital requirements will probably prove to be the most significant change in the long term. The final details have been largely agreed so that the new standards are now set to be implemented in nearly all of the world's major financial markets. It is still uncertain, though, whether implementation of the rules will actually be harmonized throughout each country and what concrete effects the new framework will have on banks' business.

Together with the forthcoming regulatory changes, the banking environment in 2010 was also greatly impacted by the European sovereign debt crisis and fears of a weak recovery or even a relapse of some major economies into recession. While the robust recovery of the global economy over the last few months has brightened the prospects for banks' business, the public debt problems encountered especially by several euro-area countries, and their lack of competitiveness, continued to weigh on market sentiment. These concerns spilled over into the banking sector at times – causing the funding markets for financial institutions in severely affected countries to dry up, and attracting criticism of the extensive cross-border activities of particular European banks as well as generally giving rise to significant financial market volatility.

## 4.1 Risk and Capital Management Principles and Organization

The wide variety of the Group's businesses requires the Group to identify, measure, aggregate and manage its risks effectively, and to allocate the Group's capital among the Group's businesses appropriately. The Group manages risk and capital through a framework of principles, organizational structures as well as measurement and proactive monitoring processes that are closely aligned with the activities of the Group's group divisions. The importance of strong risk and capital management and the continuous need to refine these practices became particularly evident during the financial market crisis. While the Group continuously strives to improve the Group's risk and capital management, the Group may be unable to anticipate all market developments, in particular those of an extreme nature.

### Risk and Capital Management Principles

The following key principles underpin the Group's approach to risk and capital management:

- The Group's Management Board provides overall risk and capital management supervision over the consolidated Group. The Group's Supervisory Board regularly monitors the Group's risk and capital profile.
- The Group manages credit, market, liquidity, operational, business and reputational risks as well as the Group's capital in a coordinated manner at all relevant levels within the Group's organization. This also holds true for complex products which the Group typically manages within its framework established for trading exposures.

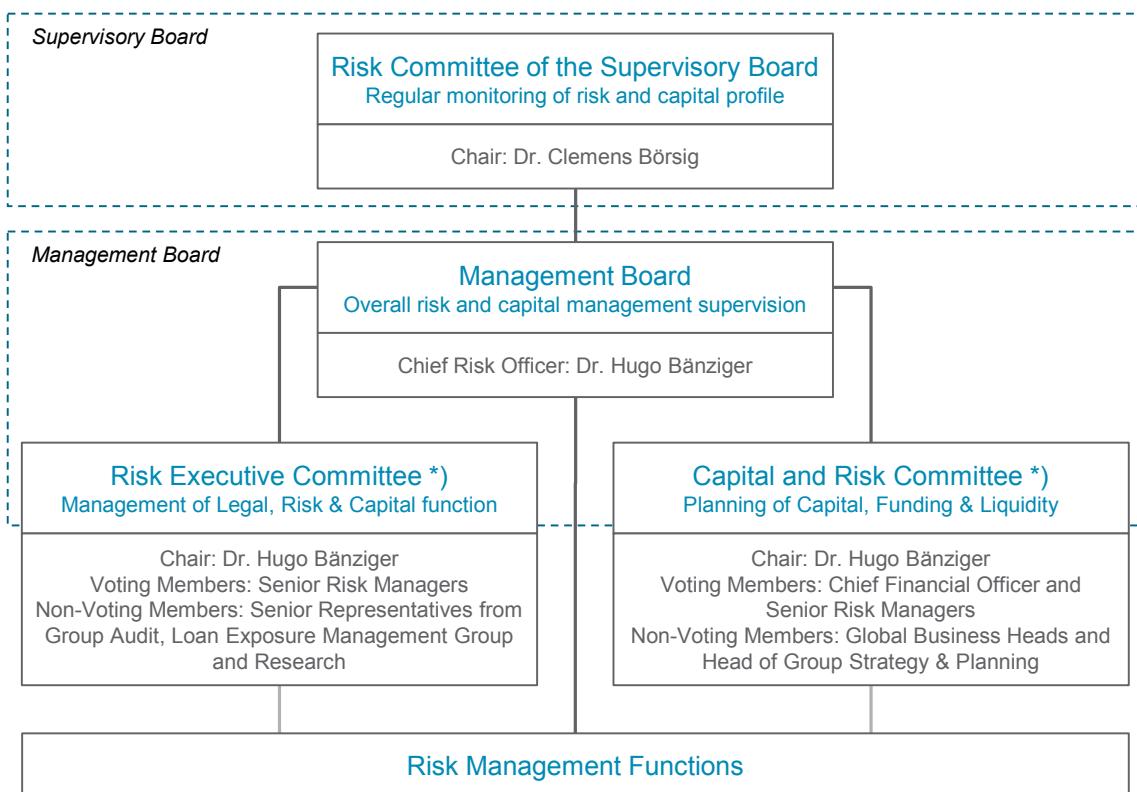
- The structure of the Group's integrated Legal, Risk & Capital function is closely aligned with the structure of the Group divisions.
- The Legal, Risk & Capital function is independent of the Group divisions.

Comparable risk management principles are in place at Postbank reflected in its own organizational setup.

### Risk and Capital Management Organization

The following chart provides a schematic overview of the risk management governance structure of the Deutsche Bank Group.

**Risk and Capital Management – Schematic Overview of Governance Structure at Group Level**



\*) Supported by several Sub-Committees

The Group's Chief Risk Officer, who is a member of the Group's Management Board, is responsible for the Group's Group-wide credit, market, operational, liquidity, business, legal and reputational risk management. Additionally the Group's Chief Risk Officer is responsible for capital management activities and heads the Group's integrated Legal, Risk & Capital function.

Two functional committees, which are both chaired by the Group's Chief Risk Officer, are central to the Legal, Risk & Capital function.

- The Group's Risk Executive Committee is responsible for management and control of the aforementioned risks across the consolidated Group. To fulfill this mandate, the Risk Executive Committee is supported by sub-committees that are responsible for dedicated areas of risk management, including several policy committees and the Group Reputational Risk Committee.
- The responsibilities of the Capital and Risk Committee include risk profile and capital planning, capital capacity monitoring and optimization of funding. It also supervises the Group's non-traded market risk exposures.

Multiple members of the Capital and Risk Committee are also members of the Group Investment Committee, ensuring a close link between both committees as proposals for strategic investments are analyzed by the Group Investment Committee. Depending on the size of the strategic investment it may require approval from the Group Investment Committee, the Management Board or even the Supervisory Board. The development of the strategic investments is monitored by the Group Investment Committee on a regular basis.

Dedicated Legal, Risk & Capital units are established with the mandate to:

- Ensure that the business conducted within each division is consistent with the risk appetite that the Capital and Risk Committee has set within a framework established by the Management Board;
- Formulate and implement risk and capital management policies, procedures and methodologies that are appropriate to the businesses within each division;
- Approve credit, market and liquidity risk limits;
- Conduct periodic portfolio reviews to ensure that the portfolio of risks is within acceptable parameters; and
- Develop and implement risk and capital management infrastructures and systems that are appropriate for each division.

The heads of the Group's Legal, Risk & Capital units, who are members of the Group's Risk Executive Committee, are responsible for the performance of the risk management units and report directly to the Group's Chief Risk Officer.

The Group's Finance and Audit departments operate independently of both the Group divisions and of the Legal, Risk & Capital function. The role of the Finance department is to help quantify and verify the risk that the Group assumes and ensure the quality and integrity of the Group's risk-related data. The Group's Audit department performs risk-oriented reviews of the design and operating effectiveness of the Group's system of internal controls.

Postbank's Group-wide risk management organization independently measures and evaluates all key risks and their drivers. During 2010 the Chief Risk Officer had a direct reporting line to the Management Board of Postbank. Effective March 1, 2011, Postbank's Chief Risk Officer role has been established at Management Board level.

The key risk management committees of Postbank, in all of which Postbank's Chief Risk Officer is a voting member, are:

- The Bank Risk Committee (newly established in 2010), which advises Postbank's Management Board with respect to the determination of overall risk appetite and risk allocation.

- The Credit Risk Committee, which is responsible for limit allocation and the definition of an appropriate limit framework.
- The Market Risk Committee, which decides on limit allocations as well as strategic positioning of Postbank's banking book and the management of liquidity risk.
- The Operational Risk Committee which defines the appropriate risk framework as well as the capital allocation for the individual business areas.

### Risk and Capital Strategy

The risk and capital strategy is developed annually through an integrated process, led by the Legal, Risk & Capital function together with the Group divisions and the Finance function, ensuring Group-wide alignment of risk and performance targets. The strategy is ultimately presented to, and approved by, the Management Board. Subsequently, this plan is also presented to, and discussed with, the Risk Committee of the Supervisory Board.

The Group's risk appetite is set for various parameters and different levels of the Group. Performance against these targets is monitored regularly and a report on selected important and high-level targets is brought to the direct attention of the Chief Risk Officer, the Capital and Risk Committee and/or the Management Board. In case of a significant deviation from the targets, it is the responsibility of the divisional legal, risk & capital units to bring this to the attention of their superiors and ultimately the Chief Risk Officer if no immediate mitigation or future mitigation strategy can be achieved on a subordinated level.

Amendments to the risk and capital strategy must be approved by the Chief Risk Officer or the full Management Board, depending on significance.

At Postbank, similar fundamental principles are in place with Postbank's Management Board being responsible for Postbank's risk profile and risk strategy, and regularly reporting thereon to the Supervisory Board of Postbank. Starting in 2011, Postbank's capital demand is reflected in the consolidated Group's risk and capital strategy.

## 4.2 Categories, Quantification and Reporting of Risk

As part of the Group's business activities, the Group faces a variety of risks, the most significant of which are described further below in dedicated sections, starting with credit risk. These risks can be categorized in a variety of ways. From a regulatory perspective, the Group holds regulatory capital against three types of risk: credit risk, market risk and operational risk. As part of the Group's internal capital adequacy assessment process the Group calculates the amount of economic capital that is necessary to cover the risks generated from the Group's business activities. The Group also calculates and monitors liquidity risk, which the Group manages via a separate risk management framework.

### Credit Risk

Credit risk arises from all transactions where actual, contingent or potential claims against any counterparty, borrower or obligor (which the Group refers to collectively as "counterparties") exist, including those claims that the Group plans to distribute (see further below in the more detailed credit risk section). These transactions are typically part of the Group's traditional non-traded lending activities (such as loans and contingent liabilities), or the Group's direct trading activity with clients (such as OTC derivatives, FX forwards and Forward Rate Agreements) or are related to the Group's positions in traded credit products (such as bonds). This latter risk, which the Group calls "Traded Default Risk", is managed using both credit and market risk parameters.

The Group distinguishes between three kinds of credit risk:

- Default risk is the risk that counterparties fail to meet contractual payment obligations.
- Country risk is the risk that the Group may suffer a loss, in any given country, due to any of the following reasons: a possible deterioration of economic conditions, political and social upheaval, nationalization and expropriation of assets, government repudiation of indebtedness, exchange controls and disruptive currency depreciation or devaluation. Country risk includes transfer risk which arises when debtors are unable to meet their obligations owing to an inability to transfer assets to nonresidents due to direct sovereign intervention.
- Settlement risk is the risk that the settlement or clearance of transactions will fail. It arises whenever the exchange of cash, securities and/or other assets is not simultaneous.

### Market Risk

Market risk arises from the uncertainty concerning changes in market prices and rates (including interest rates, equity prices, foreign exchange rates and commodity prices), the correlations among them and their levels of volatility. In the Group's risk management processes the Group further distinguishes market risk into:

- Trading market risk, which arises primarily through the market-making and trading activities in the various cash and derivative markets.
- Nontrading market risk, which arises from assets and liabilities that are typically on the Group's books for a longer period of time (i.e. non-consolidated strategic investments, alternative asset investments, sight and saving deposits, and equity compensation), but where the inherent value is still dependent on the movement of financial markets and parameters. The Group includes risk from the modeling of the duration of sight and saving deposits and risk from the Group's Deutsche Bank Bauspar business in nontrading market risk. In addition, the Group also includes equivalent risks that Postbank categorizes as business and collective risks, respectively.

### Operational Risk

Operational risk is the potential for incurring losses in relation to employees, contractual specifications and documentation, technology, infrastructure failure and disasters, external influences and customer relationships. This definition includes legal and regulatory risk, but excludes business and reputational risk.

### Liquidity Risk

Liquidity risk is the risk arising from the Group's potential inability to meet all payment obligations when they come due or only being able to meet these obligations at excessive costs.

### Business Risk

Business risk describes the risk the Group assumes due to potential changes in general business conditions, such as the Group's market environment, client behavior and technological progress. This can affect the Group's results if the Group fails to adjust quickly to these changing conditions.

Beyond the above risks, there are a number of further risks, such as reputational risk, insurance-specific risk and concentration risk. They are substantially related to one or more of the above risk types.

### Reputational Risk

Within the Group's risk management processes, the Group defines reputational risk as the risk that publicity concerning a transaction, counterparty or business practice involving a client will negatively impact the public's trust in the Group's organization.

Several policies and guidelines form the framework of the Group's reputational risk management. The primary responsibility for the identification, escalation and resolution of reputational risk issues resides with the business divisions. The risk management units assist and advise the business divisions in ascertaining that reputational risk issues are appropriately identified, escalated and addressed.

The most senior dedicated body for reputational risk issues is the Group's Group Reputational Risk Committee (GRRC). It is a permanent sub-committee of the Risk Executive Committee and is chaired by the Chief Risk Officer. The GRRC reviews and makes final determinations on all reputational risk issues, where escalation of such issues is deemed necessary by senior business and regional management, or required under other Group policies and procedures.

### Insurance Specific Risk

The Group's exposure to insurance risk relates to Abbey Life Assurance Company Limited (ALAC) and the defined benefit pension obligations of Deutsche Bank Group. In the Group's risk management framework, the Group considers insurance-related risks primarily as non-traded market risks. The Group monitors the underlying assumptions in the calculation of these risks regularly and seeks risk mitigating measures such as reinsurances, if the Group deems this appropriate. The Group is primarily exposed to the following insurance-related risks.

- **Longevity risk.** The risk of faster or slower than expected improvements in life expectancy on immediate and deferred annuity products. For risk management purposes, monthly stress testing and economic capital allocation are carried out for both ALAC and the defined benefit pension obligation as part of the Group's market risk framework and process. For ALAC, reinsurance is the primary method of mitigation of longevity risk. Mortality experience investigations and sensitivities of the obligations to changes in longevity are provided by ALAC and the global scheme actuary TowersWatson on an annual basis.
- **Mortality and morbidity risks.** The risks of a higher or lower than expected number of death or disability claims on assurance products and of an occurrence of one or more large claims.
- **Expenses risk.** The risk that policies cost more or less to administer than expected.
- **Persistency risk.** The risk of a higher or lower than expected percentage of lapsed policies.

To the extent that actual experience is less favorable than the underlying assumptions, or it is necessary to increase provisions due to more onerous assumptions, the amount of capital required in the insurance entities may increase.

### Concentration Risk

Risk Concentrations are not an isolated risk type but are broadly integrated in the management of credit, market, operational and liquidity risks. Risk concentrations refer to a bank's loss potential through unbalanced distribution of dependencies on specific risk drivers. Risk concentrations are encountered within and across counterparties, regions/countries, industries and products, impacting the aforementioned risks. Risk concentrations are actively managed, for instance by entering into offsetting or risk-reducing transactions. Management of risk concentration across risk types involves expert panels, qualitative assessments, quantitative instruments (such as economic capital and stress testing) and comprehensive reporting.

### Risk Management Tools

The Group uses a comprehensive range of quantitative tools and metrics for monitoring and managing risks. As a matter of policy, the Group continually assesses the appropriateness and the reliability of the Group's quantitative tools and metrics in light of the Group's changing risk environment. Some of these tools are common to a number of risk categories, while others are tailored to the particular features of specific risk categories. The following are the most important quantitative tools and metrics the Group currently uses to measure, manage and report the Group's risk:

- **Economic capital.** Economic capital measures the amount of capital the Group needs to absorb very severe unexpected losses arising from the Group's exposures. "Very severe" in this context means that economic capital is set at a level to cover with a probability of 99.98 % the aggregated unexpected losses within one year. The Group calculates economic capital for the default risk, transfer risk and settlement risk elements of credit risk, for market risk including traded default risk, for operational risk and for general business risk. The Group continuously reviews and enhances its economic capital model as appropriate. Notably during the course of 2009 and 2010 the Group revised the correlation model underlying the Group's credit risk portfolio model to align it more closely with observable default correlations. In addition, the model is now capable of deriving the Group's loss potential for multiple time steps, which is expected to enable it to also determine the regulatory Incremental Risk Charge going forward. Within the Group's economic capital framework the Group captures the effects of rating migration as well as profits and losses due to fair value accounting. The Group uses economic capital to show an aggregated view of the Group's risk position from individual business lines up to the Group's consolidated Group level. The Group also uses economic capital (as well as goodwill and unamortized other intangible assets) in order to allocate the Group's book capital among the Group's businesses. This enables the Group to assess each business unit's risk-adjusted profitability, which is a key metric in managing the Group's financial resources. In addition, the Group considers economic capital, in particular for credit risk, when the Group measures the risk-adjusted profitability of the Group's client relationships. For consolidation purposes Postbank economic capital has been calculated on a basis consistent with Deutsche Bank methodology, however, limitations in data availability may lead to portfolio effects that are not fully estimated and thereby resulting in over or under estimation. See Chapter 4.5 "Economic Capital Requirements" below for a quantitative summary of the Group's economic capital usage.

Following a similar concept, Postbank also quantifies its capital demand arising from severe unexpected losses, referring to it as "risk capital". In doing so, Postbank uses uniform parameters to measure individual risks that have been classified as material. These parameters are oriented on the value-at-risk approach, using the loss (less the expected gain or loss) that will not be exceeded for a 99.93 % level of probability within the given holding period which is usually one year but for market risk set at 90 days.

- **Expected loss.** The Group uses expected loss as a measure of its credit and operational risk. Expected loss is a measurement of the loss the Group can expect within a one-year period from these risks as of the respective reporting date, based on the Group's historical loss experience. When calculating expected loss for credit risk, the Group takes into account credit risk ratings, collateral, maturities and statistical averaging procedures to reflect the risk characteristics of the Group's different types of exposures and facilities. All parameter assumptions are based on statistical averages of up to seven years based on the Group's internal default and loss history as well as external benchmarks. The Group uses expected loss as a tool of the Group's risk management process and as part of the Group's management reporting systems. The Group also considers the applicable results of the expected loss calculations as a component of the Group's collectively assessed allowance for credit losses included in the Group's financial statements. For operational risk the Group determines the expected loss from statistical averages of the Group's internal loss history, recent risk trends as well as forward looking expert estimates.
- **Value-at-Risk.** The Group uses the value-at-risk approach to derive quantitative measures for its trading book market risks under normal market conditions. The Group's value-at-risk figures plays a role in both internal and external (regulatory) reporting. For a given portfolio, value-at-risk measures the potential future loss (in terms of market value) that, under normal market conditions, will not be exceeded with a defined confidence level in a defined period. The value-at-risk for a total portfolio represents a measure of the Group's diversified market risk (aggregated, using pre-determined correlations) in that portfolio.  
At Postbank, the value-at-risk approach is used for both the trading book and the banking book. Postbank has laid down the material foundation to apply the internal market risk model used to measure and manage market risk in order to determine the capital requirements for market risk in accordance with the German Regulation on Solvency ("SolvV") subsequent to regulatory approval.
- **Stress testing.** The Group supplements its analysis of credit, market, operational and liquidity risk with stress testing. For credit risk management purposes, the Group performs stress tests to assess the impact of changes in general economic conditions or specific parameters on the Group's credit exposures or parts thereof as well as the impact on the creditworthiness of the Group's portfolio. For market risk management purposes, the Group performs stress tests because value-at-risk calculations are based on relatively recent historical data, only purport to estimate risk up to a defined confidence level and assume good asset liquidity. Therefore, they only reflect possible losses under relatively normal market conditions. Stress tests help the Group determines the effects of potentially extreme market developments on the value of the Group's market risk sensitive exposures, both on the Group's highly liquid and less liquid trading positions as well as the Group's investments. The correlations between market risk factors used in the Group's current stress tests are estimated from volatile market conditions in the past using an algorithm, and the estimated correlations proved to be essentially consistent with those observed during recent periods of market stress. The Group uses stress testing to determine the amount of economic capital the Group needs to allocate to cover the Group's market risk exposure under the scenarios of extreme market conditions the Group selects for its simulations. For operational risk management purposes, the Group performs stress tests on the Group's economic capital model to assess its sensitivity to changes in key model components, which include external losses. For liquidity risk management purposes, the Group performs stress tests and scenario analysis to evaluate the impact of sudden stress events on the Group's liquidity position. In 2010, the Group completed the implementation of the Group's group wide stress testing framework across the different risk types, which also comprise reverse stress tests, i.e. an analysis that develops a scenario which makes the business model unviable.

At Postbank all material and actively managed risk categories (credit, market, liquidity and operational risks) are subject to defined stress tests.

### **Regulatory risk assessment.**

The Group's operations throughout the world are regulated and supervised by relevant authorities in each of the jurisdictions in which it conducts business. Such regulation covers licensing, capital adequacy, liquidity, risk concentration, conduct of business and organizational and reporting requirements. Primarily, the Group is subject to comprehensive regulation and supervision by the BaFin and the Deutsche Bundesbank (referred to as "Bundesbank"), the German central bank. The BaFin supervises the operations of German banks to ensure that they are in compliance with the Banking Act and other applicable laws and regulations. The Bundesbank supports the BaFin and closely cooperates with it. The Banking Act and the rules and regulations thereunder implement certain recommendations of the Basel Committee on Banking Supervision, as well as certain European Union directives relating to banks. It addresses issues such as regulatory capital, risk-based capital adequacy and consolidated supervision.

### **Risk Reporting and Measurement Systems**

The Group has centralized risk data and systems supporting regulatory reporting and external disclosures, as well as internal management reporting for credit, market, operational and liquidity risk. The risk infrastructure incorporates the relevant legal entities and business divisions and provides the basis for tailor-made reporting on risk positions, capital adequacy and limit utilization to the relevant functions on a regular and ad-hoc basis. Established units within Finance and Legal, Risk & Capital assume responsibility for measurement, analysis and reporting of risk while ensuring sufficient quality and integrity of risk-related data.

Postbank continues to have an own reporting framework that substantially follows the same principles as outlined above.

## **4.3 Capital Management**

The Group's Treasury function manages the Group's capital at Group level and locally in each region, except that Postbank manages its capital on a Group level and locally on its own. The allocation of financial resources, in general, and capital, in particular, favors business portfolios with the highest positive impact on the Group's profitability and shareholder value. As a result, Treasury periodically reallocates capital among business portfolios.

Treasury implements the Group's capital strategy, which itself is developed by the Capital and Risk Committee and approved by the Management Board, including the issuance and repurchase of shares. The Group is committed to maintain its sound capitalization. Overall capital demand and supply are constantly monitored and adjusted, if necessary, to meet the need for capital from various perspectives. These include book equity based on IFRS accounting standards, regulatory capital and economic capital. Since October 2008, the Group's target for the Tier 1 capital ratio continued to be at 10 % or above.

The allocation of capital, determination of the Group's funding plan and other resource issues are framed by the Capital and Risk Committee.

The Group conducts an annual planning process to determine the Group's future strategic direction, decide on key initiatives and allocate resources to the businesses. The Group's plan comprises profit and loss, capital supply and capital demand, other resources, such as headcount, and business-specific key performance indicators. This process is performed at the business division level comprising the next five years, with business unit details for the first three years. In addition, the first of the five years are detailed by quarter (operative plan). Based upon a range of economic scenarios, the business areas discuss their strategic development with the required risk management functions in order to align their revenue potential with the Group's risk appetite/resources. Group Strategy & Planning and Finance coordinate the strategic planning process and present the resulting strategic plan to the Group Executive Committee for discussion and final approval. The final plan is also presented to the Supervisory Board at the beginning of each year.

The approved planned risk-weighted assets and capital deduction items form the basis for quarterly capital demand limits by business area. The risk and performance plans feed into Treasury's capital and liquidity planning. Depending on the development of risk-weighted assets and capital deduction items, Treasury regularly updates contingency measures in light of the Group's Tier 1 ratio target.

Regional capital plans covering the capital needs of the Group's branches and subsidiaries are prepared on a semi-annual basis and presented to the Group Investment Committee. Most of the Group's subsidiaries are subject to legal and regulatory capital requirements. Local Asset and Liability Committees attend to those needs under the stewardship of regional Treasury teams. Furthermore, they safeguard compliance with requirements such as restrictions on dividends allowable for remittance to Deutsche Bank AG or on the ability of the Group's subsidiaries to make loans or advances to the parent bank. In developing, implementing and testing the Group's capital and liquidity, it takes such legal and regulatory requirements into account.

On October 6, 2010, the Group completed a capital increase from authorized capital against cash contributions. In total, 308.6 million new registered no-par value shares (common shares) were issued, resulting in gross proceeds of € 10.2 billion. The net proceeds of € 10.1 billion raised in the issuance (after expenses of approximately € 0.1 billion, net of tax) were primarily used to cover the capital consumption from the consolidation of Postbank, and, in addition, to support the existing capital base.

Treasury executes the repurchase of shares. As of January 1, 2010, the number of shares held in Treasury from buybacks totaled 0.6 million. The 2009 Annual General Meeting granted the Group's management board the authority to buy back up to 62.1 million shares before the end of October 2010. During the period from January 1, 2010 until the 2010 Annual General Meeting, 11.1 million shares (or 2 % of shares issued) were purchased. Thereof 10.6 million were used for equity compensation purposes. As of the 2010 Annual General Meeting on May 27, 2010, the number of shares held in Treasury from buybacks totaled 1.0 million. The 2010 Annual General Meeting granted the Group's management board the authority to buy back up to 62.1 million shares before the end of November 2014. Thereof 31.0 million shares can be purchased by using derivatives. During the period from the 2010 Annual General Meeting until December 31, 2010, 18.8 million shares were purchased, of which 0.5 million were purchased via sold put options which were executed by the counterparty at maturity date. 9.8 million of the total 18.8 million shares repurchased were used for equity compensation purposes in 2010 and 9.0 million shares were used to increase the Group's Treasury position for later use for future equity compensation. As of December 31, 2010, the number of shares held in Treasury from buybacks totaled 10.0 million.

Total outstanding hybrid Tier 1 capital (substantially all noncumulative trust preferred securities) as of December 31, 2010, amounted to € 12.6 billion compared to € 10.6 billion as of December 31, 2009. This increase was mainly due to the consolidation of € 1.6 billion hybrid Tier 1 capital issued by Postbank and foreign exchange effects of the strengthened U.S. dollar on the Group's U.S. dollar denominated hybrid Tier 1 capital. During the first half year 2010 the Group raised € 0.1 billion of hybrid Tier 1 capital by increasing an outstanding issue.

In 2010, the Group issued € 1.2 billion of lower Tier 2 capital (qualified subordinated liabilities). Consolidation of Tier 2 capital issued by Postbank added € 2.2 billion of lower Tier 2 capital and € 1.2 billion of profit participation rights. Profit participation rights amounted to € 1.2 billion after and nil before consolidation of Postbank. Qualified subordinated liabilities as of December 31, 2010, amounted to € 10.7 billion compared to € 7.1 billion as of December 31, 2009. Cumulative preferred securities amounted to € 0.3 billion as of December 31, 2010, unchanged to December 31, 2009.

### **Capital Management at Postbank**

Postbank manages its capital by continuously monitoring capital supply and demand. Capital management aims at regulatory as well as at economic capital adequacy, in line with the concept of risk bearing capacity. In general, the capital allocation requires an appropriate return on regulatory capital demand. The capital allocation is approved by Postbank's Management Board based on a multi-year plan.

The regulatory and economic capital demand is permanently monitored to adjust the available capital if required. Capital demand forecasts are regularly determined and carried forward based on the planned development of the business volume and results as well as expected risk parameter changes. Capital ratios are managed in compliance with the Postbank's Management Board approved statutory guidelines, by steering the existing and new transaction volume, by issuance of Tier 1 and Tier 2 capital instruments or by executing risk mitigating capital market transactions.

## 4.4 Balance Sheet Management

The Group manages its balance sheet on a Group level excluding Postbank and, where applicable, locally in each region. In the allocation of financial resources the Group favors business portfolios with the highest positive impact on its profitability and shareholder value. The Group's balance sheet management function has the mandate to monitor and analyze balance sheet developments and to track certain market-observed balance sheet ratios. Based on this the balance sheet management function triggers discussion and management action by the Capital and Risk Committee. While the Group monitors IFRS balance sheet developments, its balance sheet management is principally focused on adjusted values as used in its leverage ratio target definition, which is calculated using adjusted total assets and adjusted total equity figures.

Similarly Postbank follows a value-oriented financial management approach that includes balance sheet management.

## 4.5 Economic Capital Requirements

The Group uses economic capital to show an aggregated management view of the risk position from individual business lines up to the consolidated Group level. The Group also uses economic capital (as well as goodwill and other nonamortizing intangibles) in order to allocate the Group's active book equity among its businesses. This enables the Group to assess each business unit's risk-adjusted profitability, which is a key metric in managing the financial resources in order to optimize the value generated for the Group's shareholders. Active book equity is defined as shareholders' equity adjusted by unrealized net gains on assets available for sale, fair value adjustments on cash flow hedges (both components net of applicable taxes) and dividends, for which a proposal is accrued on a quarterly basis and for which payments occur once a year following the approval by the Annual General Meeting. In addition, the Group considers economic capital, in particular for credit risk, when measuring the risk-adjusted profitability of the Group's client relationships.

The table below shows the Group's total economic capital usage at December 31, 2010, and December 31, 2009, following the IFRS consolidation principles, calculated for credit, market, business and operational risk; it does not include liquidity risk. To determine the Group's overall economic capital usage, the Group generally considers diversification benefits across risk types except for business risk, which is aggregated by simple addition. The Group estimates the diversification benefit across risk types through application of a simulation model which combines loss distributions for credit, market and operational risk, considering the dependence of their key risk drivers.

**Table 7 Economic Capital Requirements**

in € m.	Dec 31, 2010	Dec 31, 2009
Credit risk	12,785	7,453
Market risk	13,160	12,515
Trading market risk	6,420	4,613
Nontrading market risk	6,740	7,902
Operational risk	3,682	3,493
Diversification benefit across credit, market and operational risk	(3,534)	(3,166)
<b>Sub-total credit, market and operational risk</b>	<b>26,093</b>	<b>20,295</b>
Business risk	1,085	501
<b>Total economic capital usage</b>	<b>27,178</b>	<b>20,796</b>

As of December 31, 2010, the Group's economic capital usage totaled € 27.2 billion, which is € 6.4 billion, or 31 %, above the € 20.8 billion economic capital usage as of December 31, 2009. The increase in economic capital usage includes the effects of the acquisitions of Postbank, Sal. Oppenheim/BHF-BANK and parts of ABN AMRO's commercial banking activities in the Netherlands, as well as exposure increases and the effects of various model refinements for the calculation of economic capital for credit risk and trading market risk.

The December 31, 2010, economic capital usage included € 4.6 billion in relation to Postbank, which has been calculated on a basis consistent with Deutsche Bank methodology, however, limitations in data availability may lead to portfolio effects that are not fully estimated and thereby resulting in over or under estimation. For December 31, 2009, € 4.2 billion economic capital usage was included for Postbank.

The Group's economic capital usage for credit risk totaled € 12.8 billion as of December 31, 2010. The increase of € 5.3 billion, or 72 %, was principally driven by acquisitions. The consolidation of Postbank as well as of Sal. Oppenheim and parts of ABN AMRO's commercial banking activities in the Netherlands increased the economic capital usage by € 3.7 billion. The other changes reflected exposure increases, refinements of the credit risk model and the effect from regular recalibrations of the credit risk parameters.

The Group's economic capital usage for market risk increased by € 645 million, or 5 %, to € 13.2 billion as of December 31, 2010. The increase was driven by trading market risk, which increased by € 1.8 billion, or 39 %, primarily reflecting model improvements. Nontrading market risk economic capital usage decreased by € 1.2 billion, or 15 %, reflecting the elimination of the Group's former Postbank equity investment upon consolidation of Postbank's assets on the Group's balance sheet, which reduced the economic capital usage by € 3.3 billion net. This decrease was partly offset by changes in other nontrading market risk of € 1.8 billion and by the acquisition of Sal. Oppenheim, which contributed a further € 313 million.

Operational risk economic capital usage increased by € 189 million, or 5 %, to € 3.7 billion as of December 31, 2010. The increase is fully explained by acquisitions.

The Group's economic capital usage for business risk, consisting of a strategic risk and a tax risk component, totaled € 1.1 billion as of December 31, 2010. The strategic risk economic capital usage increase of € 450 million was primarily attributable to the Postbank acquisition resulting in an economic capital usage of € 400 million.

The diversification effect of the economic capital usage across credit, market and operational risk increased by € 368 million, or 12 %, as of December 31, 2010.

For further detail on the Group's economic capital requirements and the Group's economic capital calculations please refer to the section "Overall Risk Position" of the Risk Report in the Group's Financial Report 2010.

## 5. Counterparty Credit Risk: Strategy and Processes

### 5.1 Credit Risk Management Principles and Strategy

The Group measures and manages its credit risk following the below philosophy and principles:

- The key principle of credit risk management is client due diligence, which is aligned with the Group's country and industry portfolio strategies. Prudent client selection is achieved in collaboration with the Group's business line counterparts as a first line of defense. In all group divisions consistent standards are applied in the respective credit decision processes.
- The Group actively aims to prevent undue concentration and long tail-risks (large unexpected losses) by ensuring a diversified and marketable credit portfolio, effectively protecting the bank's capital in all market conditions. Client, industry, country and product-specific concentrations are actively assessed and managed against the Group's risk appetite.
- The Group aims to avoid large directional credit risk on a counterparty and portfolio level by applying stringent underwriting standards combined with a pro-active hedging and distribution model and collateralization of the Group's hold portfolio where feasible.
- The Group is selective in taking outright cash risk positions unless secured, guaranteed and/or adequately hedged. Exceptions to this general principle are lower risk, short-term transactions and facilities supporting specific trade finance requests as well as low risk businesses where the margin allows for adequate loss coverage.
- The Group aims to secure its derivative portfolio through collateral agreements and may additionally hedge concentration risks to further mitigate credit risks from underlying market movements.
- Every extension of credit or material change to a credit facility (such as its tenor, collateral structure or major covenants) to any counterparty requires credit approval at the appropriate authority level. The Group assigns credit approval authorities to individuals according to their qualifications, experience and training, and the Group reviews these periodically.
- The Group measures and consolidates all its credit exposures to each obligor on a global basis that applies across the consolidated Group, in line with regulatory requirements of the German Banking Act (Kreditwesengesetz).

Postbank has comparable uniform standards in place.

### 5.2 Credit Risk Ratings and Rating Governance

#### Credit Risk Ratings

A basic and key element of the credit approval process is a detailed risk assessment of each credit-relevant counterparty. When rating a counterparty the Group applies in-house assessment methodologies, scorecards and the Group's 26-grade rating scale for evaluating the credit-worthiness of the Group's counterparties. The majority of the Group's rating methodologies are authorized for use within the Advanced Internal Rating Based Approach under Basel II rules. The Group's rating scale enables the Group to compare its internal ratings with common market practice and ensures comparability between different sub-portfolios of the Group's institution. Several default ratings therein enable the Group to incorporate the potential recovery rate of unsecured defaulted counterparty exposures. The Group generally rates its counterparties individually, though certain portfolios of securitized receivables are rated on a pool basis.

In the Group's retail business, creditworthiness checks and counterparty ratings of the homogenous portfolio are derived by utilizing an automated decision engine. The decision engine incorporates quantitative aspects (e.g. financial figures), behavioral aspects, credit bureau information (such as SCHUFA in Germany) and general customer data. These input factors are used by the decision engine to determine the creditworthiness of the borrower and, after consideration of collateral evaluation, the expected loss as well as the further course of action required to process the ultimate credit decision. The established rating procedures the Group has implemented in its retail business are based on multivariate statistical methods and are used to support the Group's individual credit decisions for this portfolio as well as managing the overall retail portfolio.

The algorithms of the rating procedures for all counterparties are recalibrated frequently on the basis of the default history as well as other external and internal factors and expert judgments.

Postbank makes use of internal rating systems authorized for use within the Foundation Internal Rating Based Approach under Basel II. Similar to the Group all internal ratings and scorings are based on a uniform master scale, which assigns each rating or scoring result to the default probability determined for that class.

### **Rating Governance**

For the Group, excluding Postbank, all rating methodologies have to be approved by the Group Credit Policy Committee ("GCPC"), a sub-committee of the Risk Executive Committee, before the methodologies are used for credit decisions and capital calculation for the first time or before they are significantly changed. Regulatory approval might be required in addition. The results of the regular validation processes as stipulated by internal policies have to be brought to the attention of the GCPC, even if the validation results do not lead to a change.

For Postbank, responsibility for design, implementation and monitoring of internal rating systems effectiveness rests with the Risk Analytics unit. In addition, a validation committee, chaired by Postbank's Credit Risk Officer has been established in 4th quarter 2010. All rating systems are subject to Postbank's Management Board approval. Effectiveness of rating systems and rating results are reported to the Postbank Management Board on a regular basis.

### **5.3 Credit Limits and Approval**

Credit limits set forth maximum credit exposures the Group is willing to assume over specified periods. In determining the credit limit for a counterparty the Group considers the counterparty's credit quality by reference to its internal credit rating. Credit limits are established by the Credit Risk Management function via the execution of assigned credit authorities. Credit authority is generally assigned to individuals as personal credit authority according to the individual's professional qualification and experience. All assigned credit authorities are reviewed on a periodic basis to ensure that they are adequate to the individual performance of the authority holder. The results of the review are presented to the Group Credit Policy Committee and reported to the Risk Executive Committee.

Where an individual's personal authority is insufficient to establish required credit limits, the transaction is referred to a higher credit authority holder or where necessary to an appropriate credit committee such as the CRM Underwriting Committee. Where personal and committee authorities are insufficient to establish appropriate limits the case is referred to the Management Board for approval.

At Postbank comparable credit limit standards are in place.

## 5.4 Credit Risk Mitigation

In addition to determining counterparty credit quality and the Group's risk appetite, the Group also uses various credit risk mitigation techniques to optimize credit exposure and reduce potential credit losses. Credit risk mitigants, described more fully below, are applied in the following forms:

- Collateral held as security to reduce losses by increasing the recovery of obligations.
- Risk transfers, which shift the probability of default risk of an obligor to a third party including hedging executed by the Group's Loan Exposure Management Group.
- Netting and collateral arrangements which reduce the credit exposure from derivatives and repo and repo-style transactions.

### Collateral Held as Security for Loans

The Group regularly agrees on collateral to be received from or to be provided to customers in contracts that are subject to credit risk. The Group also regularly agrees on collateral to be received from borrowers in the Group's lending contracts. Collateral is security in the form of an asset or third-party obligation that serves to mitigate the inherent risk of credit loss in an exposure, by either substituting the borrower default risk or improving recoveries in the event of a default. While collateral can be an alternative source of repayment, it does not replace the necessity of high quality underwriting standards.

The Group segregates collateral received into the following two types:

- Financial and other collateral, which enables the Group to recover all or part of the outstanding exposure by liquidating the collateral asset provided, in cases where the borrower is unable or unwilling to fulfill its primary obligations. Cash collateral, securities (equity, bonds), collateral assignments of other claims or inventory, equipment (e.g., plant, machinery, aircraft) and real estate typically fall into this category.
- Guarantee collateral, which complements the borrower's ability to fulfill its obligation under the legal contract and as such is provided by third parties. Letters of Credit, insurance contracts, export credit insurance, guarantees and risk participations typically fall into this category.

All types of collateral are subject to frequent valuation and regular review. The frequency depends on the collateral type, associated risks and legal environment. Divisional risk units review and approve terms and conditions of related documentation and monitor transactions on an ongoing basis in close interaction with front and middle office.

### Risk Transfers

Risk transfers to third parties form a key part of the Group's overall risk management process and are executed in various forms, including outright sales, single name and portfolio hedging, and securitizations. Risk transfers are conducted by the respective business units and by the Group's Loan Exposure Management Group ("LEMG"), in accordance with specifically approved mandates.

LEMG focuses on managing the residual credit risk of loans and lending-related commitments of the international investment-grade portfolio and the medium-sized German companies' portfolio within the Group's Corporate & Investment Bank Group Division.

Acting as a central pricing reference, LEMG provides the respective Corporate & Investment Bank Group Division businesses with an observed or derived capital market rate for loan applications; however, the decision of whether or not the business can enter into the credit risk remains exclusively with Credit Risk Management.

LEMG is concentrating on two primary initiatives within the credit risk framework to further enhance risk management discipline, improve returns and use capital more efficiently:

- to reduce single-name and industry credit risk concentrations within the credit portfolio and
- to manage credit exposures actively by utilizing techniques including loan sales, securitization via collateralized loan obligations, default insurance coverage and single-name and portfolio credit default swaps.

### Netting and Collateral Arrangements for Derivatives

Netting is predominantly applicable to OTC derivative transactions as outlined below. Netting is also applied to securities financing transactions as far as documentation, structure and nature of the risk mitigation allow netting with the underlying credit risk.

In order to reduce the credit risk resulting from OTC derivative transactions, where OTC clearing is not available, the Group regularly seeks the execution of standard master agreements (such as master agreements for derivatives published by the International Swaps and Derivatives Association, Inc. (ISDA) or the German Master Agreement for Financial Derivative Transactions) with the Group's clients. A master agreement allows the netting of rights and obligations arising under derivative transactions that have been entered into under such master agreement upon the counterparty's default, resulting in a single net claim owed by or to the counterparty ("close-out netting"). For parts of the derivatives business (e.g., foreign exchange transactions) the Group also enters into master agreements under which the Group sets off amounts payable on the same day in the same currency and in respect to transactions covered by such master agreements ("payment netting"), reducing the Group's settlement risk. In the Group's risk measurement and risk assessment processes the Group applies netting only to the extent the Group has satisfied itself of the legal validity and enforceability of the master agreement in all relevant jurisdictions.

Also, the Group enters into credit support annexes ("CSA") to master agreements in order to further reduce the Group's derivatives-related credit risk. These annexes generally provide risk mitigation through periodic, usually daily, margining of the covered exposure. The CSAs also provide for the right to terminate the related derivative transactions upon the counterparty's failure to honor a margin call. As with netting, when the Group believes the annex is enforceable, the Group reflects this in the Group's exposure measurement.

Certain CSAs to master agreements provide for rating dependent triggers, where additional collateral must be pledged if a party's rating is downgraded. The Group also enters into master agreements that provide for an additional termination event upon a party's rating downgrade. The Group analyzes and monitors potential contingent payment obligations resulting from a rating downgrade in the Group's stress testing approach for liquidity risk on an ongoing basis.

In order to reduce the credit risk resulting from OTC derivative transactions, Postbank regularly seeks the execution of standard master agreements (such as the German Master Agreement for Financial Derivative Transactions). Postbank applies netting only to the extent it has satisfied itself of the legal validity and enforceability of the master agreement in all relevant jurisdictions. In order to further reduce its derivatives-related credit risk, Postbank has entered into CSAs to master agreements with most of the key counterparties in its financial markets portfolio. As with netting, when Postbank believes the annex is enforceable, it reflects this in its capital requirements.

For purposes of calculating the regulatory requirements for its derivatives exposures Postbank uses the current exposure method, i.e. calculates its exposure at default as the sum of the positive fair value of its derivatives transactions and the regulatory add-ons.

In singular cases, Postbank agreed to clauses in its CSAs to the master agreements which require it to increase its collateral upon the event of an external rating downgrade for Postbank. The rating downgrade by Moody's (from Aa3 to A1) in the first half of 2010 had, however, no direct effect on the amount of collateral to be provided and therefore did not impact Postbank's risk-bearing capacity.

### Concentrations within Credit Risk Mitigation

Concentrations within credit risk mitigations taken may occur if a number of guarantors and credit derivative providers with similar economic characteristics are engaged in comparable activities with changes in economic or industry conditions affecting their ability to meet contractual obligations.

The Group uses a comprehensive range of quantitative tools and metrics to monitor its credit risk mitigating activities. Limits are established across all product categories including guarantees and credit derivative exposures used as risk mitigation. Limits exist at an individual guarantor or credit derivative provider level as part of the general credit risk management process and are also monitored on a portfolio basis with regard to industries, countries and other factors.

At Postbank a conservative approach is taken to positive correlations between the borrower's counterparty credit risk and the risk of a deterioration in the value of collateral. Postbank's collateral acceptance and monitoring process takes account of risk concentrations when collateral is initially recognized. In particular, Postbank monitors guarantees together with the guarantors' loans. In addition, risks relating to guarantees are expressly taken into account as part of portfolio management.

Guarantees and credit derivative contracts are primarily entered into with banks and insurance companies (including exposures to monoline insurers which are discussed in more detail in the chapter "Exposure to Monoline Insurers" in the Management Report of the Group's Financial Report 2010), principally in Western Europe and the United States. The majority of these exposures carry a rating within the investment grade band. Postbank's guarantees and credit derivative exposure are primarily entered with countries/regional governments as well as banks.

For the purpose of mitigating credit risk in its lending portfolios the Group also makes use of financial and other physical collateral. Reflecting the Group's security financing activity, a significant portion of collateral taken relates to fixed income and equity securities. Further collateral is taken in form of cash and deposits as well as real estate. The real estate collateral principally consists of residential properties in Germany and is the main collateral class within Postbank.

To improve the collateral management Postbank intends to introduce a multi client capable collateral management system on Group level. A preliminary version was already rolled out. The modular implementation process will start in 2011 for certain portfolios.

## 5.5 Monitoring Credit Risk

Ongoing active monitoring and management of credit risk positions is an integral part of the Group's credit risk management activities. Monitoring tasks are primarily performed by the divisional risk units in close cooperation with the Group's portfolio management function.

Credit counterparties are allocated to credit officers within specified divisional risk units which are aligned to types of counterparty (such as Financial Institution or Corporate). The individual credit officers within these divisional risk units have the relevant expertise and experience to manage the credit risks associated with these counterparties and their associated credit related transactions. It is the responsibility of each credit officer to undertake ongoing credit monitoring for their allocated portfolio of counterparties. The Group also has procedures in place intended to identify at an early stage credit exposures for which there may be an increased risk of loss. In instances where the Group has identified counterparties where problems might arise, the respective exposure is generally placed on a watchlist. The Group aims to identify counterparties that, on the basis of the application of the Group's risk management tools, demonstrate the likelihood of problems well in advance in order to effectively manage the credit exposure and maximize the recovery. The objective of this early warning system is to address potential problems while adequate options for action are still available. This early risk detection is a tenet of the Group's credit culture and is intended to ensure that greater attention is paid to such exposures.

Traded credit products such as bonds in the Group's developed markets' trading book (excluding Postbank) are managed by a dedicated risk management unit combining the Group's credit and market risk expertise. The Group uses appropriate portfolio limits and ratings-driven thresholds on single-issuer basis, combined with the Group's market risk management tools to risk manage such positions. Emerging markets traded credit products are risk managed using expertise which resides within the Group's respective emerging markets credit risk unit and market risk management.

At Postbank largely similar processes are in place.

A key focus of the Group's credit risk management approach is to avoid any undue concentrations in the Group's portfolio. Significant concentrations of credit risk could be derived from having material exposures to a number of counterparties with similar economic characteristics, or who are engaged in comparable activities, where these similarities may cause their ability to meet contractual obligations to be affected in the same manner by changes in economic or industry conditions. A concentration of credit risk may also exist at an individual counterparty level. The Group's portfolio management framework provides a direct measure of concentrations within the Group's credit risk portfolio.

Managing industry and country risks are key components of the Group's overall concentration risk management approach for non-Postbank portfolios. Settlement risk is also considered as part of the Group's overall credit risk management activities.

In 2010 Postbank enhanced the management of concentrations in the credit area by systematically identifying credit concentration on the level of a single counterparty as well as on a sectoral level (e.g. industry sector, regions, collateral types).

### **Industry Risk Management**

To manage industry risk, the Group has grouped its Corporate and Financial Institutions counterparties into various industry sub-portfolios. For each of these sub-portfolios an "Industry Batch report" is prepared usually on an annual basis. This report highlights industry developments and risks to the Group's credit portfolio, reviews concentration risks and incorporates an economic downside stress test. This analysis is used to define strategies for both the Group's industry portfolio, and individual counterparties within the portfolio based on their risk/reward profile and potential.

The Industry Batch reports are presented to the Group Credit Policy Committee, a sub-committee of the Risk Executive Committee and are submitted afterwards to the Management Board. In accordance with an agreed schedule, a select number of Industry Batch reports are also submitted to the Risk Committee of the Supervisory Board. In addition to these Industry Batch reports, the development of the industry sub-portfolios is constantly monitored during the year and is compared to the approved sub-portfolio strategies. Regular overviews are prepared for the Group Credit Policy Committee to discuss recent developments and to take action if necessary.

## Country Risk Management

Avoiding undue concentrations also from a regional perspective is an integral part of the Group's credit risk management framework. The Group manages country risk through a number of risk measures and limits, the most important being:

- **Total counterparty exposure.** All credit extended and OTC derivatives exposure to counterparties domiciled in a given country that the Group views as being at risk due to economic or political events ("country risk event"). It includes nonguaranteed subsidiaries of foreign entities and offshore subsidiaries of local clients.
- **Transfer risk exposure.** Credit risk arising where an otherwise solvent and willing debtor is unable to meet its obligations due to the imposition of governmental or regulatory controls restricting its ability either to obtain foreign exchange or to transfer assets to nonresidents (a "transfer risk event"). It includes all of the Group's credit extended and OTC derivatives exposure from one of the Group's offices in one country to a counterparty in a different country.
- **Highly-stressed event risk scenarios.** The Group uses stress testing to measure potential risks on its trading positions and view these as market risk.

The Group's country risk ratings represents a key tool in the Group's management of country risk. They are established by an independent country risk research function within the Group's Credit Risk Management function and include:

- **Sovereign rating.** A measure of the probability of the sovereign defaulting on its foreign or local currency obligations.
- **Transfer risk rating.** A measure of the probability of a "transfer risk event."
- **Event risk rating.** A measure of the probability of major disruptions in the market risk factors relating to a country.

All sovereign and transfer risk ratings are reviewed, at least annually, by the Group Credit Policy Committee, a sub-committee of the Group's Risk Executive Committee. The Group's country risk research group also reviews, at least quarterly, the Group's ratings for the major Emerging Markets countries. Ratings for countries that the Group views as particularly volatile, as well as all event risk ratings, are subject to continuous review.

The Group also regularly compares its internal risk ratings with the ratings of the major international rating agencies.

Country Risk limits are reviewed at least annually, in conjunction with the review of country risk ratings. Country Risk limits are set by either the Group's Management Board or by the Group's Cross Risk Review Committee, a sub-committee of the Group's Risk Executive Committee pursuant to delegated authority.

The Group charges the group divisions with the responsibility of managing their country risk within the approved limits. The regional units within Credit Risk Management monitor the Group's country risk based on information provided by the Group's Finance function. The Group's Credit Policy Committee also reviews data on transfer risk.

Important elements of the country risk management at Postbank are country risk ratings and country risk limits. Ratings are reviewed and adjusted if required by means of a rating tool on a monthly basis. Country risk limits and sovereign risk limits for all relevant countries are approved by the Management Board annually. Loans are charged to the limits with their gross nominal amounts and allocated to individual countries based on the country of domicile of the borrower.

### Distribution Risk Management

The Group frequently underwrites commitments with the intention to sell down or distribute part of the risk to third parties. These commitments include the undertaking to fund bank loans and to provide bridge loans for the issuance of public bonds. The risk is that the Group may not be successful in the distribution of the facilities. In this case, the Group would have to hold more of the underlying risk than intended for longer periods of time than originally intended.

For risk management purposes the Group treats the full amount of all such commitments as credit exposure requiring credit approval. This approval also includes the Group's intended final hold. Amounts which the Group intends to sell are classified as trading assets and are subject to fair value accounting. The price volatility is monitored in the Group's market risk process. The Group protects the value of these assets against adverse market movements via adequate credit documentation for these transactions and market risk hedges (most commonly using related indices), which are also captured in the Group's market risk process.

### Settlement Risk Management

The Group's trading activities may give rise to risk at the time of settlement of those trades. Settlement risk is the risk of loss due to the failure of a counterparty to honor its obligations to deliver cash, securities or other assets as contractually agreed.

For many types of transactions, the Group mitigates settlement risk by closing the transaction through a clearing agent, which effectively acts as a stakeholder for both parties, only settling the trade once both parties have fulfilled their sides of the bargain.

Where no such settlement system exists, the simultaneous commencement of the payment and the delivery parts of the transaction is common practice between trading partners (free settlement). In these cases, the Group may seek to mitigate the Group's settlement risk through the execution of bilateral payment netting agreements. The Group is also participant in industry initiatives to reduce settlement risks. Acceptance of settlement risk on free settlement trades requires approval from the Group's credit risk personnel, either in the form of pre-approved settlement risk limits, or through transaction-specific approvals. The Group does not aggregate settlement risk limits with other credit exposures for credit approval purposes, but the Group takes the aggregate exposure into account when the Group considers whether a given settlement risk would be acceptable.

## Credit Risk Tools – Economic Capital for Credit Risk

The Group calculates economic capital for the default risk, country risk and settlement risk as elements of credit risk. In line with the Group's economic capital framework, economic capital for credit risk is set at a level to absorb with a probability of 99.98 % very severe aggregate unexpected losses within one year. For December 31, 2010, the Group included Postbank in its calculation of economic capital usage, which has been calculated on a basis consistent with Deutsche Bank methodology. Limitations in data availability, however, may result in portfolio effects that are not fully estimated and thereby resulting in over- or underestimation.

The Group's economic capital for credit risk is derived from the loss distribution of a portfolio via Monte Carlo Simulation of correlated rating migrations. The loss distribution is modeled in two steps. First, individual credit exposures are specified based on parameters for the probability of default, exposure at default and loss given default. In a second step, the probability of joint defaults is modeled through the introduction of economic factors, which correspond to geographic regions and industries. The simulation of portfolio losses is then performed by an internally developed model, which takes rating migration and maturity effects into account. Effects due to wrong-way derivatives risk (i.e., the credit exposure of a derivative in the default case is higher than in non default scenarios) are modeled after the fact by applying the Group's own alpha factor determined for the Group's use of the Basel II Internal Models Method. The Group allocates expected losses and economic capital derived from loss distributions down to transaction level to enable management on transaction, customer and business level.

Employing a similar approach, Postbank calculates a credit value-at-risk ("CVaR") at 99.93 % confidence over a one year time horizon for all Postbank exposures subject to credit risk.

## 5.6 Credit Exposure

Counterparty credit exposure arises from the Group's traditional non-trading lending activities which include elements such as loans and contingent liabilities. Counterparty credit exposure also arises via the Group's direct trading activity with clients in certain instruments which include OTC derivatives, FX forwards and Forward Rate Agreements. A default risk also arises from the Group's positions in traded credit products such as bonds.

The Group defines its credit exposure by taking into account all transactions where losses might occur due to the fact that counterparties may not fulfill their contractual payment obligations.

- "Loans" are net loans as reported on the Group's balance sheet at amortized cost but before deduction of the Group's allowance for loan losses.
- "Irrevocable lending commitments" consist of the undrawn portion of irrevocable lending-related commitments.
- "Contingent liabilities" consist of financial and performance guarantees, standby letters of credit and indemnity agreements.

- “OTC derivatives” are the credit exposures from over-the-counter derivative transactions that the Group has entered into, after netting and cash collateral received.
- “Tradable assets” consist of bonds, traded loans and other fixed-income products that are recorded either in trading assets or securities available for sale for accounting purposes. From a regulatory perspective this category principally covers trading book positions.
- “Repo and repo-style transactions” consist of repurchase transactions, as well as securities or commodities lending and borrowing transactions after application of netting and collateral received.

Although considered in the monitoring of credit exposures, the following are not included in the tables below: brokerage and securities related receivables, interest-earning deposits with banks, cash and due from banks, and accrued interest receivables. Excluded as well are true sale securitization positions and equity investments, which are dealt with specifically in Chapters 7 “Securitization” and 9.1 “Equity Investments in the Banking Book”, respectively.

The following tables break down several of the Group’s main credit exposure categories by geographical region. For these tables, the Group has allocated exposures to regions based on the country of domicile of its counterparties, irrespective of any affiliations the counterparties may have with corporate groups domiciled elsewhere.

**Table 8 Credit Risk Exposure by Region**

		Dec 31, 2010					
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
Germany	207,129	24,273	15,758	3,018	23,823	18,691	292,692
Western Europe (excluding Germany)	110,930	30,239	18,019	22,213	73,097	60,295	314,793
Eastern Europe	8,103	1,844	1,319	836	6,708	1,101	19,911
North America	54,887	59,506	22,063	26,765	90,573	72,569	326,363
Central and South America	4,121	575	1,427	1,792	5,977	1,805	15,697
Asia/Pacific	23,562	6,651	8,532	7,247	39,353	29,381	114,726
Africa	961	419	911	421	1,083	2,237	6,032
Other <sup>4</sup>	1,332	373	27	13	95	—	1,840
<b>Total credit risk exposure</b>	<b>411,025</b>	<b>123,880</b>	<b>68,056</b>	<b>62,305</b>	<b>240,709</b>	<b>186,079</b>	<b>1,092,054</b>

<sup>1</sup> Includes impaired loans amounting to € 6.3 billion as of December 31, 2010.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

<sup>4</sup> Includes supranational organizations and other exposures that the Group has not allocated to a single region.

		Dec 31, 2009					
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
Germany	105,297	14,112	12,126	3,455	15,597	5,086	155,673
Western Europe (excluding Germany)	81,954	27,006	13,128	21,081	44,567	59,001	246,737
Eastern Europe	6,986	1,306	1,428	690	3,486	932	14,828
North America	45,717	55,337	17,018	30,805	83,023	66,757	298,657
Central and South America	3,325	214	777	831	3,916	2,042	11,105
Asia/Pacific	16,921	5,793	7,086	7,060	31,778	25,385	94,023
Africa	947	233	620	458	1,074	1,091	4,423
Other <sup>4</sup>	301	124	—	160	169	—	754
<b>Total credit risk exposure</b>	<b>261,448</b>	<b>104,125</b>	<b>52,183</b>	<b>64,540</b>	<b>183,610</b>	<b>160,294</b>	<b>826,200</b>

<sup>1</sup> Includes impaired loans amounting to € 7.2 billion as of December 31, 2009.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

<sup>4</sup> Includes supranational organizations and other exposures that the Group has not allocated to a single region.

The Group's largest concentrations of credit risk within loans from a regional perspective were in Western Europe and North America, with a significant share in households. The concentration in Western Europe was principally in the Group's home market Germany, which includes most of the Group's mortgage lending business. Within the OTC derivatives business the Group's largest concentrations were also in Western Europe and North America, with a significant share in highly rated banks and insurance companies for which the Group considers the credit risk to be limited.

The increase in loans at the end of 2010 was predominantly due to the first time inclusion of Postbank. Postbank's total contribution to the Group's loan exposure at December 31, 2010, was € 129 billion, with the vast majority being concentrated in the German region (€ 103 billion).

The Group's largest concentrations of credit risk within tradable assets from a regional perspective were in North America and Western Europe (excluding Germany), with a significant share in public sector and banks and insurance companies. Within the repo and repo-style transactions the Group's largest concentrations were in Western Europe (excluding Germany) and North America, with a significant share in highly rated banks and insurance companies.

The increase in tradable assets at the end of 2010 was primarily due to the first time inclusion of Postbank (€ 32 billion) and was largely within the public sector and banks and insurance company categories.

The increase in repo and repo-style transactions was primarily in positions with banks and insurance companies.

As of December 31, 2010, credit risk concentrations at Postbank can be recognized with respect to highly rated banks as well as in the structured credit portfolio.

The following tables break down the main credit exposure categories according to the industry sectors of the Group's counterparties.

**Table 9 Credit Risk Exposure by Industry**

in € m.	Dec 31, 2010						
	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
Banks and insurances	38,798	22,241	17,801	32,315	89,399	170,098	370,652
Fund management activities	27,964	6,435	2,392	9,318	13,531	118	59,758
Manufacturing	20,748	31,560	18,793	3,270	11,261	3,982	89,614
Wholesale and retail trade	13,637	7,369	5,022	517	2,887	347	29,779
Households	167,352	9,573	2,537	842	3,066	63	183,433
Commercial real estate activities	44,119	3,210	2,196	1,577	5,420	421	56,943
Public sector	24,113	858	57	6,510	85,212	609	117,359
Other <sup>4</sup>	74,294	42,634	19,258	7,956	29,933	10,441	184,516
<b>Total credit risk exposure</b>	<b>411,025</b>	<b>123,880</b>	<b>68,056</b>	<b>62,305</b>	<b>240,709</b>	<b>186,079</b>	<b>1,092,054</b>

<sup>1</sup> Includes impaired loans amounting to € 6.3 billion as of December 31, 2010.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

<sup>4</sup> Loan exposures for "Other" include lease financing.

		Dec 31, 2009					
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
Banks and insurances	22,002	25,289	11,315	27,948	69,054	151,320	306,928
Fund management activities	26,462	11,135	540	12,922	9,181	41	60,281
Manufacturing	17,314	24,814	16,809	2,169	8,207	362	69,675
Wholesale and retail trade	10,938	6,027	3,443	604	2,705	—	23,717
Households	85,675	4,278	1,820	801	1,807	—	94,381
Commercial real estate activities	28,959	1,876	2,194	1,286	4,664	79	39,058
Public sector	9,572	520	19	5,527	57,967	755	74,360
Other <sup>4</sup>	60,526	30,186	16,043	13,283	30,025	7,737	157,800
<b>Total credit risk exposure</b>	<b>261,448</b>	<b>104,125</b>	<b>52,183</b>	<b>64,540</b>	<b>183,610</b>	<b>160,294</b>	<b>826,200</b>

<sup>1</sup> Includes impaired loans amounting to € 7.2 billion as of December 31, 2009.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

<sup>4</sup> Loan exposures for "Other" include lease financing.

During 2010 the Group's credit risk profile composition by industry sector remained largely unchanged with the exception of effects from consolidation of Postbank. These effects included € 75 billion in household loans, € 21 billion in loans to banks and insurance companies, € 15 billion in commercial real estate loans as well as € 8 billion in loans to the public sector.

The tradable assets credit exposure is largely with banks and insurance companies as well as public sector. The repo and repo-style exposure is mainly with banks and insurance companies and primarily with higher rated counterparts.

The tables below provide the residual contract maturity profile of the main credit exposure categories.

Table 10 Credit Risk Exposure by Maturity

		Dec 31, 2010					
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
< 1 year	130,021	38,896	37,067	14,610	53,669	181,295	455,558
1 year – 5 years	102,105	70,460	18,426	18,636	74,098	4,628	288,353
> 5 years	178,899	14,524	12,563	29,059	112,942	156	348,143
<b>Total credit risk exposure</b>	<b>411,025</b>	<b>123,880</b>	<b>68,056</b>	<b>62,305</b>	<b>240,709</b>	<b>186,079</b>	<b>1,092,054</b>

<sup>1</sup> Includes impaired loans amounting to € 6.3 billion as of December 31, 2010.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

		Dec 31, 2009					
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
< 1 year	95,388	36,843	29,103	14,798	32,662	155,638	364,432
1 year – 5 years	63,352	57,323	13,844	19,703	56,959	4,528	215,709
> 5 years	102,708	9,959	9,236	30,039	93,989	128	246,059
<b>Total credit risk exposure</b>	<b>261,448</b>	<b>104,125</b>	<b>52,183</b>	<b>64,540</b>	<b>183,610</b>	<b>160,294</b>	<b>826,200</b>

<sup>1</sup> Includes impaired loans amounting to € 7.2 billion as of December 31, 2009.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

The average credit risk exposure held over the four quarters was € 980 billion for 2010 and € 858 billion for 2009 as shown in the tables below.

**Table 11 Average Credit Risk Exposure**

in € m.	2010						
	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
<b>Total average credit risk exposure</b>	<b>314,120</b>	<b>113,825</b>	<b>64,202</b>	<b>67,876</b>	<b>226,943</b>	<b>193,840</b>	<b>980,806</b>
<b>Total credit risk exposure at year-end</b>	<b>411,025</b>	<b>123,880</b>	<b>68,056</b>	<b>62,305</b>	<b>240,709</b>	<b>186,079</b>	<b>1,092,054</b>

<sup>1</sup> Includes impaired loans amounting to € 6.3 billion as of December 31, 2010.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

in € m.	2009						
	Loans <sup>1</sup>	Irrevocable lending commitments	Contingent liabilities	OTC derivatives <sup>2</sup>	Tradable assets	Repo and repo-style transactions <sup>3</sup>	Total
<b>Total average credit risk exposure</b>	<b>266,986</b>	<b>104,942</b>	<b>50,563</b>	<b>84,131</b>	<b>186,747</b>	<b>164,752</b>	<b>858,121</b>
<b>Total credit risk exposure at year-end</b>	<b>261,448</b>	<b>104,125</b>	<b>52,183</b>	<b>64,540</b>	<b>183,610</b>	<b>160,294</b>	<b>826,200</b>

<sup>1</sup> Includes impaired loans amounting to € 7.2 billion as of December 31, 2009.

<sup>2</sup> Includes the effect of netting agreements and cash collateral received where applicable.

<sup>3</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

The average credit risk exposure increase at the end of 2010 was predominantly due to the first time inclusion of Postbank in December 2010.

The higher total credit risk exposure as of December 31, 2010, was most visible for Loans and Tradable assets and was primarily due to the first time inclusion of Postbank

## 5.7 Counterparty Credit Risk from Derivatives

### Credit Exposure from Derivatives

Exchange-traded derivative transactions (e.g., futures and options) are regularly settled through a central counterparty (e.g., LCH. Clearnet Ltd. or Eurex Clearing AG), the rules and regulations of which provide for daily margining of all current and future credit risk positions emerging out of such transactions. To the extent possible, the Group also uses central counterparty clearing services for OTC derivative transactions ("OTC clearing"); the Group thereby benefits from the credit risk mitigation achieved through the central counterparty's settlement system.

As the replacement values of derivatives portfolios fluctuate with movements in market rates and with changes in the transactions in the portfolios, the Group also estimates the potential future replacement costs of the portfolios over their lifetimes or, in case of collateralized portfolios, over appropriate unwind periods. The Group measures the potential future exposure against separate limits. The Group supplements the potential future exposure analysis with stress tests to estimate the immediate impact of extreme market events on the Group's exposures (such as event risk in the Group's Emerging Markets portfolio).

The potential future exposure measure which the Group uses is generally given by a time profile of simulated positive market values of each counterparty's derivatives portfolio, for which netting and collateralization are considered. For limit monitoring the Group employs the 95th quantile of the resulting distribution of market values, internally referred to as potential future exposure ("PFE"). The average exposure profiles generated by the same calculation process are used to derive the so-called average expected exposure ("AEE") measure, which the Group uses to reflect potential future replacement costs within the Group's credit risk economic capital, and the expected positive exposure ("EPE") measure driving the Group's regulatory capital requirements. While AEE and EPE are generally calculated with respect to a time horizon of one year, the PFE is measured over the entire lifetime of a transaction or netting set. The Group also employs the aforementioned calculation process to derive stressed exposure results for input into the Group's credit portfolio stress testing.

The PFE profile of each counterpart is compared daily to a PFE limit profile set by the responsible credit officer. Breaches of PFE limits at any one profile time point are highlighted for action within the Group's credit risk management process. The EPE is directly used in the customer level calculation of the IRBA regulatory capital, whereas AEE feeds as a loan equivalent into the Group's credit portfolio model where it is combined with all other exposure to a counterpart within the respective simulation and allocation process (see Chapter 5.5 "Monitoring Credit Risk").

The following table shows the positive market values or replacement costs of the Group's OTC and exchange-traded derivative transactions entered into for trading and non-trading purposes as of December 31, 2010, and December 31, 2009, following IFRS consolidation and valuation principles. The positive market values are presented gross, that is, before considering netting and collateral. The benefit resulting from the application of netting and collateral is displayed separately.

**Table 12 Positive Market Values of Derivatives**

	Dec 31, 2010				Dec 31, 2009			
in € m. <sup>1</sup>	Positive market values before netting and collateral agreements	Netting agreements	Eligible collateral <sup>2</sup>	Positive market values after netting and collateral agreements	Positive market values before netting and collateral agreements	Netting agreements	Eligible collateral <sup>2</sup>	Positive market values after netting and collateral agreements
Interest rate contracts	410,970	350,087	37,376	23,507	345,753	292,157	32,886	20,710
Foreign exchange contracts	110,371	87,714	8,736	13,921	87,314	68,276	7,383	11,654
Equity contracts	34,017	25,367	3,118	5,532	38,162	27,246	3,250	7,666
Credit derivative contracts	81,093	67,163	5,142	8,788	104,384	80,840	7,411	16,134
Commodity-related activities	14,108	11,056	653	2,399	16,317	11,206	638	4,473
Other contracts	7,221	6,165	699	356	4,480	3,634	62	784
Total positive market values of derivatives	657,780	547,553	55,724	54,503	596,410	483,360	51,630	61,420

<sup>1</sup> Excludes for December 31, 2010, and December 31, 2009, respectively, € 8.5 billion (€ 6.8 billion) positive market values before netting and collateral or € 344 million (€ 166 million) positive market values after netting and collateral with regard to derivatives classified as other assets.

<sup>2</sup> Includes € 46.3 billion cash collateral as of December 31, 2010, and € 43.7 billion as of December 31, 2009.

The counterparty credit risk position resulting from derivative transactions in the form of the regulatory exposure value (exposure at default) amounted to € 154 billion as of December 31, 2010, and to € 129 billion as of December 31, 2009. The related RWA for these derivative counterparty credit risk position amounted to € 55 billion as of December 31, 2010, and to € 51 billion as of December 31, 2009. The calculation builds on the regulatory principles for consolidation and netting and is therefore not directly comparable to the IFRS-related information as presented in the tables above. Moreover, the Group uses the so-called internal model method ("IMM") to derive a regulatory exposure value for the vast majority of its derivative exposure while applying an own calibrated alpha factor in its calculation, floored at the minimum level of 1.2. More details on the IMM are presented in Chapter 6.2 "Advanced Internal Ratings Based Approach". As noted before, Postbank applies the current exposure method to its derivatives exposures resulting in an EAD of € 4.4 billion and RWA of € 1.5 billion, both included above. Hence, Postbank's derivative counterparty credit risk is immaterial to the Group.

The tables below list the nominal volumes of the Group's credit derivative exposure as of December 31, 2010, and December 31, 2009, based on the IFRS consolidation principles. The figures are provided on a gross level, meaning no netting has been considered. The tables split the exposure into the part held in the regulatory banking book, which is shown under the heading "used for own credit portfolio" and the part held in the regulatory trading book, referred to as "acting as intermediary".

**Table 13 Notional Amount of Credit Derivatives**

in € m.	Dec 31, 2010				
	Used for own credit portfolio		Acting as intermediary		Total <sup>1</sup>
	Protection bought	Protection sold	Protection bought	Protection sold	
Credit default swaps – single name	37,707	1,766	917,980	901,615	1,859,068
Credit default swaps – multi name <sup>1</sup>	695	39	770,554	750,835	1,522,123
Total return swaps	733	922	4,321	4,652	10,628
<b>Total notional amount of credit derivatives</b>	<b>39,135</b>	<b>2,728</b>	<b>1,692,855</b>	<b>1,657,102</b>	<b>3,391,819</b>

<sup>1</sup> Includes credit default swaps on indices and nth-to-default credit default swaps.

in € m.	Dec 31, 2009				
	Used for own credit portfolio		Acting as intermediary		Total <sup>1</sup>
	Protection bought	Protection sold	Protection bought	Protection sold	
Credit default swaps – single name	32,834	385	944,895	956,335	1,934,450
Credit default swaps – multi name <sup>1</sup>	2,717	3	718,756	766,578	1,488,055
Total return swaps	8	72	3,356	3,496	6,931
<b>Total notional amount of credit derivatives</b>	<b>35,560</b>	<b>461</b>	<b>1,667,007</b>	<b>1,726,409</b>	<b>3,429,436</b>

<sup>1</sup> Includes credit default swaps on indices and nth-to-default credit default swaps.

## 5.8 Asset Quality

Information presented in this chapter is based upon IFRS principles of consolidation and uses financial statement values.

### Impairment of Loans and Allowance for Loan Losses

The Group's Credit Risk Management regularly assesses whether there is objective evidence that a loan or group of loans is impaired. A loan or group of loans is impaired and impairment losses are incurred if:

- there is objective evidence of impairment as a result of a loss event that occurred after the initial recognition of the loan and up to the balance sheet date (a "loss event"),
- the loss event had an impact on the estimated future cash flows of the loan or the group of loans, and
- a reliable estimate of the loss amount can be made.

Credit Risk Management's loss assessments are subject to regular review in collaboration with Group Finance. The results of this review are reported to and approved by an oversight committee comprised of Group Finance and Legal, Risk & Capital senior management.

The Group first assesses whether objective evidence of impairment exists individually for loans that are individually significant. It then assesses collectively for loans that are not individually significant and loans which are significant but for which there is no objective evidence of impairment under the individual assessment.

To allow management to determine whether a loss event has occurred on an individual basis, all significant counterparty relationships are reviewed periodically. This evaluation considers current information and events related to the counterparty, such as the counterparty experiencing significant financial difficulty or a breach of contract, for example, default or delinquency in interest or principal payments.

If there is evidence of impairment leading to an impairment loss for an individual counterparty relationship, then the amount of the loss is determined as the difference between the carrying amount of the loan(s), including accrued interest, and the present value of expected future cash flows discounted at the loan's original effective interest rate or the effective interest rate established upon reclassification to loans, including cash flows that may result from foreclosure less costs for obtaining and selling the collateral. The carrying amount of the loans is reduced by the use of an allowance account and the amount of the loss is recognized in the consolidated statement of income as a component of the provision for credit losses.

The collective assessment of impairment is principally to establish an allowance amount relating to loans that are either individually significant but for which there is no objective evidence of impairment, or are not individually significant but for which there is, on a portfolio basis, a loss amount that is probable of having occurred and is reasonably estimable. The loss amount has three components. The first component is an amount for transfer and currency convertibility risks for loan exposures in countries where there are serious doubts about the ability of counterparties to comply with the repayment terms due to the economic or political situation prevailing in the respective country of domicile. This amount is calculated using ratings for country risk and transfer risk which are established and regularly reviewed for each country in which the Group does business. The second component is an allowance amount representing the incurred losses on the portfolio of smaller-balance homogeneous loans, which are loans to individuals and small business customers of the private and retail business. The loans are grouped according to similar credit risk characteristics and the allowance for each group is determined using statistical models based on historical experience. The third component represents an estimate of incurred losses inherent in the group of loans that have not yet been individually identified or

measured as part of the smaller-balance homogeneous loans. Loans that were found not to be impaired when evaluated on an individual basis are included in the scope of this component of the allowance.

Once a loan is identified as impaired, although the accrual of interest in accordance with the contractual terms of the loan is discontinued, the accretion of the net present value of the written down amount of the loan due to the passage of time is recognized as interest income based on the original effective interest rate of the loan.

At each balance sheet date, all impaired loans are reviewed for changes to the present value of expected future cash flows discounted at the loan's original effective interest rate. Any change to the previously recognized impairment loss is recognized as a change to the allowance account and recorded in the consolidated statement of income as a component of the provision for credit losses.

When it is considered that there is no realistic prospect of recovery and all collateral has been realized or transferred to the Group, the loan and any associated allowance is written off. Subsequent recoveries, if any, are credited to the allowance account and recorded in the consolidated statement of income as a component of the provision for credit losses.

The process to determine the provision for off-balance sheet positions is similar to the methodology used for loans. Any loss amounts are recognized as an allowance in the consolidated balance sheet within other liabilities and charged to the consolidated statement of income as a component of the provision for credit losses.

If in a subsequent period the amount of a previously recognized impairment loss decreases and the decrease is due to an event occurring after the impairment was recognized, the impairment loss is reversed by reducing the allowance account accordingly. Such reversal is recognized in profit or loss.

With the consolidation of Postbank, parts of the commercial banking activities in the Netherlands acquired from ABN AMRO and Sal. Oppenheim/BHF-BANK, the Group acquired certain loans for which a specific allowance had been established beforehand by Postbank, ABN AMRO or Sal. Oppenheim/BHF-BANK respectively. These loans were taken on to the Group's balance sheet at their fair values as determined by their expected cash flows which reflected the credit quality of these loans at the time of acquisition. As long as the Group's cash flow expectations regarding these loans have not deteriorated since acquisition, they are not considered impaired or problem loans.

At Postbank the process of establishing loan loss allowances is in general the same as the Group's methodologies. Exceptions include the fact that Postbank executes direct charge-offs without first establishing a loan loss allowance and the fact that the loan loss allowances in the retail mortgage portfolio are assessed individually for loans being 180 days or more past due. In reflecting Postbank in the Group's consolidated results, the effects of the aforementioned differences have been aligned to the Group's policies for reporting purposes.

Loan loss allowances established for loans prior to consolidation of Postbank, Sal. Oppenheim/BHF-BANK and parts of the commercial banking activities in the Netherlands acquired from ABN AMRO, have not been consolidated into the Group's stock of loan loss allowances. Instead, these loan loss allowances have been considered in determining the fair value representing the cost basis of the newly consolidated loans. Subsequent improvements in the credit quality of these loans are reflected as an appreciation in their carrying value with a corresponding gain recognized in other income. Loan loss allowances established for loans after consolidation of Postbank, Sal. Oppenheim/BHF-BANK and parts of the commercial banking activities in the Netherlands acquired from ABN AMRO, however, are included in the Group's provision for credit losses and loan loss allowances.

### Past Due Loans

The Group considers originated loans to be past due once contractually agreed payments on principal and/or interest remain unpaid by the borrower. In addition, the Group considers loans acquired within a consolidation to be past due once payments on principal and/or interest, which were expected with a certain payment date at time of the initial consolidation of the loans, remain unpaid by the borrower. The Group categorizes nonimpaired loans past due according to these definitions into days past due buckets for the IFRS disclosure.

### Quantitative Information on Asset Quality

The following tables present the Group's impaired loans, the individually and collectively assessed loan loss allowances held in respect of these impaired loans and other loans past due but not impaired, broken down by geographic region based on the country of domicile of the counterparties, as well as by industry sectors of the counterparties.

**Table 14 Loans Impaired or Past Due by Region**

in € m.	Dec 31, 2010				Dec 31, 2009			
	Total impaired loans	Individually assessed loan loss allowance	Collectively assessed loan loss allowance	Other loans past due <sup>1</sup>	Total impaired loans	Individually assessed loan loss allowance	Collectively assessed loan loss allowance	Other loans past due <sup>1</sup>
Germany	2,006	559	292	4,102	1,665	498	354	3,971
Western Europe (excluding Germany)	2,594	640	634	1,838	3,702	1,035	466	3,610
Eastern Europe	267	6	172	112	151	17	80	177
North America	1,150	339	0	238	1,395	397	—	800
Central and South America	43	27	—	14	85	21	—	5
Asia/Pacific	182	68	1	42	157	51	—	51
Africa	23	4	—	84	27	7	—	2
Other	—	—	0	—	19	3	—	—
<b>Total</b>	<b>6,265</b>	<b>1,643</b>	<b>1,099</b>	<b>6,430</b>	<b>7,201</b>	<b>2,029</b>	<b>900</b>	<b>8,616</b>

<sup>1</sup> These are loans in which interest or principal payments were one day or more past due and which were not impaired.

Table 15 Loans Impaired or Past Due by Industry

in € m.	Dec 31, 2010				Dec 31, 2009			
	Total impaired loans	Individually assessed loan loss allowance	Collectively assessed loan loss allowance	Other loans past due <sup>1</sup>	Total impaired loans	Individually assessed loan loss allowance	Collectively assessed loan loss allowance	Other loans past due <sup>1</sup>
Banks and insurances	81	82	—	82	101	82	3	18
Fund management activities	841	298	—	11	848	281	1	1,506
Manufacturing	742	332	58	149	698	307	48	301
Wholesale and retail trade	312	147	66	198	346	117	48	223
Households	1,973	105	857	4,487	1,659	49	674	4,183
Commercial real estate activities	969	259	17	867	960	314	22	1,360
Public sector	—	—	0	7	45	6	—	2
Other <sup>2</sup>	1,347	420	101	629	2,544	873	104	1,023
<b>Total</b>	<b>6,265</b>	<b>1,643</b>	<b>1,099</b>	<b>6,430</b>	<b>7,201</b>	<b>2,029</b>	<b>900</b>	<b>8,616</b>

<sup>1</sup> These are loans in which interest or principal payments were one day or more past due and which were not impaired.

<sup>2</sup> Impaired loans and individually assessed allowances in category "Other" for 2010 were widely spread across various industries. Impaired loans and individually assessed allowances in category "Other" for 2009 contained primarily the impaired junior debt portion of one Leveraged Finance exposure which was reclassified in accordance with IAS 39.

As of December 31, 2010, the Group's impaired loans totaled € 6.3 billion and were comprised of individually assessed impaired loans amounting to € 3.6 billion and collectively assessed impaired loans amounting to € 2.7 billion. 41 % of the Group's impaired loans were with counterparties domiciled in Western Europe (excluding Germany), followed by 32 % with clients domiciled in Germany, while industry concentrations were with households (31 %) and other (22 %).

The Group's allowance for loan losses for impaired loans as of December 31, 2010, was € 2.7 billion, and included an individually assessed loan loss allowance for impaired loans of € 1.6 billion and a collectively assessed loan loss allowance for impaired loans of € 1.1 billion. More than 46 % of the Group's allowance for loan losses on impaired loans was with counterparties domiciled in Western Europe (excluding Germany), followed by 31 % with clients domiciled in Germany, while industry concentrations were with households (35 %) and manufacturing (14 %).

As of December 31, 2010, the Group's loans past due but not impaired totaled € 6.4 billion, of which 64 % were less than 30 days past due. Of the loans past due but not impaired 64 % were with counterparties domiciled in Germany, while industry concentration was with households (70 %).

In addition to the allowances for loan losses for impaired loans reported in the Tables 14 "Loans Impaired or Past Due by Region" and 15 "Loans Impaired or Past Due by Industry", as of December 31, 2010, the Group held € 554 million allowances for loan losses on collectively assessed loans considered performing, which amounted to € 413 million as of December 31, 2009. These amounts have been recorded in order to reflect incurred losses that have not yet been individually identified or provided for as part of the assessment of smaller-balance homogeneous loans.

As of December 31, 2010, the Group held € 3.3 billion allowance for loan losses, which was 53 % of the Group's loan exposure classified as impaired.

The following table presents the aggregated value of collateral – with the fair values of collateral capped at loan outstandings – held by the Group against its loans past due but not impaired.

**Table 16 Fair Value of Collateral Held**

in € m.	Dec 31, 2010	Dec 31, 2009
Financial and other collateral	1,502	1,757
Guarantees received	77	57
<b>Total capped fair value of collateral held for impaired loans</b>	<b>1,579</b>	<b>1,814</b>

Considering the collateral held against impaired loans in addition to the allowance for loan losses, the impaired loan coverage was 78 % as of December 31, 2010, and 72 % as of December 31, 2009. The increase was principally driven by a reduction of loans reclassified in accordance with IAS 39. These loans required a lower amount of loan loss allowance due to fair value charges taken before their reclassification and hence lead to a lower average coverage ratio.

The following table presents the Group's impaired loans, the corresponding provision for loan losses before recoveries, and recoveries, according to the industry sectors of the counterparties.

**Table 17 Loans Impaired by Industry**

in € m.	Dec 31, 2010	12 month ending Dec 31, 2010		Dec 31, 2009	12 month ending Dec 31, 2009	
	Total impaired loans	Provision for loan losses before recoveries	Recoveries	Total impaired loans	Provision for loan losses before recoveries	Recoveries
Banks and insurances	81	71	4	101	237	1
Fund management activities	841	21	—	848	66	—
Manufacturing	742	111	19	698	137	13
Wholesale and retail trade	312	79	9	346	84	8
Households	1,973	678	77	1,659	801	107
Commercial real estate activities	969	177	4	960	341	8
Public sector	—	(8)	0	45	16	—
Other <sup>1</sup>	1,347	256	30	2,544	1,113	29
<b>Total</b>	<b>6,265</b>	<b>1,385</b>	<b>143</b>	<b>7,201</b>	<b>2,795</b>	<b>166</b>

<sup>1</sup> Impaired loans in category "Other" for 2010 were widely spread across various industries. Impaired loans and corresponding provisions in sector "Other" for 2009 include primarily the impaired junior debt portion of one Leveraged Finance exposure which was reclassified in accordance with IAS 39.

The following table breaks down the not impaired past due loan exposure carried at amortized cost according to its past due status, including nonimpaired loans past due more than 90 days but where there is no concern over the creditworthiness of the counterparty.

**Table 18 Loans Past Due but not Impaired**

in € m.	Dec 31, 2010	Dec 31, 2009
Loans less than 30 days past due	4,092	6,192
Loans 30 or more, but less than 60 days past due	973	941
Loans 60 or more, but less than 90 days past due	384	558
Loans 90 days or more past due	981	925
<b>Total loans past due but not impaired</b>	<b>6,430</b>	<b>8,616</b>

### Allowance for Off-balance Sheet Positions

The Group's allowance for off-balance sheet positions totaled € 218 million as of December 31, 2010, and included € 110 million of collectively assessed and € 108 million of individually assessed allowances.

In 2010 the Group recorded changes in the group of consolidated companies for off-balance sheet allowances following the consolidation of acquisitions amounting to € 34 million for Postbank and € 8 million for Sal. Oppenheim/ BHF-BANK.

The majority of the allowance for off-balance sheet positions was with counterparties domiciled in Western Europe (excluding Germany) and Germany, while industry concentrations were with manufacturing and other.

## Allowance for Credit Losses

The following tables provide a breakdown of the movements in the Group's allowance for credit losses.

**Table 19 Development of Allowance for Credit Losses**

in € m.					2010
	Allowance for loan losses		Allowance for off-balance sheet positions		
	Individually assessed	Collectively assessed	Individually assessed	Collectively assessed	
<b>Balance, beginning of year</b>	<b>2,029</b>	<b>1,314</b>	<b>83</b>	<b>124</b>	<b>3,550</b>
Provision for credit losses	562	751	(18)	(22)	1,273
Increases/newly approved allowances	731	751	20	—	1,502
Reductions/releases of allowances	(169)	(1)	(37)	(22)	(228)
<b>Net charge-offs</b>	<b>(896)</b>	<b>(404)</b>	—	—	<b>(1,300)</b>
Charge-offs	(934)	(509)	—	—	(1,443)
Recoveries	38	104	—	—	142
Allowance related to acquisitions/divestitures	—	—	42	—	42
Exchange rate-related differences/other	(52)	(8)	1	7	(52)
<b>Balance, end of year</b>	<b>1,643</b>	<b>1,653</b>	<b>108</b>	<b>110</b>	<b>3,513</b>

in € m.					2009
	Allowance for loan losses		Allowance for off-balance sheet positions		
	Individually assessed	Collectively assessed	Individually assessed	Collectively assessed	
<b>Balance, beginning of year</b>	<b>977</b>	<b>961</b>	<b>98</b>	<b>112</b>	<b>2,148</b>
Provision for credit losses	1,789	808	21	12	2,630
Increases/newly approved allowances	1,880	808	48	12	2,748
Reductions/releases of allowances	(91)	—	(27)	—	(118)
<b>Net charge-offs</b>	<b>(637)</b>	<b>(419)</b>	<b>(45)</b>	—	<b>(1,101)</b>
Charge-offs	(670)	(552)	(45)	—	(1,267)
Recoveries	33	133	—	—	166
Allowance related to acquisitions/divestitures	—	—	—	—	—
Exchange rate-related differences/other	(101)	(36)	9	—	(127)
<b>Balance, end of year</b>	<b>2,029</b>	<b>1,314</b>	<b>83</b>	<b>124</b>	<b>3,550</b>

## Treatment of Default Situations under Derivatives

Unlike standard loan assets, the Group generally has more options to manage the credit risk in its OTC derivatives when movement in the current replacement costs of the transactions and the behavior of the Group's counterparty indicate that there is the risk that upcoming payment obligations under the transactions might not be honored. In these situations, the Group is frequently able under prevailing contracts to obtain additional collateral or terminate the transactions or the related master agreement at short notice.

Wrong way risk occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty. It must be carefully considered together with the correlation between the obligor and risk mitigants and is actively monitored and reviewed on a regular basis. In compliance with Section 224 (8) and (9) SolvV the Group, excluding Postbank, has established a monthly wrong way risk monitoring process, whereby transactions subject to wrong way risk are automatically selected and presented for comment to the responsible credit officer. In addition, the Group, excluding Postbank, utilizes its newly established process for calibrating its own alpha factor (as defined in Section 223 (7) SolvV) to estimate the overall wrong-way risk in the Group's derivatives and securities financing transaction portfolio. Postbank derivative counterparty risk is immaterial to the Group and collateral held is typically in the form of cash.

## Derivatives – Credit Valuation Adjustment

The Group establishes a counterparty credit valuation adjustment for OTC derivative transactions to cover expected credit losses. The adjustment amount is determined at each reporting date by assessing the potential credit exposure to all counterparties, taking into account any collateral held, the effect of netting under a master agreement, expected loss given default and the credit risk for each counterparty based on historic default levels.

The credit valuation adjustments are significant for certain monoline counterparties. These credit valuation adjustments are assessed using a model-based approach with numerous input factors for each counterparty, including market data, the likelihood of an event (either a restructuring or insolvency), an assessment of any potential settlement in the event of a restructuring, and recovery rates in the event of either restructuring or insolvency. The Group recorded € 1.2 billion in credit valuation adjustments against the Group's aggregate monoline exposures for 2010 and € 1.2 billion for 2009.

The master agreements executed with the Group's clients usually provide for a broad set of standard or bespoke termination rights, which allow the Group to respond swiftly to a counterparty's default or to other circumstances which indicate a high probability of failure. When the Group's decision to terminate derivative transactions or the related master agreement results in a residual net obligation owed by the counterparty, the Group restructures the obligation into a non-derivative claim and manages it through the Group's regular work-out process. As a consequence, for accounting purposes the Group typically does not show any nonperforming derivatives.

## 6. Counterparty Credit Risk: Regulatory Assessment

### 6.1 General Considerations

The Group, excluding Postbank, applies the advanced IRBA for the majority of its advanced IRBA eligible credit portfolios to calculate its regulatory capital requirements according to the SolvV, based on respective approvals received from BaFin.

The BaFin approvals obtained as a result of the advanced IRBA audit processes for the Group's counterparty credit exposures excluding Postbank allow the usage of 48 internally developed rating systems for regulatory capital calculation purposes out of which 37 rating systems were authorized in December 2007 and a further 11 less material ones followed until year end 2010. Overall they cover all of the Group's material exposures, excluding Postbank, in the advanced IRBA eligible exposure classes "central governments", "institutions", "corporates", and "retail".

The Group, excluding Postbank, assigns a few remaining advanced IRBA eligible portfolios temporarily to the standardized approach. With regard to these, an implementation plan and approval schedule have been set up and agreed with the competent authorities, the BaFin and the Bundesbank.

As described in Chapter 3.2 "Regulatory Capital Requirements", Postbank's retail portfolio is also assigned to the advanced IRBA based on respective BaFin approvals Postbank received and the Group's advanced IRBA status. Details of the advanced IRBA and the advanced IRBA exposures are provided in Chapters 6.2 "Advanced Internal Ratings Based Approach" and 6.3 "Advanced IRBA Exposure".

Moreover, subsequent to the acquisition of Postbank, the Group now applies the foundation IRBA for a significant portion of Postbank's IRBA eligible credit portfolios, where Postbank received respective BaFin approvals in recent years. The foundation IRBA and the foundation IRBA exposures are discussed in Chapters 6.4 "Foundation Internal Ratings Based Approach" and 6.5 "Foundation IRBA Exposure".

The approvals Postbank obtained from the BaFin as a result of its IRBA audit processes for the counterparty credit exposures allow the usage of 16 internally developed rating systems for regulatory capital calculation purposes under the advanced and foundation IRBA and out of which 8 rating systems were authorized in December 2006 and a further 8 followed by year end 2010. Overall they cover Postbank's material exposures in the advanced IRBA eligible exposure class "retail" as well as Postbank's material exposures in the foundation IRBA eligible exposure classes "central governments", "institutions" and "corporates".

Postbank is currently in the process of preparing for the advanced IRBA audit process for the exposure classes "institutions" and "corporates" to extend its foundation IRBA approvals to advanced IRBA approvals.

Exposures which the Group does not treat under the advanced or the foundation IRBA are discussed in the Chapters 6.6 “Other IRBA Exposure” or 6.7 “Standardized Approach” respectively.

The advanced IRBA coverage ratio of the Group, excluding Postbank, is more than 90 % as of December 31, 2010, using an exposure measure according to Section 67 SolvV. This ratio excludes the exposures permanently assigned to the standardized approach (according to Section 70 SolvV) which are discussed in Chapter 6.7 “Standardized Approach”, other IRBA exposure (described in Chapter 6.6 “Other IRBA Exposure”) as well as securitization positions (please refer to Chapter 7 “Securitization” for further details). The regulatory minimum requirements with regard to the respective coverage ratio thresholds have been met at all times.

## 6.2 Advanced Internal Ratings Based Approach

The advanced IRBA is the most sophisticated approach available under the regulatory framework for credit risk allowing the Group to make use of its internal rating methodologies as well as internal estimates of specific other risk parameters. While the Basel II regulatory framework allows the first time usage of internal methods and parameters for regulatory purposes, these methods and parameters represent long-used key components of the internal risk measurement and management process supporting the credit approval process, the economic capital and expected loss calculation and the internal monitoring and reporting of credit risk. The relevant parameters include the probability of default (“PD”), the loss given default (“LGD”) driving the regulatory risk-weight and the credit conversion factor (“CCF”) as part of the regulatory exposure at default (“EAD”) estimation.

For the Group, excluding Postbank, the probability of default for customers is reflected in the Group’s internal rating systems. The Group assigns a probability of default to each relevant counterparty credit exposure as a function of a transparent and consistent 26-grid rating scale. The borrower ratings assigned are derived on the grounds of internally developed rating models which specify consistent and distinct customer-relevant criteria and assign a rating grade based on a specific set of criteria as given for a certain customer. The set of criteria is generated from information sets relevant for the respective customer segments like general customer behavior, financial and external data. The methods in use range from statistical scoring models to expert-based models taking into account the relevant available quantitative and qualitative information. Expert-based models are usually applied for counterparts in the asset classes central governments, institutions and corporates with the exception of small- and medium-sized entities. For the latter as well as for the retail segment statistical scoring or hybrid models combining both approaches are commonly used. Quantitative rating methodologies are developed based on applicable statistical modeling techniques, such as logistic regression. In line with Section 118 of SolvV, these models are complemented by human judgment and oversight to review model-based assignments and to ensure that the models are used appropriately. When the Group assigns its internal risk ratings, the Group compares them with external risk ratings assigned to the Group’s counterparties by the major international rating agencies, where possible. Although different rating methodologies are applied to the various customer segments in order to properly reflect customer-specific characteristics, they all adhere to the same risk management principles. Credit process policies provide guidance on the classification of customers into the various rating systems. For more information regarding the credit process and the respective rating methods used within that process, please refer to Chapter 5.2 “Credit Risk Ratings and Rating Governance”.

For Postbank's retail portfolios subject to the advanced IRBA, Postbank assigns a probability of default to each relevant counterparty credit exposure as a function of a consistent internal rating master scale. The ratings assigned are derived on the grounds of internally developed rating models which specify consistent and distinct customer-relevant criteria. These rating models are statistical scoring methods based on internal and external information relating to the borrower and use statistical procedures to evaluate a probability of default. The resulting scores are then mapped to Postbank's internal rating master scale.

The Group excluding Postbank applies internally estimated LGD factors as part of the advanced IRBA capital requirement calculation as approved by the BaFin. LGD is defined as the likely loss intensity in case of a counterparty default. It provides an estimation of the exposure that cannot be recovered in a default event and therefore captures the severity of a loss. Conceptually, LGD estimates are independent of a customer's probability of default. The concept of the LGD models ensures that the main drivers for losses (e.g., different levels and quality of collateralization and customer or product types or seniority of facility) are reflected in specific LGD factors.

As part of the application of the advanced IRBA the Group excluding Postbank applies specific CCFs in order to calculate an EAD value. Conceptually the EAD is defined as the expected amount of the credit exposure to a counterparty at the time of its default. For advanced IRBA calculation purposes the bank applies the general principles as defined in Section 100 SolvV to determine the EAD of a transaction. In instances, however, where a transaction involves an unused limit a percentage share of this unused limit is added to the outstanding amount in order to appropriately reflect the expected outstanding amount in case of a counterparty default. This reflects the assumption that for commitments the utilization at the time of default might be higher than the current utilization. When a transaction involves an additional contingent component (e.g., guarantees) a further percentage share (usage factor) is applied as part of the CCF model in order to estimate the amount of guarantees drawn in case of default. Where required under the advanced IRBA the CCFs are internally estimated. The calibrations of such parameters are based on statistical experience as well as internal historical data and consider customer and product type specifics. As part of the approval process, the BaFin assessed the Group's CCF models and stated their appropriateness for use in the process of regulatory capital requirement calculations.

Overall Postbank has similar standards in place to apply the advanced IRBA to its retail portfolios using internally estimated default probabilities, loss rates and conversion factors as the basis for calculating minimum regulatory capital requirements.

For derivative counterparty exposures as well as securities financing transactions ("SFT") the Group, excluding Postbank, makes use of the IMM in accordance with Section 222 et seqq. SolV. In this respect securities financing transactions encompass repurchase transactions, securities or commodities lending and borrowing as well as margin lending transactions (including prime brokerage). The IMM is a more sophisticated approach for calculating EAD for derivatives and SFT, again requiring prior approval from the BaFin before its first application. By applying this approach, the Group builds its EAD calculations on a Monte Carlo simulation of the transactions' future market values. Within this simulation process, interest and FX rates, credit spreads, equity and commodity prices are modeled by stochastic processes and each derivative and securities financing transaction is revalued at each point of a pre-defined time grid by the Group's internally approved valuation routines. As the result of this process, a distribution of future market values for each transaction at each time grid point is generated. From these distributions, by considering the appropriate netting and collateral agreements, the Group derives the exposure measures potential future exposure ("PFE"), average expected exposure ("AEE") and expected positive exposure ("EPE") mentioned in Chapter 5.7 "Counterparty Credit Risk from Derivatives". The EPE measure evaluated on regulatory eligible netting sets defines the EAD for derivative counterparty exposures as well as for securities financing transactions within the Group's regulatory capital calculations for the great majority of the Group's derivative and SFT portfolio. For the small population of transactions for which a simulation cannot be computed, the EAD used within the IMM is derived from the current exposure method.

### Default Definition and Model Validation

A prerequisite for the development of rating methodologies and the determination of risk parameters is a proper definition, identification and storage of the default event of a customer. The Group applies a default definition in accordance with the requirements of Section 125 SolV as confirmed by the BaFin as part of the IRBA approval process.

As an important element of the Group's risk management framework the Group, excluding Postbank, and Postbank separately regularly validate its rating methodologies and credit risk parameters. Whereas the rating methodology validation focuses on the discriminatory power of the models, the risk parameter validation for PD, LGD and CCF analyzes the predictive power of those parameters when compared against historical default experiences.

According to the Group's standards, and in line with the SolV-defined minimum requirements, the parameters PD, LGD and CCF as used by the Group excluding Postbank, are reviewed annually and a recalibration of specific parameter settings is triggered if required. In addition, ad hoc reviews are performed where appropriate as a reaction to quality deterioration at an early stage due to systematic changes of input factors (e.g., changes in payment behavior) or changes in the structure of the portfolio. The reviews conducted in 2010 for advanced IRBA rating systems triggered recalibrations of rating methodologies in 24 rating systems and amendments of rating guidelines for two additional rating systems as well as recalibration of 36 additional risk parameter settings relating to CCFs and LGDs. None of the recalibrations individually nor the impact of all recalibrations in the aggregate materially impacted the capital requirements of the Group.

At Postbank the allocation mechanism of the master scale to the probabilities of default as well as the results of the estimations of the input parameters PD, CCF and LGD are reviewed annually.

The comparison of regulatory expected loss ("EL") estimates with actual losses recorded provides some insight into the predictive power of the Group's parameter estimations and, therefore, EL calculations.

The EL used in this comparison is the forecast credit loss from counterparty defaults of the Group's exposures over a one year period and is computed as the product of PD, LGD and EAD for performing exposures as at December 31st of the preceding year. Hence, it does not include exposures in relation to Postbank. The actual loss measure is defined by the Group as new provisions before recoveries on newly impaired exposures recorded in the Group's financial statements through profit and loss during the respective reported years again under elimination of exposures consolidated from Postbank.

While the Group believes that this approach provides some insight, the comparison has limitations as the two measures are not directly comparable. In particular, the parameter LGD underlying the EL calculation represents the loss expectation until finalization of the workout period while the actual loss as defined above represents the accounting information recorded for one particular financial year. Furthermore, EL is a measure of expected credit losses for a snapshot of the Group's credit exposure at a certain balance sheet date while the actual loss is recorded for a fluctuating credit portfolio over the course of a financial year, including losses in relation to new loans entered into during the year.

According to the methodology described above, the following table provides a comparison of EL estimates for loans, commitments and contingent liabilities as of yearend 2009, 2008 and 2007, with actual losses recorded for the financial years 2010, 2009 and 2008, by regulatory exposure class.

**Table 20 Expected Loss and Actual Loss by IRBA Exposure Class**

in € m.	Dec 31, 2009		2010		Dec 31, 2008		2009		Dec 31, 2007		2008	
	Expected loss	Actual loss <sup>1</sup>										
Central governments	2	—	—	—	2	—	—	—	2	—	—	—
Institutions	16	1	—	—	21	—	16	—	13	—	55	—
Corporates	471	358	—	—	591	—	1,665	—	320	—	251	—
Retail exposures secured by real estate property	118	101	—	—	120	—	140	—	127	—	125	—
Qualifying revolving retail exposures	2	5	—	—	2	—	7	—	2	—	4	—
Other retail exposures	301	282	—	—	311	—	315	—	226	—	223	—
<b>Total expected loss and actual loss in the advanced IRBA</b>	<b>910</b>	<b>747</b>	—	—	<b>1,047</b>	—	<b>2,143</b>	—	<b>690</b>	—	<b>658</b>	—

<sup>1</sup> Losses related to assets reclassified into loans under IAS 39 amendments were excluded from the actual loss for 2008 since, as of December 31, 2007, the related assets were not within the scope of the corresponding expected loss calculation for loan.

The decrease of the expected loss for 2010 compared to the expected loss for 2009 reflected the slightly improved economic environment after the financial crisis. In 2010 the actual loss was 18% below the expected loss as the actual loss was positively influenced by lower provisions taken for assets reclassified in accordance with IAS 39.

In 2009 actual losses exceeded the expected loss by 104 % driven mainly by material charges taken against a small number of exposures, primarily concentrated in Leveraged Finance, as well as the further deteriorating credit conditions not reflected in the expected losses for the Group's corporate exposures at the beginning of the year.

The following table provides a year-to-year comparison of the actual loss by regulatory exposure class, excluding Postbank.

**Table 21 Actual Loss by IRBA Exposure Class**

in € m.	2010	2009	2008	2007
Central governments	–	–	73	–
Institutions	1	16	55	4
Corporates	358	1,665	295	135
Retail exposures secured by real estate property	101	140	125	108
Qualifying revolving retail exposures	5	7	4	4
Other retail exposures	282	315	223	179
Total actual loss by IRBA in the advanced IRBA	747	2,143	775	430

New provisions established in 2010 were lower by € 1.4 billion compared to 2009, reflecting predominantly significantly reduced provisions required for assets reclassified in accordance with IAS 39. Measures taken on portfolio and country level led to a reduction in the actual loss for the Group's retail exposures in Spain and India, partially offset by increases in the consumer finance business in Poland. The observed decreases in actual loss were partially offset by provisions taken relating to the commercial banking activities acquired from ABN AMRO and Postbank.

The observed increase in actual loss of € 1.4 billion in 2009 compared to 2008 reflected the overall deterioration in credit conditions, predominantly on the Group's exposure against corporates. This increase was driven by 83 % by assets which had been reclassified in accordance with IAS 39, relating primarily to exposures in Leveraged Finance. Further provisions against corporate exposures were a result of deteriorating credit conditions, predominantly in Europe and the Americas. Increases recorded for the Group's retail exposures reflected the Group's strategy to invest in higher margin consumer finance business and were mainly a result of exacerbating economic crisis in Spain which adversely affected the Group's mortgage loan and commercial finance portfolios there and by its consumer finance business in Poland and India.

## 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 originator 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 are assigned to the exposure class of the original counterparty 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.

Table 22 EAD of Advanced IRBA Credit Exposures by PD Grade

	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>	Dec 31, 2010 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.

	Dec 31, 2009							
	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.	24,111	1,586	1,068	776	961	452	49	29,004
EAD net in € m.	40,572	1,877	1,027	347	577	–	49	44,449
Average PD in %	0.00	0.07	0.31	1.06	3.67	19.50	100.00	0.18
Average LGD in %	48.96	43.78	33.22	34.90	16.58	39.68	2.56	47.80
Average RW in %	0.89	24.81	32.92	73.24	55.21	239.24	1.60	3.91
<b>Institutions</b>								
EAD gross in € m.	43,442	44,719	30,529	5,057	1,822	634	570	126,773
EAD net in € m.	46,460	45,918	19,994	4,222	1,068	535	483	118,680
Average PD in %	0.04	0.07	0.18	1.16	4.54	27.94	100.00	0.69
Average LGD in %	21.09	24.28	16.20	24.29	24.08	7.07	39.66	21.65
Average RW in %	7.78	13.58	16.55	50.21	82.18	38.24	25.27	13.89
<b>Corporates</b>								
EAD gross in € m.	102,493	49,940	53,266	61,464	14,154	13,432	9,792	304,542
EAD net in € m.	103,738	48,426	51,752	58,137	12,779	12,522	9,264	296,618
Average PD in %	0.03	0.07	0.24	1.20	4.27	22.67	100.00	4.56
Average LGD in %	25.70	34.34	39.54	28.18	29.93	21.59	18.29	29.79
Average RW in %	8.91	19.02	40.26	65.94	103.61	122.81	25.53	36.62
<b>Retail Exposures Secured by Real Estate Property</b>								
EAD gross in € m.	3,435	2,952	6,552	27,884	12,447	1,303	1,213	55,786
EAD net in € m.	3,435	2,952	6,549	27,854	12,374	1,287	1,199	55,650
Average PD in %	0.03	0.08	0.27	1.27	4.27	16.98	100.00	4.17
Average LGD in %	12.71	7.98	7.87	10.26	11.05	9.80	11.09	10.19
Average RW in %	1.26	1.59	4.19	15.91	34.22	54.51	1.20	17.51
<b>Qualifying Revolving Retail Exposures</b>								
EAD gross in € m.	7	60	81	98	56	12	16	330
EAD net in € m.	7	60	81	98	56	12	16	330
Average PD in %	0.04	0.08	0.26	1.15	4.68	17.88	100.00	6.71
Average LGD in %	39.68	39.72	39.72	38.92	38.13	38.10	47.31	39.52
Average RW in %	1.23	2.09	5.59	17.27	45.84	97.58	9.05	18.67
<b>Other Retail Exposures</b>								
EAD gross in € m.	251	1,741	3,858	13,466	8,392	1,374	747	29,830
EAD net in € m.	275	1,812	4,002	13,591	8,355	1,381	691	30,107
Average PD in %	0.04	0.07	0.29	1.21	4.54	17.26	100.00	4.94
Average LGD in %	38.45	39.62	38.95	33.50	36.81	43.05	42.97	36.21
Average RW in %	5.02	8.40	21.04	37.26	56.75	93.77	2.00	40.26
<b>Total IRBA Exposures</b>								
EAD gross in € m.	173,739	100,998	95,355	108,746	37,832	17,206	12,387	546,264
EAD net in € m.	194,487	101,045	83,405	104,249	35,209	15,737	11,702	545,834
Average PD in %	0.03	0.07	0.23	1.22	4.33	21.91	100.00	3.35
Average LGD in %	29.24	29.27	31.35	23.96	24.54	22.03	19.87	27.85
Average RW in %	6.83	15.95	30.70	48.18	66.57	111.78	21.51	27.26

<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 an overall increase in IRBA exposures and in particular in the Group's corporate, central governments and institutions segments. These increases primarily reflect securities financing transactions with various counterparts and deposits with central banks. The Group's securities financing transactions excluding Postbank are included in Table 22 "EAD of Advanced IRBA Credit Exposures by PD Grade" with a total EAD of € 175 billion as of December 31, 2010, and € 114 billion as of December 31, 2009. The corresponding RWA amounted to € 3.2 billion and € 2.1 billion at year end 2010 and 2009 respectively. Additionally, the Group increased interest earning deposits, primarily with central banks for liquidity purposes.

The tables below show the Group's undrawn commitment exposure treated within the advanced IRBA and broken down by regulatory exposure class. It also provides the corresponding exposure-weighted credit conversion factors and resulting EADs.

**Table 23 EAD of Undrawn Commitments in the Advanced IRBA by Exposure Class**

	Dec 31, 2010			Dec 31, 2009	
	Undrawn commitments in € m.	Weighted Credit Conversion Factor (CCF) in %	Exposure value for undrawn commitments (EAD) in € m.	Undrawn commitments in € m.	Weighted Credit Conversion Factor (CCF) in %
Central governments	570	91	520	522	63
Institutions	2,822	43	1,218	2,223	39
Corporates	108,385	44	47,417	98,654	44
Retail exposures secured by real estate property	2,045	74	1,512	1,711	29
Qualifying revolving retail exposures	137	59	81	381	54
Other retail exposures	9,653	52	5,018	13,256	51
<b>Total EAD of undrawn commitments in the advanced IRBA</b>	<b>123,611</b>	<b>45</b>	<b>55,766</b>	<b>116,747</b>	<b>44</b>
					<b>51,703</b>

The increase in undrawn commitments in 2010 compared to 2009 primarily reflects new exposure in the Corporates segment. In addition, certain CCFs have been recalibrated, which account – amongst other factors – for the exposure-weighted CCF movements in Retail exposures in comparison to 2009.

In addition to Table 22 “EAD of Advanced IRBA Credit Exposures by PD Grade”, the table below shows Postbank exposures of the asset class “retail” treated as advanced IRBA exposure distributed across expected loss bands, including the exposures considered to be defaulted as defined by SolvV. The sub-class “Qualifying revolving retail exposure” mainly represents overdrafts to business clients while overdrafts to private clients are treated under the standardized approach. 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.

**Table 24 EAD of Retail IRBA Credit Exposures by Exposure Class and Risk Category**

	Dec 31, 2010				
	Expected-Loss-Band 0.00 – 5.00 %	Expected-Loss-Band 5.00 – 20.00 %	Expected-Loss-Band 20.00 – 50.00 %	Expected-Loss-Band 50.00 – 100.00 %	Total
Retail exposures secured by real estate property	67,893	809	689	110	69,501
Qualifying revolving retail exposures	417	31	0	0	448
Other retail exposures	7,383	155	195	182	7,915
<b>Total</b>	<b>75,692</b>	<b>995</b>	<b>884</b>	<b>293</b>	<b>77,864</b>

## 6.4 Foundation Internal Ratings Based Approach

Within the Group, Postbank applies the foundation IRBA for the majority of its foundation IRBA eligible credit portfolios. The foundation IRBA is an approach available under the regulatory framework for credit risk allowing institutions to make use of their internal rating methodologies while using pre-defined regulatory values for all other risk parameters. Parameters subject to internal estimates include the probability of default (“PD”) while the loss given default (“LGD”) and the credit conversion factor (“CCF”) are defined in the regulatory framework.

For the asset classes central governments, institutions and corporates respective foundation IRBA rating systems have been developed. A probability of default is assigned to each relevant counterparty credit exposure as a function of a transparent and consistent rating master scale. The borrower ratings assigned are derived on the grounds of internally developed rating models which specify consistent and distinct customer-relevant criteria and assign a rating grade based on a specific set of criteria as given for a certain customer. The set of criteria is generated from information sets relevant for the respective customer segments like general customer behavior, financial and external data. The methods in use are based on statistical analyses and for specific portfolio segments amended by expert-based assessments while taking into account the relevant available quantitative and qualitative information. The rating systems consider external long-term ratings from the major rating agencies (i.e. Standard & Poor's, Moody's and Fitch Ratings).

For the foundation IRBA a default definition is applied in accordance with the requirements of Section 125 SolvV as confirmed by the BaFin as part of its IRBA approval process.

Postbank regularly validates its rating methodologies and credit risk parameters. Whereas the rating methodology validation focuses on the discriminatory power of the models, the risk parameter validation for PD analyzes its predictive power when compared against historical default experiences.

For derivative counterparty exposure treated under the foundation IRBA the current exposure method is applied. The current exposure method calculates the exposure at default as the sum of the positive fair value of derivative transactions and the respective regulatory add-on.

## 6.5 Foundation IRBA Exposure

The table below shows Postbank's foundation IRBA exposures distributed on a rating scale and separately for each regulatory IRBA exposure class. Postbank assigns its exposures to the relevant regulatory exposure class by taking into account factors like customer-specific characteristics and the rating system used. The EAD is presented in conjunction with exposures-weighted average risk weights ("RW"). 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. EAD gross information for exposures covered by guarantees or credit derivatives are assigned to the exposures class of the original counterparty whereas the EAD net information assigns the exposure to the protection seller. Specialized lending exposures, non-credit obligation assets, equity exposures, securitization positions as well as defaulted exposures are excluded from the table. The exposures treated as defaulted from a regulatory perspective amounted to € 108 million for institutions and € 863 million for corporates while following the default classification as applied by Postbank for regulatory purposes.

Table 25 EAD of Foundation IRBA Credit Exposures by PD Grade

	AAA 0.00 – 0.015 %	AA 0.015 – 0.045 %	A 0.045 – 0.125 %	BBB 0.125 – 0.475 %	BB to CCC > 0.475 %	Dec 31, 2010 Total
<b>Central Governments</b>						
EAD gross in € m.	–	77	–	60	–	137
EAD net in € m.	–	77	–	60	–	137
thereof: undrawn commitments	–	–	–	–	–	–
Average RW in %	–	13.72	–	53.30	–	30.99
<b>Institutions</b>						
EAD gross in € m.	–	3,788	35,123	3,352	157	42,420
EAD net in € m.	–	3,789	34,692	3,234	468	42,183
thereof: undrawn commitments	–	–	4	14	–	18
Average RW in %	–	12.55	14.85	37.52	55.21	16.83
<b>Corporates</b>						
EAD gross in € m.	1,896	406	2,181	7,340	3,128	14,951
EAD net in € m.	1,896	406	2,150	6,991	2,965	14,408
thereof: undrawn commitments	396	40	688	1,344	190	2,658
Average RW in %	13.39	13.57	29.79	60.55	109.60	58.51
<b>Total</b>						
EAD gross in € m.	1,896	4,271	37,304	10,752	3,285	57,508
EAD net in € m.	1,896	4,272	36,842	10,285	3,433	56,728
thereof: undrawn commitments	396	40	692	1,358	190	2,676
Average RW in %	13.39	12.66	15.72	53.27	102.17	27.44

## 6.6 Other IRBA Exposure

As an IRBA institution, the Group is required to treat equity investments, collective investment undertakings (“CIU”) and other non-credit obligation assets generally within the IRBA. For these exposure types typically regulatory-defined IRBA risk weights are applied.

The Group uses the simple risk-weight approach according to Section 98 SolvV for the majority of recent investments in equity positions entered into since January 1, 2008. It distinguishes its exposure in equities which are non-exchange traded but sufficiently diversified, exchange-traded and other non-exchange-traded and then uses the regulatory-defined risk weights of 190%, 290% or 370%, respectively. The only exemptions are internally rated equity exposures in transactions underlying specific investment fund units resulting from Postbank where related capital requirements are calculated following a probability of default approach. The EAD for these positions amounted to €115 million as per December 31, 2010.

For certain CIU exposures the Group applies the “look through”-treatment which constitutes a decomposition of the CIU into its underlying investments. If such decomposition is performed the underlying investment components are assigned to their respective exposure class – either within the IRBA or standardized approaches – as if they were directly held. A sub-portion of the Group’s CIU exposures resulting from Postbank is covered within the standardized approach by applying risk weights provided by third parties in line with Section 83 (5) SolvV. More details on Postbank’s CIU exposures covered in the standardized approach are provided in Chapter 6.7 “Standardized Approach”. For the remaining collective investment undertakings the simple risk weight of 370 % is applied and assigned to the exposure class “equity investments”.

Exposures which are assigned to the exposure class “other non-credit obligation assets” receive an IRBA risk weight of 100 %.

The following table summarizes the Group’s IRBA exposure for equities, CIUs, other non-credit obligation assets where regulatory risk weights are applied. The volumes displayed are the regulatory exposure values. Credit risk mitigation techniques have not been applied.

**Table 26 EAD of Equity Investments, CIUs and Other Non-credit Obligation Assets by Risk Weight**

in € m.	Dec 31, 2010	Dec 31, 2009
0 %	1,141	–
100 %	7,754	3,324
190 %	355	–
290 %	334	639
370 %	3,266	1,984
1250 %	640	–
<b>Total EAD of equity investments, CIUs and other non-credit obligation assets</b>	<b>13,490</b>	<b>5,947</b>

The following table summarizes Postbank’s IRBA exposure for specialized lending where regulatory risk weights are applied. The volumes displayed are the regulatory exposure values, hence EAD. Credit risk mitigation techniques have not been applied. The exposures relate to Postbank’s commercial loans for residential construction, loans to property developers, operator models, real estate and equipment leasing, real estate located outside Germany, and private mortgage loans financing the construction of properties with more than ten residential units.

**Table 27 EAD of Postbank Specialized Lending by Risk Weight**

in € m.	Dec 31, 2010
Risk weight category 1 (strong)	13,605
Risk weight category 2 (good)	995
Risk weight category 3 (satisfactory)	449
Risk weight category 4 (weak)	328
Risk weight category 5 (defaulted)	2,556
<b>Total EAD of Postbank specialized lending</b>	<b>17,932</b>

## 6.7 Standardized Approach

The Group treats a subset of its credit risk exposures within the standardized approach. The standardized approach measures credit risk either pursuant to fixed risk weights, which are regulatory predefined, or through the application of external ratings.

The Group assigns certain credit exposures permanently to the standardized approach in accordance with Section 70 SolvV. These are predominantly exposures to the Federal Republic of Germany and other German public sector entities as well as exposures to central governments of other European Member States that meet the required conditions. These exposures make up more than half of the exposures carried in the standardized approach and receive predominantly a risk weight of zero percent. For internal purposes, however, these exposures are assessed via an internal credit assessment and fully integrated in the risk management and economic capital processes.

In line with Section 66 SolvV, the Group assigns further – generally IRBA eligible – exposures permanently to the standardized approach. This population comprises several small-sized portfolios, which are considered to be immaterial on a stand-alone basis for inclusion in the IRBA.

Other credit exposures are temporarily assigned to the standardized approach and the Group plans to transfer them to the IRBA over time. The prioritization and the corresponding transition plan is discussed and agreed with the competent authorities, the BaFin and the Bundesbank.

Equity positions entered into before January 1, 2008, are subject to the transitional arrangement to exempt them from the IRBA and a risk weight of 100 % is applied according to the standardized approach treatment.

In order to calculate the regulatory capital requirements under the standardized approach, the Group uses eligible external ratings from Standard & Poor's, Moody's, Fitch Ratings and in some cases from DBRS. These latter ratings have been newly applied in the standardized approach for a small number of exposures in 2009. Ratings are applied to all relevant exposure classes in the standardized approach. If more than one rating is available for a specific counterparty, the selection criteria as set out in Section 44 SolvV are applied in order to determine the relevant risk weight for the capital calculation. Moreover, given the low volume of exposures covered under the standardized approach and the high percentage of (externally rated) central government exposures therein, the Group does not infer borrower ratings from issuer ratings.

The following table shows the Group's exposure values in the standardized approach by risk weight. The information is shown before and after credit risk mitigation obtained in the form of eligible financial collateral, guarantees and credit derivatives. The table excludes Postbank's CIU exposures assigned to the standardized approach which are displayed in the Table 29 "EAD of CIUs of Postbank in the Standardized Approach by Risk Weight" thereafter.

**Table 28 EAD in the Standardized Approach by Risk Weight**

in € m.	Dec 31, 2010		Dec 31, 2009	
	Before credit risk mitigation	After credit risk mitigation	Before credit risk mitigation	After credit risk mitigation
0 %	120,433	106,412	49,414	44,391
5 %	17	17	—	—
10 %	987	987	1,637	1,637
20 %	4,245	6,114	2,447	1,572
22 %	2	2	—	—
35 %	4,280	4,270	2,814	2,809
50 %	5,080	4,881	2,971	2,972
55 %	298	298	—	—
75 %	19,254	15,598	11,688	11,060
100 %	49,566	28,917	37,372	23,536
110 %	80	80	—	—
150 %	1,636	1,621	969	928
<b>Total EAD in the standardized approach</b>	<b>205,888</b>	<b>169,197</b>	<b>109,312</b>	<b>88,905</b>

The following table shows the Postbank exposure values for CIUs covered within the standardized approach. It comprises bonds in the form of collective investment undertakings assigned to the standardized approach based on a "look through"-treatment as well as the exposure values for collective investment undertakings with risk weights calculated by third parties in the standardized approach by risk weight. Credit risk mitigation techniques have not been applied.

**Table 29 EAD of CIUs of Postbank in the Standardized Approach by Risk Weight**

in € m.	Dec 31, 2010
<b>Bonds in CIUs</b>	
0 %	172
11 %	21
22 %	244
55 %	445
110 %	691
200 %	72
300 %	356
<b>EAD for bonds in CIUs</b>	<b>2,001</b>
<b>CIUs with risk weight calculated by third parties</b>	
< 22 %	120
<b>EAD for CIUs with risk weight calculated by third parties</b>	<b>120</b>
<b>Total EAD for CIUs in the standardized approach</b>	<b>2,121</b>

## 6.8 Regulatory Application of Credit Risk Mitigation Techniques

Risk-weighted assets and regulatory capital requirements can be managed actively by credit risk mitigation techniques. As a prerequisite for recognition in regulatory calculations, the Group must adhere to certain minimum requirements as stipulated in the SolvV regarding collateral management, monitoring processes and legal enforceability.

The range of collateral being eligible for regulatory recognition is dependent predominantly on the regulatory capital calculation method used for a specific risk position. The principle is that a higher degree of sophistication with regard to the underlying methodology generally leads to a wider range of admissible collateral and options to recognize protection via guarantees and credit derivatives. However, also the minimum requirements to be adhered to and the mechanism available to reflect the risk mitigation benefits are predominantly a function of the regulatory calculation method applied.

The advanced IRBA generally accepts all types of financial collateral, as well as real estate, collateral assignments and other physical collateral. In the Group's application of the advanced IRBA, there is basically no limitation to the range of accepted collateral as long as the Group can demonstrate to the competent authorities that reliable estimates of the collateral values can be generated and that basic requirements are fulfilled.

The same principle holds true for taking benefits from guarantee and credit derivative arrangements. Within the advanced IRBA, again there are generally no limitations with regard to the range of eligible collateral providers as long as some basic minimum requirements are met. However, collateral providers' credit quality and other relevant factors are incorporated through the Group's internal models.

In the Group's advanced IRBA calculations excluding Postbank, financial and other collateral is generally considered through an adjustment to the applicable LGD as the input parameter for determining the risk weight. For recognizing protection from guarantees and credit derivatives, generally a PD substitution approach is applied, i.e. within the advanced IRBA risk-weight calculation the PD of the borrower is replaced by the protection seller's PD. However, for certain guaranteed exposures and certain protection providers the so-called double default treatment is applicable. The double default effect implies that for a guaranteed exposure a loss only occurs if the originator and the guarantor fail to meet their obligations at the same time.

The following table presents the exposure values before credit risk mitigation as well as to the extent they are covered by eligible collateral, guarantees and credit derivatives in the advanced IRBA excluding Postbank, broken down into the respective exposure classes.

**Table 30 Collateralized Counterparty Credit Risk Exposure in the Advanced IRBA by Exposure Class**

in € m.	Dec 31, 2010				Dec 31, 2009			
	Total EAD	Eligible advanced IRBA collateral	Guarantees and credit derivatives	Total EAD collateralized <sup>1</sup>	Total EAD	Eligible advanced IRBA collateral	Guarantees and credit derivatives	Total EAD collateralized <sup>1</sup>
Central governments	55,636	2,920	1,928	4,848	29,004	1,606	1,330	2,936
Institutions	133,839	37,478	5,784	43,262	125,532	45,794	12,908	58,702
Corporates	381,118	175,229	30,993	206,222	303,301	93,551	28,436	121,987
Retail	87,229	50,989	604	51,593	85,945	46,614	598	47,212
<b>Total</b>	<b>657,821</b>	<b>266,615</b>	<b>39,310</b>	<b>305,924</b>	<b>543,783</b>	<b>187,565</b>	<b>43,272</b>	<b>230,837</b>

<sup>1</sup> Excludes collateralization which is reflected in the EPE measure.

Postbank retail exposures which are subject to the advanced IRBA and excluded from Table 30 “Collateralized Counterparty Credit Risk Exposure in the Advanced IRBA by Exposure Class” amounted to € 77.9 billion in EAD out of which € 37.1 billion constituted exposure collateralized by financial or other advanced IRBA-eligible collateral.

The foundation IRBA sets stricter limitations with regard to the eligibility of credit risk mitigation compared to the advanced IRBA but allows for consideration of financial collateral, guarantees and credit derivatives as well as other foundation IRBA-eligible collateral like mortgages and security assignments.

The financial collateral recognized by Postbank in its foundation IRBA essentially comprises cash, bonds and other securities related to repo lending.

The following table presents Postbank’s foundation IRBA related exposure values before credit risk mitigation as well as to the extent they are covered by eligible collateral, guarantees and credit derivatives, broken down into the respective exposure classes.

**Table 31 Collateralized Counterparty Credit Risk Exposure in the Foundation IRBA by Exposure Class**

in € m.	Total EAD	Dec 31, 2010			
		Financial collateral	Other collateral	Guarantees and credit derivatives	Total EAD collateralized
Central governments	137	—	—	—	—
Institutions	42,528	9,442	—	613	10,055
Corporates	33,747	—	19,398	1,109	20,507
<b>Total</b>	<b>76,412</b>	<b>9,442</b>	<b>19,398</b>	<b>1,722</b>	<b>30,562</b>

In the standardized approach, collateral recognition is limited to eligible financial collateral, such as cash, gold bullion, certain debt securities, equities and CIUs, in many cases only with their volatility-adjusted collateral value. In its general structure, the standardized approach provides a preferred (lower) risk-weight for “claims secured by real estate property”. Given this preferred risk-weight real estate is not considered a collateral item under the standardized approach. Further limitations must be considered with regard to eligible guarantee and credit derivative providers.

In order to reflect risk mitigation techniques in the calculation of capital requirements the Group applies the financial collateral comprehensive method since the higher sophistication of that method allows a broader range of eligible collateral. Within this approach, financial collateral is reflected through a reduction in the exposure value of the respective risk position, while protection taken in the form of guarantees and credit derivatives is considered by means of a substitution, i.e., the borrower's risk weight is replaced by the risk weight of the protection provider.

The following table presents the Group's exposure values before credit risk mitigation as well as to the extent they are covered by financial collateral, guarantees and credit derivatives in the standardized approach broken down into the respective exposure classes, including Postbank's CIU exposures assigned to the standardized approach.

**Table 32 Collateralized Counterparty Credit Risk Exposure in the Standardized Approach by Exposure Class**

in € m.	Dec 31, 2010				Dec 31, 2009			
	Total EAD	Financial collateral	Guarantees and credit derivatives	Total EAD collateralized	Total EAD	Financial collateral	Guarantees and credit derivatives	Total EAD collateralized
Central governments	83,522	9,947	1	9,947	38,184	4,982	—	4,982
Regional governments and local authorities	17,908	6	—	6	10,677	21	—	21
Other public sector entities	3,348	—	194	194	242	—	—	—
Multilateral development banks	196	—	—	—	—	—	—	—
International organizations	130	—	—	—	—	—	—	—
Institutions	19,956	8,567	103	8,670	2,317	399	—	399
Covered bonds issued by credit institutions	1,018	—	—	—	1,657	—	—	—
Corporates	43,356	15,984	1,679	17,663	33,252	11,507	63	11,570
Retail	19,254	1,414	2,242	3,656	11,688	608	20	628
Claims secured by real estate property	7,455	22	—	22	2,823	6	—	6
Collective investment undertakings	2,121	—	—	—	—	—	—	—
Equity investments	7,201	3,171	—	3,171	7,366	2,857	—	2,857
Other items	171	—	—	—	193	—	—	—
Past due items	2,375	21	4	25	914	27	4	31
<b>Total</b>	<b>208,011</b>	<b>39,132</b>	<b>4,222</b>	<b>43,354</b>	<b>109,313</b>	<b>20,407</b>	<b>87</b>	<b>20,494</b>

## 7. Securitization

### 7.1 Overview of Activities Undertaken by the Group

The Group engages in various business activities that use securitization structures. The principle purposes are to provide clients with access to risk and returns related to specific portfolios of assets, to provide clients with access to funding and to manage the Group's credit risk exposure.

A participant in the securitization market can typically adopt three different roles: the originator, sponsor or investor role. An originator is an institution which is involved, either itself or through its' related entities directly or indirectly, in the origination or purchase of the securitized exposures. In a sponsorship role, an institution establishes and manages an asset-backed commercial paper program ("ABCP") or other securitization transaction, but has neither originated nor taken the purchased assets on its balance sheet. All other securitization positions entered into by the Group are assumed in the capacity as an investor. In order to achieve their business objectives the Group acts in all three roles on the securitization markets. However, Postbank does not assume the role of a sponsor.

As an originator, the Group uses securitizations primarily as a strategy to reduce credit risk. These credit risk management related transactions are conducted by different units within the Group. The Loan Exposure Management Group ("LEMG") uses, amongst others, synthetic securitizations to manage the credit risk of loans and lending-related commitments of the international investment-grade portfolio and the medium-sized German companies' portfolio within the Corporate & Investment Bank ("CIB") group division. The credit risk is predominantly transferred to counterparties synthetically through financial guarantees and, to a lesser extent, with first loss credit derivatives. Other methods used to mitigate credit risk are the issuance of credit-linked notes and synthetic collateralized loan obligations supported by financial guarantees. Using the above mentioned techniques, the overall credit risk volume that has been transferred and recognized for regulatory purposes amounts to € 20.4 billion in 2010 compared to € 19.2 billion in 2009. The increase of the volume related mainly to one already existing deal which after achieving a significant risk transfer to a third party now qualified for regulatory recognition. Securitization transactions that expired or have been derecognized in 2010 were replaced by five new issued securitizations with almost the same volume in 2010.

The credit risk coverage the Group received under the terms and conditions of a 2010 acquisition which has been conducted by the Global Transaction Banking unit lead to a new securitization transaction on an underlying loan pool of European assets in relation to small and medium entities ("SME") of € 12.8 billion. A first loss credit default swap protection on a portfolio of derivative counterparty credit risk exposures within CIB in the amount of U.S. \$ 20.0 billion is no longer recognized for regulatory purposes.

Postbank was originator of three synthetic securitization transactions with an exposure securitized of € 4.6 billion. The underlying exposures are financings of residential real estate assets located in Germany and Italy. The transactions serve to reduce regulatory capital requirements on the one hand and concentration risk on the other hand.

On a limited basis the Group has entered into securitization transactions as part of an active liquidity risk management strategy during 2008 and 2009. These transactions do not transfer credit risk and are therefore not included in the quantitative part of this chapter.

The Group sets up, sponsors and administers a number of ABCP programs. These programs provide customers with access to liquidity in the commercial paper market and create investment products for clients. As an administrative agent for the commercial paper programs, the Group facilitates the purchase of non-Deutsche Bank Group loans, securities and other receivables by the commercial paper conduit ("conduit"), which then issues to the market high-grade, short-term commercial paper, collateralized by the underlying assets, to fund the purchase. The conduits require sufficient collateral, credit enhancements and liquidity support to maintain an investment grade rating for the commercial paper. The Group is acting as liquidity provider to these conduits. The collateral in the conduits includes a range of asset-backed loans and securities, including aircraft leasing, student loans, trust preferred securities and residential- and commercial-mortgage-backed securities. The credit enhancement and liquidity facilities with these conduits are part of the Group's regulatory banking book. There are also instances in which the Group will face the conduit on foreign exchange and interest rate swaps which are recorded in the trading book.

Furthermore, the Group acts as an investor in third party securitizations through the purchase of third party issued securitizations tranches or provides liquidity/credit support to which it, and in some instances other parties, provide financing. Additionally, the Group assists third party securitizations by providing derivatives related to securitization structures. These include currency, interest rate, equity and credit derivatives.

The Group supports SPEs which originate or purchase assets with an intention to securitize these assets, providing clients with access to assets and risks to meet their needs. These assets are predominantly commercial and residential whole loans or mortgage-backed securities. The SPEs fund these purchases by issuing multiple tranches of securities, the repayment of which is linked to the performance of the assets in the SPEs. This business does not constitute securitization positions on the Group's balance sheet.

The Group also performs trading activities relating to securitization exposures, which in particular include the Group's Credit Correlation Trading business. This business offers complex credit products to clients and dynamically hedges its trading market risk exposures. The traded instruments in the Credit Correlation business mainly comprise Collateralized-Debt-Obligations ("CDO") tranches referencing synthetic pools of credit exposures, including standard tranches of credit indices, first-to-default credit derivatives, single-name credit derivatives and indices based on credit default swaps. The securitization trading activities are assigned to the regulatory trading book and attract capital requirements according to its market risk model described in Chapters 8 "Trading Market Risk" and 9 "Nontrading Market Risk". In its securities trading capacity the Group may also retain certain tranches of an SPE's capital structure, which are recorded in the regulatory banking book and attract capital requirements according to the regulatory securitization framework.

## 7.2 Accounting and Valuation Policies for Securitizations

The Group securitizes various consumer and commercial financial assets, which is achieved via the sale of these assets to an SPE, which in turn issues securities to investors. The transferred assets may qualify for derecognition in full or in part, under the policy on derecognition of financial assets. When an asset is derecognized a gain or loss equal to the difference between the consideration received and the carrying amount of the transferred asset is recorded. Synthetic securitization structures typically involve derivative financial instruments. Transfers that do not qualify for derecognition may be reported as a secured financing or result in the recognition of continuing involvement liabilities; no gain or loss is recognized in such instances. The investors and the securitization vehicles generally have no recourse to the Group's other assets in cases where the issuers of the financial assets fail to perform under the original terms of those assets.

The Group may consolidate SPEs for financial statement purposes that it established, sponsors or with which it has a contractual relationship. The Group will consolidate an SPE when it has the power to govern the financial and operating policies, generally accompanying a shareholding, either directly or indirectly, of more than one half of the voting rights or where according to the Standing Interpretations Committee Interpretation No. 12 (SIC-12) "Consolidation – Special Purpose Vehicles," when the activities are so narrowly defined, or if it is not evident who controls the financial and operating policies of the SPE, a range of other factors are considered. These factors include whether (1) the activities are being conducted on the Group's behalf according to specific business needs so that benefits are obtained from the entity's operations, (2) through decision-making powers the majority of the benefits are obtained, (3) the majority of the benefits of the activities of the entity will be obtained, and (4) the majority of the residual ownership risks related to the assets is retained in order to obtain the benefits from its activities. The Group consolidates an SPE if an assessment of the relevant factors indicates that the Group controls it. The Group reassesses the treatment of SPE's for consolidation when there is a change in the SPE's arrangements or the substance of the relationship between the Group and an SPE changes.

When these assets are held at fair value, consistent with the valuation of similar financial instruments, the fair value of retained tranches or the financial assets is initially and subsequently determined using market price quotations where available or internal pricing models that utilize variables such as yield curves, prepayment speeds, default rates, loss severities, interest rate volatilities and spreads. The assumptions used for valuation are based on observable transactions in similar securities and are verified by external pricing sources, where available. Where observable transactions in similar securities and other external pricing sources are not available, management judgment must be used to determine fair value.

For further detail on the Group's accounting and valuation policies please refer to Note 01 "Significant Accounting Policies" and Note 14 "Financial Instruments carried at Fair Value" in the Group's Financial Report 2010. In addition, the Management Report of the Group's Financial Report 2010 includes a discussion of SPEs.

## 7.3 Regulatory Securitization Framework

The KWG specifically defines a securitization transaction for regulatory reporting and the capacity in which an institution could acquire a position and the appropriate capital requirement.

A securitization transaction is defined as a transaction in which payments depend on the performance of an underlying pool of exposures and investments in the securitization are tranches. Tranching results in a ranking among investments in the securitization. This determines the order and the amount of payments or losses to be directed to the holder of the position, that is the waterfall structure. A securitization position can be acquired in various forms including investments in securitization tranches, derivative transactions for hedging interest rate and currency risks included in the waterfall, liquidity facilities, credit enhancements, unfunded credit protection or collateral for securitization tranches.

The current regulatory securitization framework requires the disclosure of banking book securitization positions as well as interest rate and currency derivative transactions related to securitization transactions independent of the assignment to banking or trading book.

### Regulatory Capital Calculation Methods

The Solvency Regulations, pursuant to Section 225 et seqq. SolV, establish the methodologies applied for regulatory capital calculation purposes for securitization positions. The regulatory framework basically provides two different approaches for the calculation of regulatory capital requirements: the securitization IRBA and the securitization standardized approach. Provided the Group has in place a regulatory approved rating system for the exposures in the underlying pool the securitization IRBA has to be used. The securitization standardized approach is only applied if the underlying pool mainly consists of exposures classes for which the Group does not have an approved rating system. Within the securitization IRBA the Group shall apply the ratings based approach ("RBA") if public external ratings are available. Eligible external issue ratings are taken from Standard & Poor's, Moody's and Fitch Ratings and in some cases from DBRS. If more than one rating is available for a specific securitization position, the selection criteria following a hierarchy structure as set forth in Section 236 et seqq. SolV are applied to determine the relevant risk weight for the capital calculation. The regulatory capital requirement for ABCP conduit securitization positions is calculated using the internal assessment approach ("IAA") for non-externally-rated exposure when applicable. The Group has received approval from the BaFin to apply the IAA to approximately 80 % of its ABCP conduit securitization exposure.

For securitization positions which do not have an eligible external rating or do not qualify for the IAA, the Group applies the inferred ratings method according to Section 256 SolV, or the supervisory formula approach (SFA), according to Section 258 SolV. In all other cases, the exposures are deducted from the Group's own funds. When applying the SFA, the Group estimates the risk parameters PD and LGD for the assets of the securitization portfolio, by using its internally developed rating systems approved for such assets. As in 2009 also in 2010 the Group developed new rating systems for homogenous pools of assets to be applied to assets that have not been originated by the Group. The rating systems are based on historical default and loss information from comparable assets. Risk parameters PD and LGD are derived on risk pool level.

In situations where the securitization standardized approach is applied for the capital calculation, the Group calculates the capital charge based on qualifying external ratings using the standardized risk weights as defined in the regulatory securitization framework. Qualifying external ratings are obtained from the rating agencies, Standard & Poor's, Moody's and Fitch Ratings and in some cases from DBRS. For unrated securitization positions in the securitization standardized approach the Group utilizes the alternative risk weight calculation, as outlined in Section 243 SolvV.

There is no securitization position for which the Group has applied the special provisions for originators of securitization transactions which include an investor's interest to be recognized by the originator pursuant to Section 245 et seqq. resp. Section 262 et seqq. SolvV.

### Regulatory Good Practice Guidelines

The European Banking Federation, the Association for Financial Markets in Europe (formerly London Investment Banking Association), the European Savings Banks Group and the European Association of Public Banks and Funding Agencies published the "Industry good practice guidelines on Pillar 3 disclosure requirements for securitization" in December 2008, which were slightly revised in 2009/2010. The Group's Pillar 3 disclosures are materially in compliance with these guidelines.

## 7.4 Securitization Details

The amounts reported in the following tables are based on the regulatory securitization framework. These amounts differ from, and are not directly comparable to, the amounts reported in the section "Special Purpose Entities" of the Management Report in the Group's Financial Report 2010, in particular due to the differences in the respective consolidation principles discussed above between IFRS accounting and regulatory consolidation frameworks.

The Group is only exposed to credit risks related to the exposures securitized, as shown below, to the extent it has retained or purchased any of the related securitization positions and the risk of the retained or purchased positions depends on the relative position in the waterfall of the securitization transaction.

The following table details the total outstanding exposure, i.e. the overall pool size, the Group has securitized in its capacity either as an originator or as a sponsor through traditional or synthetic securitization transactions split by exposure type. Within the originator column the table provides information on the underlying securitized asset pool which was either originated from the Group's balance sheet or acquired from third parties. The amounts reported are either the carrying values as reported in the Group's consolidated financial statements for synthetic securitizations or the current principal amount for traditional securitizations and off-balance-sheet exposures in synthetic transactions.

For sponsor relationships, the total outstanding exposures securitized reported in the tables below represent the principal notional amount of outstanding exposures of the entities issuing the securities and other receivables. The Group's exposure as of December 31, 2010, with regard to the € 169 billion total outstanding exposures securitized shown under the "Sponsor" columns was € 23.5 billion. The remaining exposure is held by third parties. As of December 31, 2009, the Group's maximum exposure with regard to € 237 billion total outstanding exposures securitized resulting from sponsoring activities amounted to € 23.5 billion. The decrease resulted primarily from a reduction in the exposure types of credit card receivables. The outstanding exposures securitized reported in the tables are derived using information received from servicer reports of the third parties that the conduits have the relationships with.

**Table 33 Outstanding Exposures Securitized by Exposure Type (Overall Pool Size)**

in € m.	Dec 31, 2010				Dec 31, 2009			
	Originator	Sponsor <sup>1</sup>	Originator	Sponsor <sup>1</sup>	Traditional	Synthetic	Traditional	Synthetic
	Traditional	Synthetic	Traditional	Synthetic	Traditional	Synthetic	Traditional	Synthetic
Residential mortgages	18,450	4,608	15,907	—	19,596	—	17,117	—
Commercial mortgages	18,877	—	8,702	—	15,611	—	1,276	—
Credit card receivables	—	—	356	—	—	—	90,970	—
Leasing	—	—	10,538	—	—	—	7,667	—
Loans to corporates or SMEs <sup>2</sup> (treated as corporates)	9,136	35,929	27,388	1,864	9,093	21,875	27,833	2,655
Consumer loans	—	—	35,478	—	—	—	24,813	—
Trade receivables	—	—	2,037	—	—	—	756	252
Securitizations (re-securitizations)	7,739	—	283	—	6,778	—	320	—
Other assets	—	5,793 <sup>3</sup>	65,445	527	—	19,506 <sup>3</sup>	62,994	527
<b>Total outstanding exposures securitized<sup>4</sup></b>	<b>54,202</b>	<b>46,330</b>	<b>166,134</b>	<b>2,391</b>	<b>51,078</b>	<b>41,381</b>	<b>233,746</b>	<b>3,434</b>

<sup>1</sup> Included under "Sponsor" are € 20 billion exposures securitized, of which the Group originated € 14 billion, equally included under "Originator" as of December 31, 2010, which amounted to € 12 billion and € 8 billion as of December 31, 2009, respectively.

<sup>2</sup> SMEs are small- or medium-sized entities.

<sup>3</sup> Includes EAD for derivative exposures securitized.

<sup>4</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

The following table gives details for outstanding exposures for which the Group is an originator or sponsor, showing the amount of impaired or past due exposures securitized by exposure type and, hence, the credit quality of the underlying securitization asset pool. For sponsor relationships, it is the total impaired and past due assets in the asset pool of the third party entities issuing the securities and other receivables to the sponsoring conduits that are reported in the tables. In case the Group is deemed the originator of a synthetic securitization impaired and past due exposures are determined in line with the Group's internal policies. For traditional securitizations and sponsor positions exposures which are 30 days or more past due are disclosed. The information was primarily derived from underlying positions' investor reports.

Separately, the table details losses the Group recognized in 2010 and 2009 for retained or purchased securitization positions as originator or sponsor by exposure type. The losses are those reported in the consolidated statement of income. The amounts are the actual losses in the underlying asset pool to the extent that these losses are allocated to the retained or purchased securitization positions held by the Group after considering any eligible credit protection. This applies to both traditional and synthetic transactions.

In case of the Group being considered an originator, the credit quality for the exposure type "Loans to corporate or SME", "Securitizations" and "Commercial mortgages" decreased in 2010, as reflected through an increase of impaired or past due loans of € 0.9 billion. For sponsor relationships, however, the exposures of impaired/past due loans decreased especially for the exposure type credit cards receivables by € 3.9 billion as of December 31, 2010.

**Table 34 Impaired and Past Due Exposures Securitized and Losses Recognized by Exposure Type (Overall Pool Size)**

in € m.	Dec 31, 2010		2010		Dec 31, 2009		2009	
	Impaired/past due		Losses		Impaired/past due		Losses	
	Originator	Sponsor <sup>1</sup>	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor
Residential mortgages	7,299	695	41	—	7,469	359	199	—
Commercial mortgages	376	277	8	—	145	—	—	—
Credit card receivables	—	51	—	—	—	3,933	—	—
Leasing	—	9	—	—	—	50	—	—
Loans to corporates or SMEs <sup>2</sup> (treated as corporates)	635	485	118	—	280	828	109	—
Consumer loans	—	1,789	—	—	—	1,896	—	—
Trade receivables	—	39	—	—	—	31	—	—
Securitizations (re-securitizations)	358	29	42	—	178	100	3	—
Other assets	—	610	—	—	—	510	—	—
<b>Total impaired and past due exposures securitized and losses recognized<sup>3</sup></b>	<b>8,668</b>	<b>3,984</b>	<b>209</b>	<b>—</b>	<b>8,072</b>	<b>7,707</b>	<b>311</b>	<b>—</b>

<sup>1</sup> Included under "Sponsor" are € 0.3 billion impaired and past due exposures securitized, of which the Group originated € 0.2 billion, equally included under "Originator" as of December 31, 2010.

<sup>2</sup> SMEs are small- or medium-sized entities.

<sup>3</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

The following table provides the amount of securitization positions retained or purchased by exposure type. Amounts reported are the regulatory exposure values prior to the application of credit risk mitigation.

The change in relation to prior year can be mainly characterized by two effects. The increase of the securitization positions in the exposure type residential mortgages of about € 4 billion or 50 % related to the consolidated Postbank exposure. The increase in the exposure type "Loans to corporates or SMEs" was related to the initial risk coverage the Group received under the terms and conditions of a 2010 acquisition. The decrease in the exposure type "other assets" results from de-recognizing a first loss credit default swap protection on a portfolio of derivative counterparty credit risk exposures.

**Table 35 Securitization Positions Retained or Purchased by Exposure Type**

in € m.	Dec 31, 2010	Dec 31, 2009
Residential mortgages	12,800	8,426
Commercial mortgages	7,193	5,624
Credit card receivables	428	494
Leasing	2,190	2,538
Loans to corporates or SMEs <sup>1</sup> (treated as corporates)	52,930	39,447
Consumer loans	9,145	6,178
Trade receivables	484	224
Securitizations (re-securitizations)	4,666	1,571
Other assets <sup>2</sup>	14,067	29,034
<b>Total securitization positions retained or purchased<sup>3</sup></b>	<b>103,903</b>	<b>93,536</b>

<sup>1</sup> SMEs are small- or medium-sized entities.

<sup>2</sup> Other assets consists mainly of the exposure types derivative counterparty risk exposures, wholesale inventory finance, future flow finance, and irrevocable capital commitments.

<sup>3</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

The following table provides a geographic breakdown of the securitization positions retained or purchased based on the country of domicile of the obligors of the exposures securitized. The securitization exposure backed by exposure in Europe increased by € 16 billion. The increase relates to the inclusion of the Postbank securitization positions in the Group disclosure on the one hand and the new executed European SME deal on the other hand.

**Table 36 Securitization Positions Retained or Purchased by Region**

in € m.	Dec 31, 2010	Dec 31, 2009
Europe	51,536	35,421
Americas	46,665	48,530
Asia/Pacific	5,229	9,357
Other	473	228
<b>Total securitization positions retained or purchased<sup>1</sup></b>	<b>103,903</b>	<b>93,536</b>

<sup>1</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

The table below shows the amount of securitization positions retained or purchased based on regulatory exposure values, prior to application of credit risk mitigation, broken down by risk weight bands for December 31, 2010, and December 31, 2009. In addition the resulting capital requirements by risk weight band are provided separately for the IRBA and the standardized approach.

While the reduction of the exposure amount in the risk weight band “≤ 10 %” is justified by the regulatory de-recognition of the protection on a portfolio of derivative counterparty risk exposures, the increase in the risk weight band “> 10 % ≤ 20 %” results mainly from the new execution of a European SME securitization transaction and the inclusion of Postbank. Moreover, the improvement of credit risk parameters for another transaction has led to a shift of a significant exposure amount from a category with higher risk weights. The increase in capital requirements in the “1250 % / Deduction” risk weight band results from the inclusion of Postbank, the new executed European SME deal and re-classifications of securitization positions from the Group’s regulatory trading book to the regulatory banking book.

**Table 37 Securitization Positions Retained or Purchased by Risk Weight Band**

in € m.	Dec 31, 2010			Dec 31, 2009		
	Exposure amount	Capital requirements, IRBA <sup>1</sup>	Capital requirements, standardized approach	Exposure amount	Capital requirements, IRBA <sup>1</sup>	Capital requirements, standardized approach
≤ 10 %	54,422	293	—	63,811	376	—
> 10 % ≤ 20 %	25,236	128	162	6,457	59	10
> 20 ≤ 50 %	9,982	353	25	11,324	317	12
> 50 ≤ 100 %	4,672	218	24	6,103	370	7
> 100 ≤ 650 %	2,027	281	22	3,030	305	73
> 650 < 1250 %	171	86	—	50	24	—
1250 % / Deduction	7,393	3,883	675	2,761	1,816	249
<b>Total securitization positions retained or purchased</b>	<b>103,903</b>	<b>5,242</b>	<b>908</b>	<b>93,536</b>	<b>3,267</b>	<b>351</b>

<sup>1</sup> After considering value adjustments according to Section 253 (3) and 268 (2) SolvV.

The following tables detail securitization activities undertaken during 2010 and 2009, the majority of which relates to renewed sponsor activity related to previously existing transactions. The tables show securitized exposure (i.e., the underlying pools) separately for originator and sponsor activities, broken down by exposure type and into traditional and synthetic transactions.

As already outlined in the introduction, the Group entered into a new securitization transactions referencing European SME claims, where the Group reports the retained tranches as securitization positions. This securitization, as well as the replacement of certain LEMG securitizations, materially comprises the Group's securitization activities as originator in 2010.

**Table 38 Securitization Activity – Total Outstanding Exposures Securitized by Exposure Type**

in € m.	Originator			Sponsor	
	Dec 31, 2010		2010	Dec 31, 2010	
	Traditional	Synthetic	Realized gains (losses) from sales/liquidations	Traditional	Synthetic
Residential mortgages	–	–	–	–	–
Commercial mortgages	204	–	–	–	–
Credit card receivables	–	–	–	356	–
Leasing	–	–	–	2,626	–
Loans to corporates or SMEs <sup>1</sup> (treated as corporates)	–	16,032	–	–	–
Consumer loans	–	–	–	16,943	–
Trade receivables	–	–	–	819	–
Securitizations (re-securitizations)	–	–	–	–	–
Other assets	–	–	–	4,696	–
<b>Total outstanding exposures securitized during 2010<sup>2</sup></b>	<b>204</b>	<b>16,032</b>	<b>–</b>	<b>25,440</b>	<b>–</b>

<sup>1</sup> SMEs are small- or medium-sized entities.

<sup>2</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

in € m.	Originator			Sponsor <sup>1</sup>	
	Dec 31, 2009		2009	Dec 31, 2009	
	Traditional	Synthetic	Realized gains (losses) from sales/liquidations	Traditional	Synthetic
Residential mortgages	–	–	–	–	–
Commercial mortgages	–	–	–	–	–
Credit card receivables	–	–	–	–	–
Leasing	–	–	–	605	–
Loans to corporates or SMEs <sup>2</sup> (treated as corporates)	460	2,657	(27)	3,196	–
Consumer loans	–	–	–	13,608	–
Trade receivables	–	–	–	–	–
Securitizations (re-securitizations)	–	–	–	–	–
Other assets	–	19,506 <sup>3</sup>	–	33,649	–
<b>Total outstanding exposures securitized during 2009<sup>4</sup></b>	<b>460</b>	<b>22,163</b>	<b>(27)</b>	<b>51,058</b>	<b>–</b>

<sup>1</sup> Included under "Sponsor" were € 0.7 billion exposures securitized, of which the Group originated € 0.5 billion, equally included under "Originator".

<sup>2</sup> SMEs are small- or medium-sized entities.

<sup>3</sup> Includes EAD for derivative exposures securitized.

<sup>4</sup> For a regulatory assessment of the Group's exposure to credit risk in relation to its securitization activity in the banking book see Table 37 "Securitization Positions Retained or Purchased by Risk Weight Band".

## 8. Trading Market Risk

The vast majority of the Group's businesses are subject to market risk, defined as the potential for change in the market value of the Group's trading and investing positions. Risk can arise from adverse changes in interest rates, credit spreads, foreign exchange rates, equity prices, commodity prices and other relevant parameters, such as market volatility.

Market risk arising from Postbank has been included in the 2010 information and where possible the Group's own risk methodology framework has been applied. Deutsche Bank, however, does not manage any market risk aspect of Postbank.

The primary objective of Market Risk Management is to ensure that the Group's business units optimize the risk-reward relationship and do not expose the Bank to unacceptable losses outside of the Group's risk appetite. To achieve this objective, Market Risk Management works closely together with risk takers (the business units) and other control and support groups. This is restricted to the Deutsche Bank Group excluding Postbank.

The Group differentiates between two substantially different types of market risk:

- Trading market risk arises primarily through the market-making activities of the Corporate & Investment Bank division. This involves taking positions in debt, equity, foreign exchange, other securities and commodities as well as in equivalent derivatives.
- Nontrading market risk in various forms: Equity risk arises primarily from non-consolidated strategic investments in the Corporate Investment portfolio, alternative asset investments and equity compensation. Interest rate risk stems from the Group's nontrading asset and liability positions. Other nontrading market risk elements are risks arising from asset management and fund related activities as well as model risks in PBC, GTB and PWM, which are derived by stressing assumptions of client behavior in combination with interest rate movements. Postbank categorizes risk from modeling deposits as business risk and risk from its building society BHW as collective risk whereas in Deutsche Bank Group excluding Postbank these risks are part of nontrading market risk.

### **Trading Market Risk Management Framework at Deutsche Bank Group (excluding Postbank)**

The Group's primary instrument to manage trading market risk is the limit setting process which is not applicable to Postbank. The Group's Management Board, supported by Market Risk Management, which is part of the Group's independent Legal, Risk & Capital function, sets Group-wide value-at-risk and economic capital limits for market risk in the trading book. Market Risk Management sub-allocates this overall limit to the Group's divisions and individual business areas within CIB (e.g., Global Rates, Equity, etc.) based on anticipated business plans and risk appetite. Within the individual business areas, the business heads may establish business limits by sub-allocating the Market Risk Management limit down to individual portfolios or geographical regions.

Value-at-risk and economic capital limits are used for managing all types of market risk at an overall portfolio level. In addition, Market Risk Management operates sensitivity and concentration/liquidity limits as an additional and complementary tool for managing certain portfolios or risk types. A distinction is made between Market Risk Management limits and business limits for sensitivities and concentration/liquidity. In practice, the Market Risk Management limits are likely to be a relatively small number of key limits necessary to capture an exposure to a particular risk factor and will tend to be global in nature rather than for any particular geographical region or specific portfolios.

To manage the exposures inside the limits, the risk takers apply several risk mitigating measures, most notably the use of:

- **Portfolio management:** Risk diversification arises in portfolios which consist of a variety of positions. Because some investments are likely to rise in value when others decline, diversification can help to lower the overall level of risk profile of a portfolio.
- **Hedging:** Hedging involves taking positions in related financial assets, including derivative products, such as futures, swaps and options. Hedging activities may not always provide effective mitigation against losses due to differences in the terms, specific characteristics or other basis risks that may exist between the hedge instrument and the exposure being hedged.

In 2010, the Group continued to invest heavily in the Group's market risk management function and increased the Group's staffing level by close to 30 %. The Group has added specific market risk management resources in key asset class areas, further built out the Group's central teams and established a dedicated change management function.

### Trading Market Risk Management Framework at Postbank

The Market Risk Management framework at Postbank is based on the following key principles: In general, Postbank's Financial Markets division manages trading market risk centrally based on separately defined risk limits for Deutsche Postbank AG and its foreign subsidiary Luxembourg.

The aggregate limits are set by the Management Board of Postbank and allocated by the Market Risk Committee to the individual operating units as sub-limits. The allocation mechanism for market risk limits at Postbank is similar to Deutsche Bank's Economic Capital approach. The risk capital limits allocated to specific business activities represent the level of market risk that is reasonable and desirable for Postbank from an earnings perspective.

On a day-to-day basis, market risk at Postbank is monitored through a system of limits based on the Value-at-Risk methodology. In addition, Postbank's Market Risk Committee has defined sensitivity limits for the trading and banking book as well as for specific subportfolios.

### Quantitative Risk Management Tools

#### Value-at-Risk at Deutsche Bank Group (excluding Postbank)

Value-at-risk is a quantitative measure of the potential loss (in value) of trading positions due to market movements that will not be exceeded in a defined period of time and with a defined confidence level.

The Group's value-at-risk for the trading businesses is based on the Group's own internal value-at-risk model. In October 1998, the German Banking Supervisory Authority (now the BaFin) approved the Group's internal value-at-risk model for calculating the regulatory market risk capital for the Group's general and specific market risks, which are not applied to Postbank. Since then the model has been periodically refined and approval has been maintained.

The Group calculates value-at-risk using a 99 % confidence level and a holding period of one day. This means the Group estimates there is a 1 in 100 chance that a mark-to-market loss from the Group's trading positions will be at least as large as the reported value-at-risk. For regulatory reporting, the holding period is ten days.

The Group uses historical market data to estimate value-at-risk, with an equally-weighted 261 trading day history. The calculation employs a Monte Carlo Simulation technique, and the Group assumes that changes in risk factors follow a certain distribution, e.g., normal or logarithmic normal distribution. To determine the Group's aggregated value-at-risk, the Group uses observed correlations between the risk factors during this 261 trading day period.

The Group's value-at-risk model is designed to take into account the following risk factors: interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices, as well as their implied volatilities and common basis risk. The model incorporates both linear and, especially for derivatives, nonlinear effects of the risk factors on the portfolio value.

The value-at-risk measure enables the Group to apply a constant and uniform measure across all of the Group's trading businesses and products. It allows a comparison of risk in different businesses, and also provides a means of aggregating and netting positions within a portfolio to reflect correlations and offsets between different asset classes. Furthermore, it facilitates comparisons of the Group's market risk both over time and against its daily trading results.

When using value-at-risk estimates a number of considerations should be taken into account. These include the following:

- The use of historical market data may not be a good indicator of potential future events, particularly those that are extreme in nature. This 'backward-looking' limitation can cause value-at-risk to underestimate risk (as in 2008), but can also cause it to be overstated.
- Assumptions concerning the distribution of changes in risk factors, and the correlation between different risk factors, may not hold true, particularly during market events that are extreme in nature. There is no standard value-at-risk methodology to follow and different assumptions would produce different results.
- The one day holding period does not fully capture the market risk arising during periods of illiquidity, when positions cannot be closed out or hedged within one day.
- Value-at-risk does not indicate the potential loss beyond the 99th quantile.
- Intra-day risk is not captured.
- There may be risks in the trading book that are either not or not fully captured by the value-at-risk model.

The Group continuously analyzes potential weaknesses of its value-at-risk model using statistical techniques such as back-testing, but also rely on risk management experience and expert opinion. Back-testing provides an analysis of the predictive power of the value-at-risk calculations based on actual experience. The Group compares the hypothetical daily profits and losses under the buy-and-hold assumption (in accordance with German regulatory requirements) with the estimates from the Group's value-at-risk model.

A committee with participation from Market Risk Management, Market Risk Operations, Risk Analytics and Instruments, Finance and others meets on a quarterly basis to review back-testing results of the Group as a whole and on individual businesses. The committee analyzes performance fluctuations and assesses the predictive power of the Group's value-at-risk model, which in turn allows the Group to improve and adjust the risk estimation process accordingly.

The Group is committed to the ongoing development of its proprietary risk models, and the Group allocates substantial resources to reviewing and improving them. Special attention is given to improving those parts of the value-at-risk model that relate to the areas where losses have been experienced in the recent past. During 2010, improvements were made to the value-at-risk calculation, including the following:

- Inclusion of Equity Dividend Risk
- Refined methodology for securitization positions
- Inclusion of the market risk of Sal. Oppenheim and BHF-BANK

In addition, the Group has introduced a process of systematically capturing and evaluating immaterial risks currently not captured in the Group's value-at-risk model.

### **Value-at-Risk at Postbank**

The Postbank also uses the value-at-risk concept to quantify and monitor the market risk it assumes. Postbank also uses a Monte Carlo Simulation for calculation of trading book risks across all portfolios, transforming heterogeneous types of market risk into a single measure of risk. The risk factors taken into account in the value-at-risk include yield curves, equity prices, foreign exchange rates, and volatilities, along with risks arising from changes in credit spreads. Correlation effects between the risk factors are derived from historical data.

The Postbank value-at-risk is currently not consolidated into the value-at-risk of the remaining Group.

### **Economic Capital for Market Risk**

Economic capital for market risk measures the amount of capital the Group needs to absorb very severe unexpected losses arising from the Group's exposures over the period of one year. "Very severe" in this context means that economic capital is set at a level to cover with a probability of 99.98% the aggregated unexpected losses within one year. The market risks from Postbank have been modeled into the Group's Economic Capital results.

The Group calculates economic capital using stress tests and scenario analyses. The stress tests are derived from historically observed severe market shocks. The resulting losses from these stress scenarios are then aggregated using correlations observed during periods of market crises, to reflect the increase in correlations which occurs during severe downturns.

The stress tests are augmented by subjective assessments where only limited historical data is available, or where market developments lead the Group to believe that historical data may be a poor indicator of possible future market scenarios.

The calculation of economic capital for market risk from the trading units is performed weekly. The model incorporates the following risk factors: interest rates, credit spreads, equity prices, foreign exchange rates and commodity prices. Volatility, credit correlation and common basis risks are also captured.

During the course of 2010 the Group also implemented significant methodology enhancements to the Group's economic capital model, including the following:

- Extension of stress tests for securitization and correlation risk
- Improved granularity for equity dividend and stock borrow risk
- Enhanced coverage of basis risks

The Group's stress testing results and economic capital estimations are necessarily limited by the number of stress tests executed and the fact that not all downside scenarios can be predicted and simulated. While the Group's risk managers have used their best judgment to define worst case scenarios based upon the knowledge of past extreme market moves, it is possible for the Group's market risk positions to lose more value than even the Group's economic capital estimates. The Group also continuously assesses and refines its stress tests in an effort to ensure they capture material risks as well as reflect possible extreme market moves.

Postbank also performs scenario analyses and stress tests in addition to the value-at-risk calculations. The assumptions underlying the stress tests are validated on an ongoing basis.

#### **Value-at-Risk of Trading Units of the Corporate & Investment Bank Group Division**

The following table shows the value-at-risk (with a 99 % confidence level and a one-day holding period) of the trading units of the Group's Corporate & Investment Bank Group Division but excluding the value-at-risk of Postbank. The Group's trading market risk outside of these units excluding Postbank is immaterial. "Diversification effect" reflects the fact that the total value-at-risk on a given day will be lower than the sum of the values-at-risk relating to the individual risk classes. Simply adding the value-at-risk figures of the individual risk classes to arrive at an aggregate value-at-risk would imply the assumption that the losses in all risk categories occur simultaneously.

**Table 39 Value-at-Risk of CIB Trading Units by Risk Type**

in € m.	Dec 31, 2010	Dec 31, 2009
Interest rate risk	77.4	111.0
Equity price risk	21.3	37.0
Foreign exchange risk	29.0	23.9
Commodity price risk	13.3	14.8
Diversification effect	(70.1)	(65.7)
<b>Total</b>	<b>70.9</b>	<b>121.0</b>

The following table shows the maximum, minimum and average value-at-risk (with a 99 % confidence level and a one-day holding period) of the trading units of the Corporate & Investment Bank Group Division for the periods specified excluding the value-at-risk of Postbank.

**Table 40 Value-at-Risk of CIB Trading Units in the Reporting Period**

in € m.	Total		Diversification effect		Interest rate risk		Equity price risk		Foreign exchange risk		Commodity price risk	
	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009
Average	95.6	126.8	(48.6)	(61.6)	86.8	117.6	21.9	26.9	22.9	28.7	12.7	15.1
Maximum	126.4	180.1	(88.5)	(112.3)	113.0	169.2	33.6	47.3	46.4	64.4	21.2	34.7
Minimum	67.5	91.9	(26.4)	(35.9)	65.8	83.2	13.6	14.5	10.8	11.9	6.2	8.5

The Group's value-at-risk for the trading units remained within a band between € 67.5 million and € 126.4 million. The average value-at-risk in 2010 was € 95.6 million, which is 25 % below the 2009 average of € 126.8 million.

The decrease in average Value-at-Risk observed in 2010 was driven primarily by reduced risk taking and lower historical volatilities. In addition, the trading business continued with the recalibration of its business model towards taking less risk in illiquid or complex exposures.

The following table shows the value-at-risk of Postbank's trading book (with a 99 % confidence level and a one-day holding period). "Diversification effect" reflects the fact that the total value-at-risk on a given day will be lower than the sum of the values-at-risk relating to the individual risk classes. Simply adding the value-at-risk figures of the individual risk classes to arrive at an aggregate value-at-risk would imply the assumption that the losses in all risk categories occur simultaneously.

**Table 41 Value-at-Risk of Postbank**

in € m.	Dec 31, 2010
Interest rate risk	1.8
Equity price risk	0.2
Foreign exchange risk	0.0
Commodity price risk	—
Diversification effect	(0.0)
Total	2.0

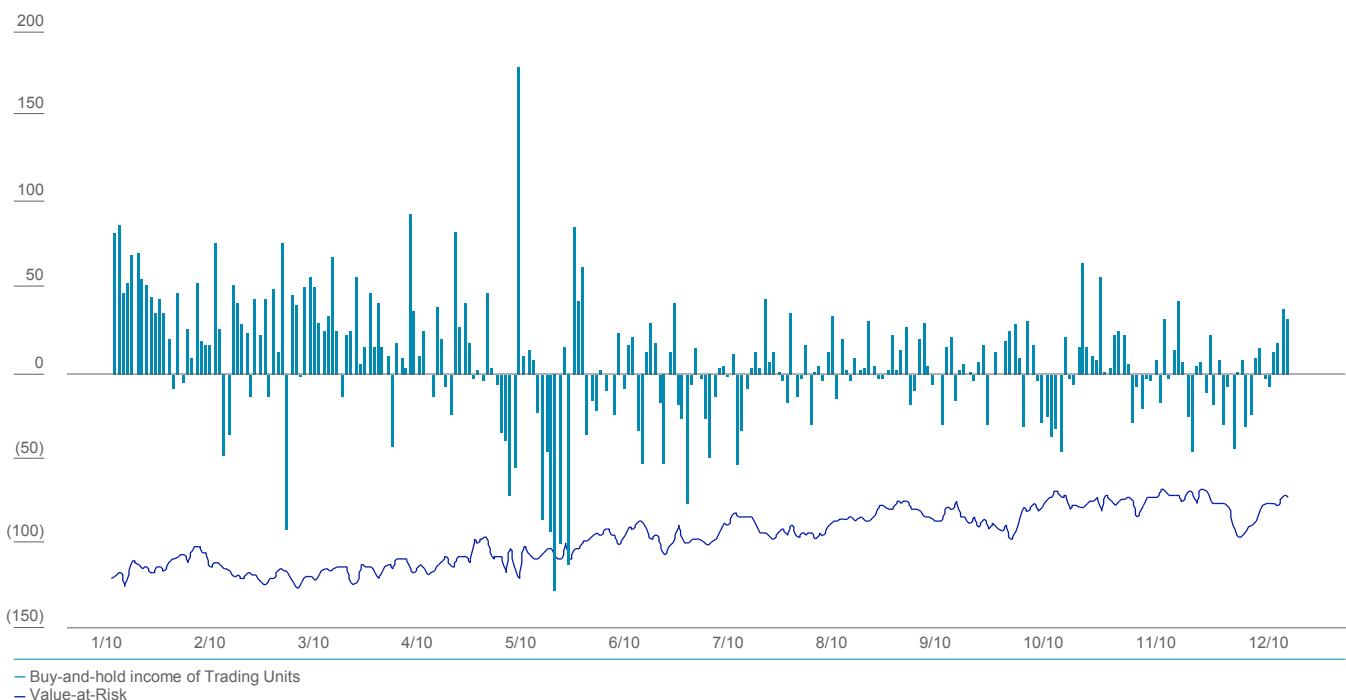
### Regulatory Backtesting of Trading Market Risk

Backtesting is a procedure used to verify the predictive power of the value-at-risk calculations involving the comparison of hypothetical daily profits and losses under the buy-and-hold assumption with the estimates from the value-at-risk model. An outlier is a hypothetical buy-and-hold trading loss that exceeds the Group's value-at-risk estimate. On average, the Group would expect a 99 percent confidence level to give rise to two to three outliers in any one year. In the Group's regulatory back-testing in 2010, the Group observed two outliers compared to one in 2009. Both outliers occurred in late May following increased market volatility. The Group continues to believe that, due to the significant improvement in methodology, calculation parameters and the model performance achieved since the market turmoil, the Group's value-at-risk model will remain an appropriate measure for the Group's trading market risk under normal market conditions.

The following graph shows the daily buy-and-hold trading results in comparison to the value-at-risk as of the close of the previous business day. Both figures are shown in millions of Euro and exclude the Postbank value-at-risk calculated on a stand-alone basis.

**Buy-and-hold income of Trading Units and Value-at-Risk in 2010**

in € m.

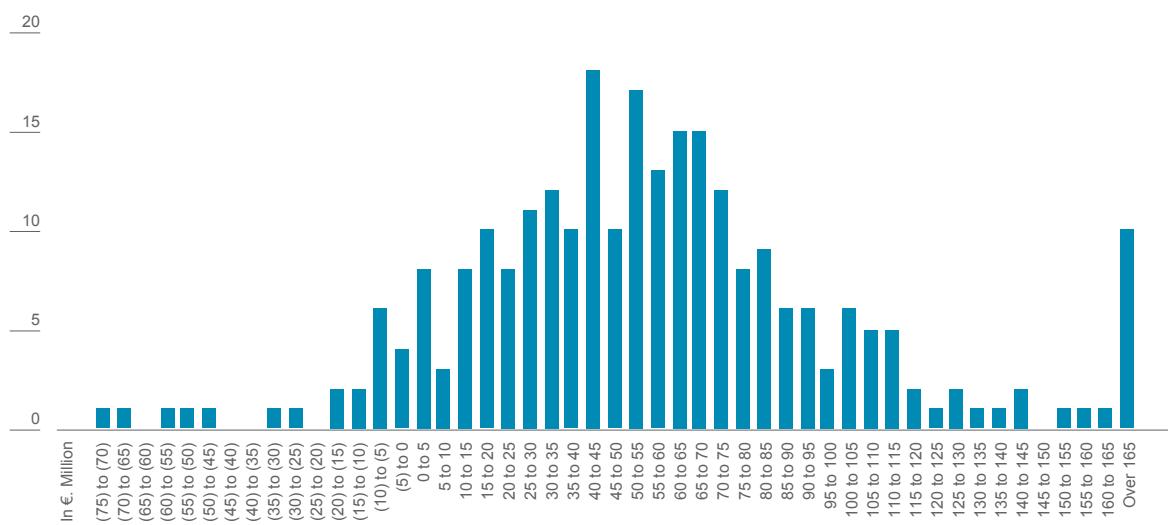


## Daily Income of the Group's Trading Units in 2010

The following histogram shows the distribution of daily income of the Group's trading units in 2010 (excluding Postbank). It displays the number of trading days on which the Group reached each level of trading income shown on the horizontal axis in millions of euro.

**Income of Trading Units in 2010**

Days



The Group's trading units achieved a positive actual income for 92 % of the trading days in 2010 (versus 91 % in 2009).

## Economic Capital Usage for the Group's Trading Market Risk

The economic capital usage for market risk arising from the trading units totaled € 6.4 billion at year-end 2010 compared with € 4.6 billion at year-end 2009. Traded default risk increased by € 1.0 billion primarily from model refinements and more conservative liquidity assumptions. Traded market risk increased by € 0.8 billion, driven by model improvements with some partial offset from a reduction in legacy credit exposure. Postbank's contribution to the Group's economic capital usage for its trading market risk was minimal.

## Valuation of Market Risk Positions

A substantial percentage of the Group's financial assets and liabilities carried at fair value are based on, or derived from, observable prices or inputs. The availability of observable prices or inputs varies by product and market, and may change over time. For example, observable prices or inputs are usually available for: liquid securities; exchange traded derivatives; over the counter (OTC) derivatives transacted in liquid trading markets such as interest rate swaps, foreign exchange forward and option contracts in G7 currencies; and equity swap and option contracts on listed securities or indices. If observable prices or inputs are available, they are utilized in the determination of fair value and, as such, fair value can be determined without significant judgment. This includes instruments for which the fair value is derived from a valuation model that is standard across the industry and the inputs are directly observable. This is the case for many generic swap and option contracts.

In other markets or for certain instruments, observable prices or inputs are not available, and fair value is determined using valuation techniques appropriate for the particular instrument. For example, instruments subject to valuation techniques include: trading loans and other loans or loan commitments designated at fair value through profit or loss, under the fair value option; new, complex and long-dated OTC derivatives; transactions in immature or limited markets; distressed debt securities and loans; private equity securities and retained interests in securitizations of financial assets. The application of valuation techniques to determine fair value involves estimation and management judgment, the extent of which will vary with the degree of complexity and liquidity in the market. Valuation techniques include industry standard models based on discounted cash flow analysis, which are dependent upon estimated future cash flows and the discount rate used. For more complex products, the valuation models include more complex modeling techniques, parameters and assumptions, such as volatility, correlation, prepayment speeds, default rates and loss severity. Management judgment is required in the selection and application of the appropriate parameters, assumptions and modeling techniques. Because the objective of using a valuation technique is to establish the price at which market participants would currently transact, the valuation techniques incorporate all factors that the Group believes market participants would consider in setting a transaction price.

Valuation adjustments are an integral part of the fair value process that requires the exercise of judgment. In making appropriate valuation adjustments, the Group follows methodologies that consider factors such as bid-offer spread valuation adjustments, liquidity, and credit risk (both counterparty credit risk in relation to financial assets and the Group's own credit risk in relation to financial liabilities which are at fair value through profit or loss).

The fair value of the Group's financial liabilities which are at fair value through profit or loss (e.g., OTC derivative liabilities and structured note liabilities designated at fair value through profit or loss) incorporates the change in the Group's own credit risk of the financial liability. For derivative liabilities the Group considers its own credit-worthiness by assessing all counterparties' potential future exposure to the Group, taking into account any collateral provided, the effect of any master netting agreements, expected loss given default and the Group's own credit risk based on historic default levels. The change in the Group's own credit risk for structured note liabilities is calculated by discounting the contractual cash flows of the instrument using the rate at which similar instruments would be issued at the measurement date. The resulting fair value is an estimate of the price at which the specific liability would be exchanged at the measurement date with another market participant.

Under IFRS, if there are significant unobservable inputs used in the valuation technique as of the trade date the financial instrument is recognized at the transaction price and any trade date profit is deferred. Management judgment is required in determining whether there exist significant unobservable inputs in the valuation technique. Once deferred the decision to subsequently recognize the trade date profit requires a careful assessment of the then current facts and circumstances supporting observability of parameters and/or risk mitigation.

The Group has established internal control procedures over the valuation process to provide assurance over the appropriateness of the fair values applied. If fair value is determined by valuation models, the assumptions and techniques within the models are independently validated by a specialist group. Price and parameter inputs, assumptions and valuation adjustments are subject to verification and review processes. If the price and parameter inputs are observable, they are verified against independent sources.

If prices and parameter inputs or assumptions are not observable, the appropriateness of fair value is subject to additional procedures to assess its reasonableness. Such procedures include performing revaluations using independently generated models, assessing the valuations against appropriate proxy instruments, performing sensitivity analysis and extrapolation techniques, and considering other benchmarks. Assessment is made as to whether the valuation techniques yield fair value estimates that are reflective of the way the market operates by calibrating the results of the valuation models against market transactions. These procedures require the application of management judgment.

Other valuation controls include review and analysis of daily profit and loss, validation of valuation through close out profit and loss and Value-at-Risk back-testing.

## 9. Nontrading Market Risk

### 9.1 Equity Investments in the Banking Book

Equity investments which are neither consolidated for regulatory purposes nor deducted from the Group's own funds are held as equity positions in the regulatory banking book. In the Group's consolidated balance sheet, these equity investments are either classified as "Financial assets available for sale ("AFS")" or "Equity method investments". An immaterial amount of financial assets designated at fair value through profit and loss which are equity interests is included in the banking book. These investments are not addressed in the following chapters.

#### Accounting and Valuation Policies for Equity Investments

AFS equity instruments are initially recognized at fair value plus transaction costs that are directly attributable to the acquisition of that financial asset. Financial assets classified as AFS are carried at fair value with the changes in fair value generally reported in equity unless the asset is subject to a fair value hedge or is impaired. At each balance sheet date, management assesses whether there is objective evidence that an individual asset is impaired. Objective evidence of impairment includes a significant or prolonged decline in the fair value of the investment below cost. The amount of impairment is the difference between the acquisition cost and current fair value of the asset less any previously recognized impairment. Impairments of AFS equity investments cannot be reversed. Increases in their fair value after impairment are recognized in equity.

Consistent with the valuation of financial instruments, fair value of equity securities is initially and subsequently determined using quoted prices in active markets or valuation techniques, where prices quoted in active markets are not available.

The Group reports investments in associates and joint ventures under the equity method of accounting. Equity method investments are initially recorded at cost, and subsequently increased (or decreased) to reflect both the Group's pro-rata share of the post-acquisition net income (or loss) and other movements included directly in the equity of the entity. Goodwill arising on the acquisition is included in the carrying value of the investment (net of any accumulated impairment loss). At each balance sheet date, the Group assesses whether there is any objective evidence that the investment in an associate or jointly controlled entity is impaired. If there is objective evidence of impairment, an impairment test is performed by comparing the investment's recoverable amount, which is the higher of its value in use and fair value less costs to sell, with its carrying amount. Equity method losses in excess of the Group's carrying value of the investment in the entity are charged against other assets held by the Group related to the investee. If those assets are written down to zero, a determination is made whether to report additional losses based on the Group's obligation to fund such losses.

For further detail on the Group's accounting and valuation policies related to equity investments please refer to Notes 01 "Significant Accounting Policies", 14 "Financial Instruments carried at Fair Value" and 17 "Equity Method Investments" in the Group's Financial Report 2010.

## Equity Investments Held

The following table presents the Group's equity investments separately for AFS and equity method investments and further broken down into exchange-traded and non-exchange-traded positions based on their carrying value. A disparity between the carrying value of the investment positions and their fair value was only observable for the exchange-traded equity method investments, which had a carrying value of € 280 million and a fair value of € 561 million as of December 31, 2010.

**Table 42 Equity Investments According to IFRS Classification**

in € m. <sup>1, 2</sup>	Carrying value	
	Dec 31, 2010	Dec 31, 2009
<b>Financial assets available for sale equity investments</b>		
Exchange-traded positions	<b>2,984</b>	<b>3,078</b>
Non-exchange-traded positions <sup>3</sup>	608	690
	<b>2,376</b>	2,388
<b>Equity method investments</b>		
Exchange-traded positions	<b>2,661</b>	<b>7,770</b>
Non-exchange-traded positions <sup>3</sup>	280	6,066
	<b>2,381</b>	1,704
<b>Total equity investments</b>	<b>5,645</b>	<b>10,848</b>

<sup>1</sup> Equity investments held by entities, which are consolidated for IFRS purposes but not consolidated for regulatory purposes, are included in the table. Entities holding equity investments which are considered for regulatory purposes but not consolidated according to IFRS, do not provide IFRS balance sheet and profit or loss information, and are excluded from this table. The regulatory exposure value ("EAD") of these excluded equity investments amounted to € 93 million as of December 31, 2010, and € 54 million as of December 31, 2009.

<sup>2</sup> Other positions like equity underlyings resulting from derivative transactions or certain subordinated bonds which are also assigned to the exposure class "Equity in the banking book" are excluded from the table. Their EAD amounted to € 1.1 billion as of December 31, 2010, and € 1.2 billion as of December 31, 2009.

<sup>3</sup> The "Non-exchange-traded positions" combine the two equity classes "Non-exchange-traded, but belonging to an adequately diversified equity portfolio" and "Other equity positions" according to Section 78 SolvV.

In addition to the above, the Group's regulatory requirements consider € 6.7 billion EAD as of December 31, 2010, and € 4.7 billion EAD as of December 31, 2009, in respect of equity investments which are Group-internal from an IFRS perspective.

As of December 31, 2009, the most significant equity investment held in the banking book was the stake in Deutsche Postbank AG, Bonn. Prior to obtaining control, the Group directly held a 29.95 % of the shares and voting rights of Deutsche Postbank AG, giving it the ability to significantly influence Postbank's financial and operating policies. Accordingly, this investment was accounted for using the equity method. In settling the takeover offer on December 3, 2010 and together with Deutsche Postbank AG shares held before the public takeover offer, the Group gained a controlling majority by directly holding 113.7 million Deutsche Postbank AG shares, equal to 51.98 % of all voting rights in Deutsche Postbank AG. For further details on the Postbank acquisition please refer to Note 04 "Acquisitions and Dispositions" in the Group's Financial Report 2010.

The table below summarizes the realized and unrealized gains and losses resulting from equity investments. For AFS – equity investments, the components considered are realized gains and losses from sales and liquidations as well as unrealized revaluation gains and losses and impairments. For equity method investments, the gain and loss elements consist of realized gains and losses from sales and liquidations, pro-rata share of net income (loss), impairments and unrealized revaluation gains (losses) in form of the differences between carrying amounts and fair values. In this respect, the realized gains (losses) on disposals, the impairments and the pro-rata share of net income (loss) are referring to the reporting period 2010 and 2009 whereas the unrealized revaluation gains (losses) as well as the difference between the carrying values and the fair values for the at equity investments represent the amounts as of December 31, 2010, and December 31, 2009.

**Table 43 Realized Gains (Losses) in the Reporting Period and Unrealized Gains (Losses) at Year-end from Equity Investments**

in € m. <sup>1,2</sup>	2010	2009
Gains and losses on disposal	218	464
Impairments <sup>3</sup>	(2,551)	(979)
Pro-rata share of net income (loss)	457	189
<b>Total realized gains (losses) from equity investments</b>	<b>(1,876)</b>	<b>(326)</b>
	Dec 31, 2010	Dec 31, 2009
Unrealized revaluation gains (losses) <sup>4</sup>	641	616
Difference between carrying value and fair value	280	(2,272)
<b>Total unrealized gains (losses) from equity investments</b>	<b>921</b>	<b>(1,656)</b>

<sup>1</sup> Equity investments held by entities, which are consolidated for IFRS purposes but not consolidated for regulatory purposes, are included in the table. Entities holding equity investments which are considered for regulatory purposes but not consolidated according to IFRS, do not provide IFRS balance sheet and profit or loss information, and are excluded from this table. The regulatory exposure value ("EAD") of these excluded equity investments amounted to € 93 million as of December 31, 2010, and € 54 million as of December 31, 2009.

<sup>2</sup> Other positions like equity underlying resulting from derivative transactions or certain subordinated bonds which are also assigned to the exposure class "Equity in the banking book" are excluded from the table. Their EAD amounted to € 1.1 billion as of December 31, 2010, and € 1.2 billion as of December 31, 2009.

<sup>3</sup> The increased impairment charge as of December 31, 2010, compared to December 31, 2009, resulted from the revaluation of the previous equity method investment in Deutsche Postbank AG. In 2010 a charge of approximately € 2.3 billion attributable to the equity method investment in Deutsche Postbank AG prior to consolidation was included (for further details refer to Note 04 "Acquisitions and Dispositions" in the Group's Financial Report 2010).

<sup>4</sup> These are revaluation gains (losses) related to equity investments. Overall the unrealized gains (losses) on listed securities as to be determined for regulatory purposes were € 498 million as of December 31, 2010, 45 % of which were included in Tier 2 capital, and € 736 million as of December 31, 2009, 45 % of which were included in Tier 2 capital.

The Group holds equity investments with the intent to realize profits by taking advantage of market opportunities as well as for strategic reasons. Only a smaller part of the investments are intended to support a specific business strategy of a business division as part of a complex customer transaction.

From a management point of view, the following group divisions assume responsibility for equity investments the Group entered into:

- **The Corporate Investments Group Division ("CI")** manages the global principal investment activities of the Group. The principal investment activities include certain credit exposures, certain private equity and venture capital investments, certain private equity fund investments, certain corporate real estate investments, the industrial holdings of the Group and certain other non-strategic investments. Historically, the mission of CI has been to provide financial, strategic, operational and managerial capital to enhance the values of the portfolio companies in which the group division has invested.
- **The group divisions Corporate & Investment Bank and Private Clients & Asset Management** mainly hold investments in the bank's alternative asset portfolio for profit realization as well as for strategic reasons.

## 9.2 Interest Rate Risk in the Banking Book

### Assessment of Market Risk in Nontrading Portfolios excluding Postbank – Interest Rate Risk

With the exception of some entities in the Private & Business Clients corporate division in Germany, the Private Wealth Management mortgage business in the U.S., and financing structures of strategic acquisitions in Corporate Investments the Group's interest rate risk arising from nontrading asset and liability positions has been transferred through internal transactions to the Markets Business division within the Corporate & Investment Bank group division, and is managed on the basis of value-at-risk, as reflected in trading value-at-risk numbers. The treatment of interest rate risk in the Group's trading portfolios and the application of the value-at-risk model are discussed in Chapter 8 "Trading Market Risk".

The Group's Private & Business Clients corporate division, a nontrading division, and the business division Private Wealth Management manage interest rate risk for the above mentioned entities separately through dedicated Asset and Liability Management departments. The measurement of the interest rate risk by Asset and Liability Management Private & Business Clients is performed daily and for Private Wealth Management weekly. Interest Rate Risk from strategic acquisition financing structures within the Corporate Investment division is monitored quarterly.

The nature of interest rate risks in the banking book stems from residual asset/liability mismatches. Measuring interest rate risks in the banking book is based upon key assumptions regarding client behavior, future availability of deposit balances and sensitivities of deposit rates versus market interest rates resulting in a longer than contractual effective duration. Those assumptions are being stressed within the Group's economic capital framework. Further assumptions are being made regarding early pre-payment behavior for loan products. The assumptions are based on historical observations, statistical analyses and expert assessments. If the future evolution of balances, rates or client behavior differ from these assumptions, then this could have an impact on the Group's interest rate risks in the banking book.

The changes of present values of the banking book positions when applying the regulatory required parallel yield curve shifts of (190) and +130 basis points are below 1 % of the Group's total regulatory capital. Consequently, interest rate risk in the banking book is considered immaterial for the Group excluding Postbank.

#### **Assessment of Interest Rate Risk in the Banking Book of Postbank**

For Postbank, the interest rate risk in the banking book is calculated by taking into account all interest-bearing balance sheet items and interest-sensitive off-balance sheet items in accordance with their internal management and models. Measuring interest rate risks in the banking book is based upon key assumptions in particular regarding client behavior with respect to deposits' effective duration and loan prepayments. The majority of interest rate risk is measured daily. When applying the regulatory required parallel yield curve shifts of (190) and +130 basis points to the Postbank banking book, the daily changes in value during 2010 remained in all cases below the regulatory reporting threshold of 20 % of regulatory capital. The changes of present values of the banking book positions when applying the regulatory required parallel yield curve shifts of (190) and +130 basis points are below 5 % of Postbank's total regulatory capital.

#### **Assessment of the total Interest Rate Risk in the Banking Book of the Group including Postbank**

The changes of present values of the banking book positions when applying the regulatory required parallel yield curve shifts of (190) and +130 basis points are below 1 % of the Group's total regulatory capital. Consequently, interest rate risk in the banking book is considered immaterial for the Group including Postbank.

### 9.3 Nontrading Market Risk Management

The market risk component of the Group's nontrading activities is overseen by dedicated Nontrading Market Risk Management units. These teams assume responsibility in particular for the management of equity and interest rate risk in the banking book which is described in more detail in Chapters 9.1 "Equity Investments in the Banking Book" and 9.2 "Interest Rate Risk in the Banking Book" above.

A further area of focus is the structural foreign exchange risk exposure – a significant contribution to the Group's foreign exchange risk in its nontrading portfolio – resulting from unhedged capital and retained earnings in non-euro currencies in certain subsidiaries, mainly U.S. and U.K. entities.

The Group's Nontrading Market Risk Management units oversee a number of risk exposures resulting from various business activities and initiatives. Due to the complexity and variety of risk characteristics in the area of nontrading market risks, the responsibility of risk management is split into three teams:

- The Nontrading Market Risk Management team within the Group's Market Risk Management function covers market risks in PBC, GTB, PWM and Corporate Investments as well as structural foreign exchange risks, equity compensation risks and pension risks.
- The Principal Investments team within the Group's Credit Risk Management function is specialized in risk-related aspects of the Group's nontrading alternative asset activities and performs monthly reviews of the risk profile of the nontrading alternative asset portfolios.
- The Asset Management Risk unit within the Group's Credit Risk Management function is specialized in risk-related aspects of the Group's asset and fund management business. Noteworthy risks in this area arise, for example, from performance and/or principal guarantees and reputational risk related to managing client funds.

The consolidation of Postbank in December 2010 has resulted in a significant change in the Group's equity risk profile from nontrading activities. Previously an economic capital charge was calculated to the Group's Strategic Investment Portfolio purely based on the size of the Group's minority stake. Since consolidation, economic capital for all risk categories (credit risk, trading and nontrading market risk, operational risk and business risk) of the entire Postbank is included in the Group's reporting.

The majority of the interest rate and foreign exchange risks arising from Deutsche Bank's nontrading asset and liability positions, excluding Postbank, has been transferred through internal hedges to trading books within the Corporate & Investment Bank and is thus reflected and managed through the value-at-risk numbers. Of the remaining risks that have not been transferred through those hedges foreign exchange risk is mitigated through match funding the investment in the same currency and only residual risk remains in the portfolios. For these residual positions there is immaterial interest rate risk remaining from the mismatch between the funding term and the expected maturity of the investment. In contrast to above approach, Postbank carries the majority of its open interest rate risk in the banking book. While this interest rate position is material on a Postbank standalone basis, the impact is immaterial when aggregated with Deutsche Bank's risk positions.

However, there is an important exception with respect to foreign exchange risk, which the Group refers to as structural foreign exchange risk exposure. This exposure arises from capital and retained earnings in non Euro currencies in certain subsidiaries, mainly U.S. and U.K. entities and represents the bulk of foreign exchange risk in the Group's nontrading portfolio.

In addition to the above risks, the Group's Nontrading Market Risk Management function also has the mandate to monitor and manage risks arising from the Group's equity compensation plans and pension liabilities. It also manages risks related to asset management activities, primarily resulting from guaranteed funds. Moreover, the Group's PBC, GTB and PWM businesses are subject to modeling risk with regard to client deposits. This risk materializes if client behavior in response to interest rate movements deviates substantially from the historical norm.

The Capital and Risk Committee supervises the Group's nontrading market risk exposures. Investment proposals for strategic investments are analyzed by the Group Investment Committee. Depending on the size, any strategic investment requires approval from the Group Investment Committee, the Management Board or the Supervisory Board. The development of strategic investments is monitored by the Group Investment Committee on a regular basis. Multiple members of the Capital and Risk Committee are also members of the Group Investment Committee, ensuring a close link between both committees.

### **Assessment of Market Risk in the Group's Nontrading Portfolios**

Due to the generally static nature of these positions the Group does not use value-at-risk to assess the market risk in the Group's nontrading portfolios. Rather, the Group assesses the risk through the use of stress testing procedures that are particular to each risk class and which consider, among other factors, large historically observed market moves and the liquidity of each asset class as well as changes in client behavior in relation to deposit products. This assessment forms the basis of the Group's economic capital calculations which enable the Group to actively monitor and manage the Group's nontrading market risk. As of year-end 2009 several enhancements to the economic capital coverage across the nontrading market risk portfolio were introduced. In 2010 the nontrading market risk economic capital coverage has been completed with the addition of an economic capital charge for Deutsche Bank's pension risks.

The table below shows the economic capital usages for the Group's nontrading portfolios by business division and includes the economic capital usage of the Postbank calculated using the Group's methodology.

**Table 44 Economic Capital Usage for the Group's Nontrading Market Risk Portfolios per Business Area**

in € m.	Dec 31, 2010	Dec 31, 2009
CIB	1,351	890
PCAM	3,524	2,246
Corporate Investments	1,051	5,043
Consolidation & Adjustments	814	(277)
<b>Total</b>	<b>6,740</b>	<b>7,902</b>

The increase in CIB of € 461 million was driven by various new investments.

The most significant changes in 2010 were driven by the full consolidation of Postbank which led to an overall reduction of the nontrading economic capital by € 3.3 billion. In this process, the economic capital charge for Postbank was transferred from Corporate Investments (€ 4.3 billion) to Private & Business Clients (€ 1 billion). In addition the newly integrated business of Sal. Oppenheim also led to an increase of € 313 million in PCAM.

The major change in Consolidation & Adjustments was driven by an increase of structural foreign exchange risk of € 625 million.

The table below shows the carrying values and economic capital usages separately for the Group's nontrading portfolios.

**Table 45 Carrying Value and Economic Capital Usage for the Group's Nontrading Market Risk Portfolios**

in € bn.	Carrying value		Economic capital usage	
	Dec 31, 2010	Dec 31, 2009	Dec 31, 2010	Dec 31, 2009
Strategic Investments	1.8	7.6	0.6	4.9
Major Industrial Holdings <sup>1</sup>	0.2	0.2	—	—
Other Corporate Investments	4.4	0.9	1.8	0.2
thereof: newly integrated businesses	2.6	—	1.3	—
Alternative Assets	4.4	3.8	1.6	1.3
Principal Investments	2.0	2.0	0.7	0.7
Real Estate	2.3	1.7	0.9	0.6
Hedge Funds <sup>2</sup>	0.1	0.1	—	—
Other nontrading market risks <sup>3</sup>	N/A	N/A	2.7	1.5
<b>Total</b>	<b>10.8</b>	<b>12.5</b>	<b>6.7</b>	<b>7.9</b>

<sup>1</sup> There is a small economic capital usage of € 4 million as of December 31, 2010, and of € 28 million as of December 31, 2009.

<sup>2</sup> There is a small economic capital usage of € 13 million as of December 31, 2010, and of € 17 million as of December 31, 2009.

<sup>3</sup> N/A indicates that the risk is mostly related to off-balance sheet and liability items.

The Group's economic capital usage for these nontrading market risk portfolios totaled € 6.7 billion at year-end 2010, which is € 1.2 billion, or 15 %, below the Group's economic capital usage at year-end 2009.

- **Strategic Investments.** The Group's economic capital usage of € 0.6 billion as of December 31, 2010, was mainly driven by the Group's participations in Hua Xia Bank Company Limited and Abbey Life Assurance Company.
- **Major Industrial Holdings.** The Group's economic capital usage was € 4 million as of December 31, 2010. Most of the Major Industrial Holdings have been divested in prior years and accordingly the remaining positions no longer attract a material amount of economic capital.
- **Other Corporate Investments.** The Group's economic capital usage was € 1.8 billion for the Group's other corporate investments at year-end 2010. A total of € 1.3 billion of the overall increase of € 1.6 billion results from newly integrated businesses of Postbank and Sal. Oppenheim/BHF-BANK. The economic capital has been aligned with Deutsche Bank's economic capital methodology. Newly included in this category is a restructured subordinated loan facility with significant equity characteristics, which contributed € 253 million to economic capital after diversification.

- **Alternative assets.** The Group's alternative assets portfolio includes principal investments, real estate investments (including mezzanine debt) and small investments in hedge funds. Principal investments are composed of direct investments in private equity, mezzanine debt, short-term investments in financial sponsor leveraged buy-out funds, bridge capital to leveraged buy-out funds and private equity led transactions. The alternative assets portfolio has some concentration in infrastructure and real estate assets. While recent market conditions have limited the opportunities to sell down the portfolio, the Group's intention remains to do so, provided suitable conditions allow it.
- **Other nontrading market risks:**
  - Interest Rate Risk. This is mainly driven by maturity transformation of contractually short term deposits. The effective duration of contractually short term deposits is based upon observable client behavior, elasticity of deposit rates to market interest rates (DRE), volatility of deposit balances and Deutsche Bank's own credit spread. Economic capital is derived by stressing modeling assumptions – in particular the DRE – for the effective duration of overnight deposits. The Group's economic capital usage was € 435 million as of December 31, 2010, and was mainly driven by PBC including DB Bauspar. Behavioral and economic characteristics are taken into account when calculating the effective duration and optional exposures from the Group's mortgages business.
  - Equity compensation. Risk arising from structural short position in the Deutsche Bank share price arising from restricted equity units. The Group's economic capital usage was € (272) million as of December 31, 2010, on a diversified basis. The negative contribution to the Group's diversified economic capital was derived from the fact that a reduction of the Group's share price in a downside scenario as expressed by economic capital calculation methodology would reduce the negative impact on the Group's capital position from the equity compensation liabilities.
  - Pension risk. Risk arising from the Group's defined benefit obligations, including interest rate risk and inflation risk, credit spread risk, equity risk and longevity risk. The Group's economic capital usage, excluding Postbank, was € 146 million as of December 31, 2010. The economic capital charge allocated at DB Group level for respective pension risks of Postbank amounted to € 33 million.
  - Structural Foreign Exchange Risk. The Group's foreign exchange exposure arising from unhedged capital and retained earnings in non-euro currencies in certain subsidiaries. The Group's economic capital usage was € 927 million as of December 31, 2010, on a diversified basis.
  - Asset Management's Guaranteed Funds. The Group's economic capital usage was € 1.4 billion as of December 31, 2010.

The Group's total economic capital figures for nontrading market risk currently do not take into account diversification benefits between the asset categories except for those of equity compensation and structural foreign exchange risk and pension risk.

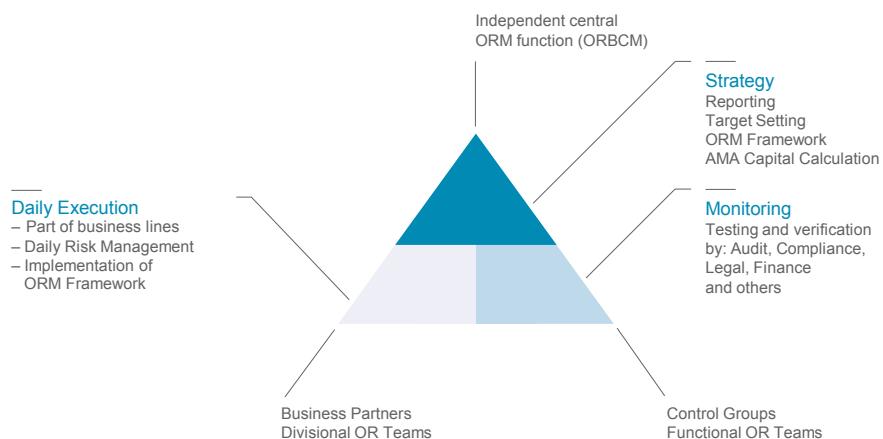
## 10. Operational Risk

### Organizational Structure

The Head of Operational Risk & Business Continuity Management chairs the Operational Risk Management Committee, which is a permanent sub-committee of the Risk Executive Committee and is composed of the operational risk officers from the Group's business divisions and the Group's infrastructure functions. It is the main decision-making committee for all operational risk management matters.

While the day-to-day operational risk management lies with the Group's business divisions and infrastructure functions, the Operational Risk & Business Continuity Management function manages the cross divisional and cross regional operational risk as well as risk concentrations and ensures a consistent application of the Group's operational risk management strategy across the bank. Based on this Business Partnership Model, which is also shown in the chart below, the Group ensures close monitoring and high awareness of operational risk.

#### Business Partnership Model of Operational Risk Management



### Managing The Group's Operational Risk

The Group manages operational risk based on a Group-wide consistent framework that enables the Group to determine its operational risk profile in comparison to its risk appetite and systematically identify operational risk themes and concentrations to define risk mitigating measures and priorities.

The Group applies a number of techniques to efficiently manage the operational risk in the Group's business, for example:

- The Group performs systematic risk analyses, root cause analyses and lessons learned activities for events above € 1 million to identify inherent areas of risk and to define appropriate risk mitigating actions which are monitored for resolution. The prerequisite for these detailed analyses and the timely information of the Group's senior management on the development of the operational risk events and on single larger events is the continuous collection of all losses above € 10,000 arising from operational risk events in the Group's "db-Incident Reporting System".
- The Group systematically utilizes information on external events occurring in the banking industry to ensure that similar incidents will not happen to the Group.
- Key Risk Indicators ("KRI") are used to alert the organization to impending problems in a timely fashion. They allow the monitoring of the bank's control culture as well as the operational risk profile and trigger risk mitigating actions. Within the KRI program the Group captures data at a granular level allowing for business environment monitoring and facilitating the forward looking management of operational risk based on early warning signals returned by the KRIs. The Group captures and monitor key operational risk indicators in the Group's tool "db-Score".
- In the Group's bottom-up Risk and Control Self Assessment ("RCSA") process, which is conducted at least annually, areas with high risk potential are highlighted and risk mitigating measures to resolve issue are identified. In general, RCSAs are performed in the Group's tool "db-SAT". On a regular basis the Group conducts country risk workshops aiming to evaluate risks specific to countries and local legal entities the Group are operating in and take appropriate risk mitigating actions.
- The Group conducts scenario analysis to amend internal and external loss information and derive actions from them. The Group also conducts stress testing on a regular basis to analyze the impact of extreme situations on the Group's capital and the profit-and-loss account.
- Regular operational risk profile reports at Group level for the Group's business divisions, the countries the Group is operating in and the Group's infrastructure functions are reviewed and discussed with the department's senior management. The regular performance of the risk profile reviews enables the Group to early detect changes to the units risk profile as well as risk concentrations across the Group and to take corrective actions.
- The Group assesses the impact of changes to the Group's risk profile as a result of new products, out-sourcings and acquisitions.
- Within the Group's tracking tool "db-Track" the Group monitors risk mitigating measures identified via these techniques for resolution.
- Due to the heterogeneous nature of operational risks in certain cases operational risks cannot be fully mitigated. In such cases operational risks are mitigated following the "as low as reasonably possible" principle by balancing the cost of mitigation with the benefits thereof and formally accepting the residual risk.
- The Group performs top risk analyses in which the results of the aforementioned activities are considered. The top risk analyses mainly contribute into the annual operational risk management strategy and planning process. Besides the operational risk management strategic and tactical planning the Group defines capital and expected loss targets which are monitored on a regular basis within the quarterly forecasting process.

## Measuring the Group's Operational Risks

In 2010 the Group has integrated into the Group's operational risk management processes Sal. Oppenheim (except for those parts which are in the process of being sold) and the commercial banking activities in the Netherlands acquired from ABN AMRO as well as Dresdner Bank's global Agency Securities Lending business. Although Postbank manages its own operational risk, Postbank has also already been integrated into the Group's economic capital calculation on a basis consistent with Deutsche Bank methodology. Limitations in data availability, however, may lead to portfolio effects that are not fully estimated and thereby resulting in over- or underestimation. The table below shows the economic capital usages for operational risk of the Group's business segments for the periods specified.

**Table 46 Measuring the Group's Operational Risks**

in € m.	Dec 31, 2010	Dec 31, 2009
CIB	2,735	2,822
PCAM	939	654
CI	8	17
<b>Total</b>	<b>3,682</b>	<b>3,493</b>

Economic capital usage for operational risk increased by € 189 million, or 5%, to € 3.7 billion as of December 31, 2010. The higher economic capital usage driven by acquisitions (Postbank, BHF-BANK, parts of the commercial banking activities in the Netherlands acquired from ABN AMRO and Sal. Oppenheim) was only partially offset by lower loss frequencies due to proactive operational risk management.

The Group calculates and measures the economic and regulatory capital for operational risk using the internal AMA methodology. Economic capital is derived from the 99.98 % quantile and allocated to the businesses and used in performance measurement and resource allocation, providing an incentive to manage operational risk, optimizing economic capital utilization. The regulatory capital operational risk applies the 99.9 % quantile. The Group's internal AMA capital calculation is based upon the loss distribution approach. Gross losses adjusted for direct recoveries from historical internal and external loss data (Operational Riskdata eXchange Association (ORX) consortium data and a public database), plus scenario data are used to estimate the risk profile (that is, a loss frequency and a loss severity distribution). Thereafter, the frequency and severity distributions are combined in a Monte Carlo Simulation to generate losses over a one year time horizon. Finally, the risk mitigating benefits of insurance are applied to each loss generated in the Monte Carlo Simulation. Correlation and diversification benefits are applied to the net losses in a manner compatible with regulatory requirements to arrive at a net loss distribution at the Group level covering expected and unexpected losses. Capital is then allocated to each of the business divisions and both a qualitative adjustment ("QA") and an expected losses deduction are made.

The QA reflects the effectiveness and performance of the day-to-day operational risk management activities via KRIs and RCSAs focusing on the business environment and internal control factors. QA is applied as a percentage adjustment to the final capital number. This approach makes qualitative adjustment transparent to the management of the businesses and provides feedback on their risk profile as well as on the success of their management of operational risk. It thus provides incentives for the businesses to continuously improve Operational Risk Management in their areas.

The expected loss for operational risk is based on historical loss experience and expert judgment considering business changes denoting the expected cost of operational losses for doing business. To the extent it is considered in the divisional business plans it is deducted from the AMA capital figure.

The unexpected losses for the business divisions (after QA and expected loss) are aggregated to produce the Group AMA capital figure.

Since 2008, the Group has maintained approval by the BaFin to use the AMA. The Group is waiting for regulatory approval to integrate Postbank into the Group's regulatory capital calculation.

### **The Group's Operational Risk Management Stress Testing Concept**

Within the Group's Stress Testing concept the Group ensures that operational risks are sufficiently and adequately stressed. The Group's AMA methodology already incorporates stress testing elements such as external data containing extreme data points and an over 25 year loss history both used to model the severity distribution. Additionally, the Group performs complementary sensitivity analysis and contributes to firm wide stress tests including reverse stress testing.

### **Role of Corporate Insurance/Deukona**

The definition of the Group's insurance strategy and supporting insurance policy and guidelines is the responsibility of the Group's specialized unit Corporate Insurance/Deukona ("CI/D"). CI/D is responsible for the Group's global corporate insurance policy which is approved by the Group's Management Board.

CI/D is responsible for acquiring insurance coverage and for negotiating contract terms and premiums. CI/D also has a role in the allocation of insurance premiums to the businesses. CI/D specialists assist in devising the method for reflecting insurance in the capital calculations and in arriving at parameters to reflect the regulatory requirements. They validate the settings of insurance parameters used in the AMA model and provide respective updates. CI/D is actively involved in industry efforts to reflect the effect of insurance in the results of the capital calculations.

The Group buys insurance in order to protect itself against unexpected and substantial unforeseeable losses. The identification, definition of magnitude and estimation procedures used are based on the recognized insurance terms of "common sense", "state-of-the-art" and/or "benchmarking". The maximum limit per insured risk takes into account the reliability of the insurer and a cost/benefit ratio, especially in cases in which the insurance market tries to reduce coverage by restricted/limited policy wordings and specific exclusions.

The Group maintains a number of captive insurance companies, both primary and re-insurance companies. However, insurance contracts provided are only considered in the modeling/calculation of insurance-related reductions of operational risk capital requirements where the risk is re-insured in the external insurance market.

The regulatory capital figure includes a deduction for insurance coverage amounting to € 467 million. Currently, no other risk transfer techniques beyond insurance are recognized in the AMA model.

CI/D selects insurance partners in strict compliance with the regulatory requirements specified in the Solvency Regulations and the Operational Risks Experts Group recommendation on the recognition of insurance in advanced measurement approaches. The insurance portfolio, as well as CI/D activities are audited by Group Audit on a periodic basis.

### **Operational Risk at Postbank**

Postbank's approach to Operational Risk Management is largely comparable to Deutsche Bank's approach. The Management Board of the Postbank is solely responsible for the management, control, and monitoring of operational risk. The Operational Risk Committee (ORK) commissioned by the Postbank Management Board defines the strategy and framework for controlling operational risk. Day-to-day management of operational risk is the responsibility of the individual units within the Postbank. Strategic parameters for managing operational risk, both qualitative as well as quantitative, are part of the overall strategy.

At Postbank the economic capital requirements for operational risk both for the Postbank as a whole and for the four business divisions individually have been determined using a standalone internal capital model to calculate capital requirements for operational risk. Postbank received the approval by the BaFin for their AMA in December 2010.

Within the consolidation of Postbank the results of the economic capital requirements for operational risk have been recalculated using Deutsche Bank's economic capital methodology for operational risk based upon pooled data from Deutsche Bank Group and Postbank and are reported in aggregate in Chapter 4.5 "Economic Capital Requirements" of this report.

# 11. Liquidity Risk

## 11.1 Liquidity Risk at Deutsche Bank Group (excluding Postbank)

Liquidity risk management safeguards the Group's ability to meet all payment obligations when they come due. The Group's liquidity risk management framework has been an important factor in maintaining adequate liquidity and in managing the Group's funding profile during 2010.

### Liquidity Risk Management Framework

The Management Board defines the Group's liquidity risk strategy, and in particular the Group's tolerance for liquidity risk based on recommendations made by Treasury and the Capital and Risk Committee. At least once every year the Management Board will review and approve the limits which are applied to the Group to measure and control liquidity risk as well as the Bank's long-term funding and issuance plan.

The Group's Treasury function is responsible for the management of liquidity and funding risk of Deutsche Bank globally as defined in the liquidity risk strategy. The Group's liquidity risk management framework is designed to identify, measure and manage the liquidity risk position of the Group. Treasury reports the Bank's overall liquidity and funding to the Management Board at least weekly via a Liquidity Scorecard. The Group's liquidity risk management approach starts at the intraday level (operational liquidity) managing the daily payments queue, forecasting cash flows and factoring in the Group's access to Central Banks. It then covers tactical liquidity risk management dealing with access to secured and unsecured funding sources. Finally, the strategic perspective comprises the maturity profile of all assets and liabilities (Funding Matrix) and the Group's issuance strategy.

The Group's cash-flow based reporting system provides daily liquidity risk information to global and regional management.

Stress testing and scenario analysis plays a central role in the Group's liquidity risk management framework. This also incorporates an assessment of asset liquidity, i.e. the characteristics of the Group's asset inventory, under various stress scenarios as well as contingent funding requirements from off-balance-sheet commitments. The monthly stress testing results are used in setting the Group's short-term wholesale funding limits (both unsecured and secured) and thereby ensuring the Group remain within the Board's overall liquidity risk tolerance.

### Short-term Liquidity and Wholesale Funding

The Group-wide reporting system tracks all contractual cash flows from wholesale funding sources on a daily basis over a 12-month horizon. The system captures all cash flows from unsecured as well as from secured funding transactions. Wholesale funding limits, which are calibrated against the Group's stress testing results and approved by the Management Board, express the Group's maximum tolerance for liquidity risk. These limits apply to the respective cumulative global cash outflows and are monitored on a daily basis. The Group's liquidity reserves are the primary mitigant against stresses in short-term wholesale funding markets. At an individual entity level the Group may set liquidity outflow limits across a broader range of cash flows where this is considered to be meaningful or appropriate.

## Unsecured Funding

Unsecured funding is a finite resource. Total unsecured funding represents the amount of external liabilities which the Group takes from the market irrespective of instrument, currency or tenor. Unsecured funding is measured on a regional basis and aggregated to a global utilization report. As part of the overall Liquidity Risk Strategy, the management board approves limits to protect the Group's access to unsecured funding at attractive levels.

## Funding Diversification

Diversification of the Group's funding profile in terms of investor types, regions, products and instruments is an important element of the Group's liquidity risk management framework. The Group's core funding resources come from retail clients, long-term capital markets investors and transaction banking clients. Other customer deposits and borrowing from wholesale clients are additional sources of funding. The Group uses wholesale deposits primarily to fund liquid assets. To ensure the additional diversification of its refinancing activities, the Group owns Pfandbrief licenses allowing it to issue mortgage Pfandbriefe.

In 2010 the Group continued to focus on increasing the Group's stable core funding components, while maintaining access to short-term wholesale funding markets, albeit on a relatively low level. The volume of discretionary wholesale funding is well diversified across products (e.g. CD, CP as well as term, call and overnight deposits) and tenors. The acquisition of Postbank significantly increased the volume of the Group's most stable funding sources. Postbank's status as a regulated bank and publicly traded company, however, may limit the Group's access to its liquidity.

The overall volume of discretionary wholesale funding and secured funding fluctuated between reporting dates based on the Group's underlying business activities. Higher volumes, primarily in secured funding transactions, are largely driven by increased client related securities financing activities as well as intra quarter growth in liquid trading inventories. The growth in discretionary wholesale funding during the year 2010 is mainly a reflection of the growth in cash and liquid trading assets within the Group's Corporate Banking & Securities Corporate Division.

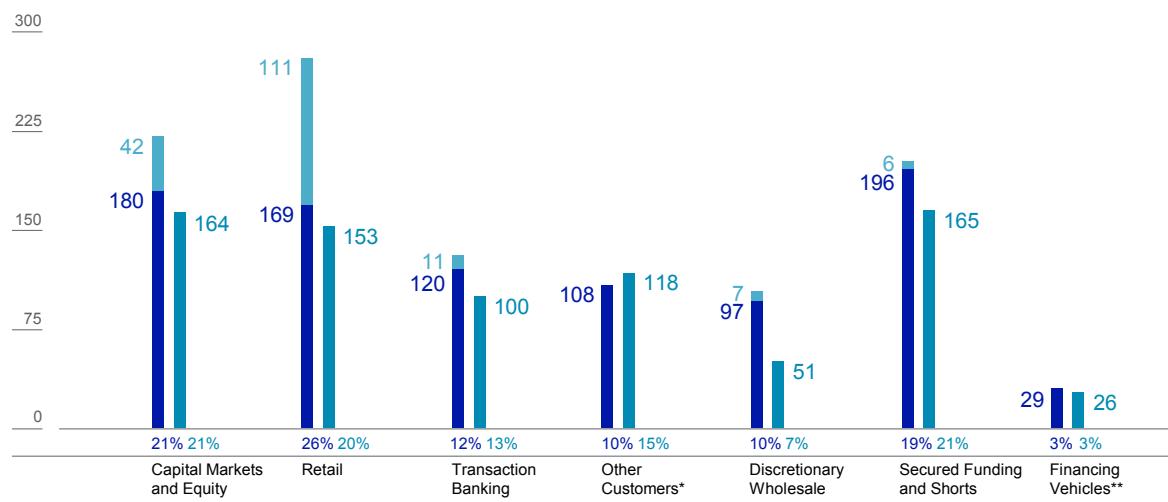
To avoid any unwanted reliance on these short-term funding sources, and to ensure a sound funding profile at the short end, which complies with the defined risk tolerance, the Group have implemented limit structures (across tenor) to these funding sources, which are derived from the Group's stress testing analysis.

## Composition of External Funding Sources

The following chart shows the composition of the Group's external funding sources (on a consolidated basis with the contribution from Postbank separately identified) that contribute to the liquidity risk position as of December 31, 2010, and December 31, 2009, both in euro billion and as a percentage of the Group's total external funding sources.

**Composition of external funding sources**

In € bn.



December 31, 2010: ■ Deutsche Bank € 897 billion, ■ Postbank € 178 billion: total € 1,075 billion

December 31, 2009: ■ total € 777 billion

\* Other includes fiduciary, self-funding structures (e.g. X-markets), margin / Prime Brokerage cash balances (shown on a net basis).

\*\* Includes ABCP-Conduits.

Note: Reconciliation to total balance sheet: Derivatives & settlement balances EUR 706 billion (EUR 620 billion), add-back for netting effect for Margin & Prime Brokerage cash balances (shown on a net basis) EUR 61 billion (EUR 51 billion), other non-funding liabilities EUR 63 billion (EUR 53 billion) for December 31, 2010 and December 31, 2009 respectively; figures may not add up due to rounding.

## Funding Matrix

The Group maps all funding-relevant assets and all liabilities into time buckets corresponding to their economic maturities to compile a maturity profile (funding matrix). Given that trading assets are typically more liquid than their contractual maturities suggest, the Group determines individual liquidity profiles reflecting their relative liquidity value. The Group takes assets and liabilities from the retail bank that show a behavior of being renewed or prolonged regardless of capital market conditions (mortgage loans and retail deposits) and assign them to time buckets reflecting the expected prolongation. Wholesale banking products are included with their contractual maturities.

The funding matrix identifies the excess or shortfall of assets over liabilities in each time bucket, facilitating management of open liquidity exposures. The funding matrix analysis together with the strategic liquidity planning process, which forecasts the funding supply and demand across business units, provides the key input parameter for the Group's annual capital market issuance plan. Upon approval by the Capital and Risk Committee and the Management Board the capital market issuance plan establishes issuing targets for securities

by tenor, volume and instrument. As per the year-end 2010, the Group was long funded in each of the annual time buckets of the funding matrix (2-10 years).

In 2010, Treasury issued capital market instruments with a total value of approximately € 22.9 billion, € 3.9 billion more than the original issuance plan.

For information regarding the maturity profile of the Group's long-term debt, please refer to Note 30 "Long-Term Debt and Trust Preferred Securities" of the Group's consolidated financial statements.

### Transfer Pricing

The Group operates a transfer pricing framework that applies to all businesses and ensures that pricing is made of (i) assets in accordance with their underlying liquidity risk, (ii) liabilities in accordance with their funding maturity and (iii) contingent liquidity exposures in accordance with the cost of providing for commensurate liquidity reserves to fund unexpected cash requirements.

Within this transfer pricing framework the Group allocates funding and liquidity risk costs and benefits to the firm's business units and set financial incentives in line with the firm's liquidity risk guidelines. Transfer prices are subject to liquidity (term) premiums depending on market conditions. Liquidity premiums are set by Treasury and picked up by a segregated liquidity account. The Treasury liquidity account is the aggregator of long-term liquidity costs. The management and cost allocation of the liquidity account is the key variable for transfer pricing funding costs within Deutsche Bank.

### Stress Testing and Scenario Analysis

The Group uses stress testing and scenario analysis to evaluate the impact of sudden stress events on the Group's liquidity position. The scenarios the Group applies have been based on historic events, such as the 1987 stock market crash, the 1990 U.S. liquidity crunch and the September 2001 terrorist attacks, liquidity crisis case studies and hypothetical events.

Also incorporated are the lessons learned from the latest financial markets crisis. They include the prolonged term money-market and secured funding freeze, collateral repudiation, reduced fungibility of currencies, stranded syndications as well as other systemic knock-on effects. The scenario types cover institution-specific events (e.g. rating downgrade), market related events (e.g. systemic market risk) as well as a combination of both, which links a systemic market shock with a multi-notch rating downgrade.

Under each of these scenarios the Group assumes that all maturing loans to customers will need to be rolled over and require funding whereas rollover of liabilities will be partially impaired resulting in a funding gap. In addition the Group analyzes the potential funding requirements from off-balance sheet commitments (e.g. drawings of credit facilities and increased collateral requirements) which could materialize under stress. The Group then models the steps the Group would take to counterbalance the resulting net shortfall in funding. Countermeasures would include the Group's unencumbered business asset inventory, the available long cash balance (over and above cash balances which form an integral part of the Group's existing clearing and settlement activities), as well as the Group's strategic liquidity reserve.

The asset liquidity analysis thereby forms an integral piece of stress testing and tracks the volume and booking location within the Group's consolidated business inventory of unencumbered, liquid assets which the Group can use to raise liquidity via secured funding transactions. Securities inventories include a wide variety of different securities. As a first step, the Group segregates illiquid and liquid securities in each inventory. Subsequently the Group assigns liquidity values (haircuts) to different classes of liquid securities. The liquidity of these assets is an important element in protecting the Group against short-term liquidity squeezes.

In addition the bank maintains sizeable cash balances, primarily with central banks, which are held in excess of the collateral which is required to support the Group's clearing activities in euro, U.S. dollars and other currencies around the globe.

As a separate countermeasure the Group holds a dedicated strategic liquidity reserve containing highly liquid and central bank eligible securities in major currencies around the world to support the Group's liquidity profile in case of potential deteriorating market conditions. The volume of the strategic liquidity reserve is the function of expected stress result. Size and composition are subject to regular senior management review.

The most immediately liquid and highest quality items within the above three categories are aggregated and separately identified as the Group's Liquidity Reserves. These Reserves comprise available cash and highly liquid government securities and other central bank eligible assets. As of December 31, 2010, the Group's Liquidity Reserves exceeded € 145 billion.

Stress testing is fully integrated in the Group's liquidity risk management framework. The Group tracks contractual cash flows per currency and product over an eight-week horizon (which the Group considers the most critical time span in a liquidity crisis) and applies the relevant stress case to all potential risk drivers from on balance sheet and off balance sheet products. Beyond the eight week time horizon the Group analyzes on a quarterly basis the impact of a more prolonged stress period extending out to twelve months, together with mitigation actions which may include some change of business model. The liquidity stress testing provides the basis for the bank's contingency funding plans which are approved by the Management Board.

The Group's stress testing analysis assesses the Group's ability to generate sufficient liquidity under extreme conditions and is a key input when defining the Group's target liquidity risk position. The analysis is performed monthly. The following table shows stress testing results as of December 31, 2010. For each scenario, the table shows what the Group's cumulative funding gap would be over an eight-week horizon after occurrence of the triggering event, how much counterbalancing liquidity the Group could generate via different sources as well as the resulting net liquidity position.

**Table 47 Stress Testing Liquidity Risk**

Scenario	Dec 31, 2010		
in € bn.	Funding gap <sup>1</sup>	Gap closure <sup>2</sup>	Net Liquidity Position
Systemic market risk	50	164	114
Emerging markets	14	169	155
Event shock	15	138	123
Operational risk (DB specific)	12	167	155
1 notch downgrade (DB specific)	33	169	136
Downgrade to A-2/P-2 (DB specific)	135	186	51
Combined <sup>3</sup>	142	173	31

<sup>1</sup> 1 Funding gap caused by impaired rollover of liabilities and other projected outflows.

<sup>2</sup> Based on liquidity generation through countermeasures.

<sup>3</sup> Combined impact of systemic market risk and downgrade to A-2/P-2.

With the increasing importance of liquidity management in the financial industry, the Group maintains an active dialogue with central banks, supervisors, rating agencies and market participants on liquidity risk-related topics. The Group participates in a number of working groups regarding liquidity and support efforts to create industry-wide standards to evaluate and manage liquidity risk at financial institutions. In addition to the Group's internal liquidity management systems, the liquidity exposure of German banks is regulated by the Banking Act and regulations issued by the BaFin. The Group is in compliance with all applicable liquidity regulations.

## 11.2 Liquidity Risk at Postbank

In general, Postbank's Financial Markets division is responsible for the centralized operational management of liquidity risk. BHW Bausparkasse AG, the foreign subsidiaries in New York and Luxembourg, and the London branch manage their risks independently using uniform Postbank group-wide procedures and processes. In the event of a liquidity shock, the Liquidity Crisis Committee has clear responsibility and authority over all Postbank units responsible for portfolios as well as all portfolio units at the subsidiaries and foreign branches.

Postbank's overarching risk strategy encompasses its strategy for management of liquidity risk. The goal of liquidity management is to ensure that Postbank is solvent at all times – not only under normal conditions, but also in stress situations. Due to its strategic focus as a retail bank, Postbank enjoys a strong financing base in its customer business and is therefore relatively independent of the money and capital markets. To guard against unexpected cash outflows, an extensive portfolio consisting of unencumbered ECB-eligible securities is held that can be used to obtain liquidity rapidly. To ensure the additional diversification of its refinancing activities, Postbank has a Pfandbrief license allowing it to issue public sector Pfandbriefe and mortgage Pfandbriefe.

At Postbank Market Risk Controlling assesses the liquidity status of the Postbank each business day on the basis of funding matrices and cash flow forecasts, with operational management of risk being performed on the basis of the liquidity status. Risk management is also based on a series of more far-reaching analyses of liquidity, in addition to regular Postbank's Group-wide liquidity and issue planning and also includes regular stress testing. Based on the results of the stress tests, Postbank believes that its liquidity position remains solid. This is due not least to the further increase in customer deposits and Postbank's extensive portfolio of ECB-eligible securities.

## 12. Glossary

### A

#### Active Book Equity (ABE)

Active Book Equity is calculated by the Group in order to make it easier to compare itself with competitors as well as in order to refer to active book equity for several ratios. The shareholders' equity is adjusted for unrealized net gains on assets available for sale, fair value adjustments on cash flow hedges (both components net of applicable taxes), as well as dividends, for which a proposal is accrued on a quarterly basis and for which payments occur once a year following the approval by the Annual General Meeting.

#### Advanced Measurement Approach (AMA)

An operational risk measurement technique proposed under ▶ Basel II capital adequacy rules using an internal modeling methodology as a basis.

#### Alternative Assets

A portfolio of assets including principal investments, real estate investments (including mezzanine debt) and small investments in hedge funds. Principal investments are composed of direct investments in private equity, mezzanine debt, short-term investments in financial sponsor leveraged buy-out funds, bridge capital to leveraged buy-out funds and private equity led transactions.

#### Average Expected Exposure (AEE)

One year time average of the average simulated positive future market values for a given portfolio of derivatives and/or securities financing transactions. This exposure measure follows internal credit line netting rules and credit risk mitigation via margining and collateralization and is used as exposure measure within the calculation of ▶ economic capital.

### B

#### Back testing

A procedure used to verify the predictive power of the ▶ value-at-risk calculations involving the comparison of hypothetical daily profits and losses under the buy-and-hold assumption with the estimates from the value-at-risk model.

### Basel II

Recommendations for international capital adequacy standards adopted by the Basel Committee on Banking Supervision, widely referred to as Basel II capital framework, which align capital requirements more closely with the underlying risks.

### Basel 2.5

New rules regarding trading activities, finalized mid-2010, introducing new risk measures (i.e. Stressed ▶ Value-at-Risk and Incremental Risk Charge) and applying the banking book rules to trading book ▶ securitizations with a specific treatment for the Correlation Trading Portfolio.

### Basel III

Revision of the international capital adequacy standards adopted by the Basel Committee on Banking Supervision which was endorsed by the G20 summit in November 2010. Aim of the revision is to strengthen global capital and liquidity rules promoting a more resilient banking sector. During a transition period until 2019 the revised standards not only increase the minimum capital requirements for banks but also introduce an additional capital conservation buffer as well as a bank specific countercyclical capital buffer. Basel III will also introduce an internationally harmonized liquidity framework for the first time with strict short- and long-term ratios. The new rules will be adopted into German law by means of the ▶ German Solvency Regulation.

### Business Risk

Risk that arises from potential changes in general business conditions, such as market environment, client behavior and technological progress, which can affect the Group's earnings if the Group is unable to adjust quickly to them.

### C

#### Confidence Level

In the framework of ▶ value-at-risk and economic capital the level of probability that the actual loss will not exceed the potential loss estimated by the ▶ value-at-risk or ▶ economic capital number.

### Country Risk

The risk that the Group may suffer a loss, in any given country, due to deterioration in economic conditions, political and social unrest, nationalization and expropriation of assets, government repudiation of external indebtedness, exchange controls and currency depreciation or devaluation.

### Credit Conversion Factor (CCF)

A multiplier that is used to convert off-balance-sheet items into credit exposure equivalents. Within the advanced IRBA the Group applies specific CCFs in order to calculate an ▶ Exposure at Default (EAD) value. In instances, in which a transaction involves an unused limit, a percentage share of this unused limit is added to the outstanding amount in order to appropriately reflect the expected outstanding amount in case of a counterparty default. This reflects the assumption that for commitments the utilization at the time of default might be higher than the current utilization.

### Credit Derivatives

Financial instruments which transfer ▶ credit risk connected with loans, bonds or other ▶ risk-weighted assets or market risk positions to parties providing protection. This does not alter or reestablish the underlying credit relationship of the original risktakers (parties selling the credit risks).

### Credit Risk

Risk that customers may not be able to meet their contractual payment obligations. Credit risk includes ▶ default risk, ▶ country risk and settlement risk.

### Credit Risk Exposure

All transactions in which losses might occur due to the fact that counterparties may not fulfill their contractual payment obligations. The Group generally calculates credit risk exposure as the gross amount of the exposure without taking into account any collateral, other credit enhancement or credit risk mitigating transactions.

## Credit Support Annexes (CSA)

Annexes to master ▶ netting agreements that are used for documenting collateral arrangements between parties trading OTC (over-the-counter) derivatives. CSA's provide derivatives-related credit risk mitigation through periodic margining of the covered exposure.

## Current Exposure Method

An approach to calculate the regulatory ▶ Exposure at default of derivative counterparty credit risk exposures as the current market value of the derivative plus an add-on amount which takes into account the potential future increase of the market value.

## D

### Default Risk

The risk that counterparties fail to meet their contractual payment obligations.

## E

### Economic Capital

A figure which states with a high degree of certainty the amount of equity capital the Group needs at any given time to absorb unexpected losses arising from current ▶ exposures.

### Equity Method

Valuation method for investments in companies over which significant influence can be exercised. The pro-rata share of the company's net income (loss) increases (decreases) the carrying value of the investment affecting net income. Distributions decrease the carrying value of the investment without affecting net income.

### Expected Loss (EL)

Measurement of loss that can be expected from within a one-year period from ▶ credit risk and ▶ operational risk based on historical loss experience.

### Expected Positive Exposure (EPE)

One year time average of the monotonically increasing average simulated positive future market values for a given portfolio of derivatives and/or securities financing transactions. This exposure measure follows external regulatory netting rules and credit

risk mitigation via margining and collateralization and is used as exposure measure within the calculation of regulatory capital under the ▶ Basel II ▶ Internal Model Method.

### Exposure at Default (EAD)

The expected amount of the credit exposure to a counterparty at the time of a default.

### Exposure Class

Asset classes such as governments, corporates or retail, which are defined by the ▶ German Solvency Regulation within each credit risk measurement approach, that is ▶ standardized and ▶ internal ratings based approach.

## F

### Fair Value

Amount at which assets or liabilities would be exchanged between knowledgeable, willing and independent counterparties, other than in a forced or liquidation sale.

### Foundation IRBA

A sophisticated approach available under the ▶ German Solvency Regulation for calculation of the ▶ regulatory capital requirements for risk positions allowing to use internal rating methodologies while loss rates and ▶ credit conversion factors are preset by the regulators.

## G

### German Solvency Regulation (Solvabilitätsverordnung, SolV)

German regulation governing the capital adequacy of institutions, groups of institutions and financial holding groups which adopted the capital framework of the Basel Committee from 2004, widely referred to as ▶ Basel II, into German law.

## I

### IFRS (International Financial Reporting Standards)/Previously IAS (International Accounting Standards)

Financial Reporting Rules of the International Accounting Standards Board designed to ensure globally transparent and comparable accounting and disclosure. Main objective is to present information that is useful in

making economic decisions, mainly for investors.

### Internal Assessment Approach (IAA)

Internal credit assessment approach used in the calculation of regulatory capital requirements for non-externally rated securitization positions in relation to ABCP conduits.

### Internal Model Approach

Subject to regulatory permission, the usage of internal ▶ value-at-risk models to calculate the regulatory capital requirement for market risk positions.

### Internal Model Method (IMM)

A more sophisticated approach for calculating a regulatory exposure value(▶ Exposure at Default) for derivative counterparty exposures as well as securities financing transactions by building the calculations on a Monte Carlo simulation of the transactions' potential future market values.

### Internal Ratings Based Approach (IRBA)

The most sophisticated approach available under the ▶ German Solvency Regulation for calculation of the ▶ regulatory capital requirements for risk positions allowing to use internal rating methodologies as well as internal estimates of specific other risk parameters including the ▶ probability of default (PD) and the ▶ loss given default (LGD) driving the regulatory risk-weight and the ▶ credit conversion factor (CCF) as part of the regulatory ▶ exposure at default (EAD) estimation.

## L

### Liquidity Risk

The risk arising from the Group's potential inability to meet all payment obligations when they come due or only being able to meet these obligations at excessive costs.

### Loss Distribution Approach

A risk profile modeling technique, which mainly uses loss data to construct aggregate loss distributions based on Monte Carlo simulations.

### Loss Given Default (LGD)

The likely loss intensity in case of a counter-party default. Its estimation represents, expressed as a percentage, the part of the exposure that cannot be recovered in a default event and therefore captures the severity of a loss.

### M

#### Market Risk

The risk that arises from the uncertainty concerning changes in market prices and rates (including interest rates, equity prices, foreign exchange rates and commodity prices), the correlations among them and their levels of volatility.

### N

#### Netting Agreements

Bilateral agreements between the Group and its counterparties with regard to the included transactions which ensure that, if solvency or bankruptcy proceedings are initiated, only a single net amount is owed by one party to the other from the netting of all claims and liabilities with the Group having the right to terminate all transactions under the agreement unilaterally if the counterparty fails to perform an obligation owed under an individual transaction.

### O

#### Operational Risk

Potential for incurring losses in relation to employees, contractual specifications and documentation, technology, infrastructure failure and disasters, external influences and customer relationships. This definition includes legal and regulatory risk, but excludes ▶ business and reputational risk.

### P

#### Potential Future Exposure

Time profile of the 95th percentile of simulated positive market values for a given portfolio of derivatives and/or securities financing transactions including the effect of ▶ netting agreements and collateral – calculated over the portfolio's entire lifetime.

### Probability of Default (PD)

The likelihood or probability of default (PD) of a counterparty is assessed over the next twelve months time horizon and expressed as a percentage. The Group does not rate through the cycle. PD is the primary measure of creditworthiness of a counterparty. The numerical probabilities of default are mapped into a 26-grade rating scale that is similar to rating scales widely used by international rating agencies.

### R

#### Rating

The result of the objective assessment of the future economic situation – namely the ▶ probability of default – of counterparties based on present characteristics and assumptions. The methodology for the rating assignment strongly depends on the customer type and the available data. A broad range of methodologies for the assessment of the ▶ credit risk is applied, such as expert systems and econometric approaches.

#### Regulatory Capital

Capital recognized for regulatory purposes according to the Basel Capital Adequacy Accord of 2004 for banks. Capital according to ▶ Basel II consists of:

- Tier 1 capital: primarily share capital, reserves and certain trust preferred securities,
- Tier 2 capital: primarily participatory capital, cumulative preference shares, long-term subordinated debt and unrealized gains on listed securities,
- Tier 3 capital: mainly short-term subordinated debt and excess Tier 2 capital.

Tier 2 capital is limited to 100 % of Tier 1 capital and the amount of long-term subordinated debt that can be recognized as Tier 2 capital is limited to 50 % of Tier 1 capital.

### Regulatory Trading Book and Banking Book

The regulatory trading book is defined in Section 1a KWG. It consists of financial instruments and commodities held with trading intent or held for the purpose of hedging the ▶ market risk of other trading book positions; repurchase transactions, lending transactions and similar transactions which relate to trading book positions; name-to-follow transactions; and receivables directly related to trading book positions. Financial instruments and commodities assigned to the trading book must be tradable or able to be hedged. The regulatory banking book comprises of all positions that are not assigned to the trading book.

### Risk-weighted Assets (RWA)

Risk-weighted assets are positions that carry ▶ credit, ▶ market and/or ▶ operational risk, weighted according to regulatory requirements. RWAs are regulatory capital requirements multiplied by 12.5, or in other words, capital requirements equal 8 % of RWA.

### S

#### Securitization

A securitization transaction is defined as a transaction where payments depend on the performance of an underlying pool of exposures and investments in the securitization are subordinated. Subordination results in a ranking among investments in the securitization. This determines the order and the amount of payments or losses to be directed to the holder of the position, the waterfall structure.

#### Standardized Approach

The least sophisticated approach available under the ▶ German Solvency Regulation for the calculation of the ▶ regulatory capital requirements. It measures ▶ Credit risk either pursuant to fixed risk weights, which are predefined by regulation or through the application of external ▶ ratings.

V

**Value-at-risk**

For a given portfolio, the value-at-risk is an estimate of the potential future loss (in terms of market value) that, under normal market conditions, will not be exceeded in a defined period of time and with a defined ▶ confidence level.

W

**Wrong Way Risk**

Risk that occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty.

## 13. Imprint

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### Cautionary statement regarding forward-looking statements

This report contains forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about our beliefs and expectations and the assumptions underlying them. These statements are based on plans, estimates and projections as they are currently available to the management of Deutsche Bank. Forward-looking statements therefore speak only as of the date they are made, and undertake no obligation to update publicly any of them in light of new information or future events.

By their very nature, forward-looking statements involve risks and uncertainties. A number of important factors could therefore cause actual results to differ materially from those contained in any forward-looking statement. Such factors include the conditions in the financial markets in Germany, in Europe, in the United States and elsewhere from which we derive a substantial portion of our trading revenues, potential defaults of borrowers or trading counterparties, the implementation of our management agenda, the reliability of our risk management policies, procedures and methods, and other risks referenced in our filings with the U.S. Securities and Exchange Commission. Such factors are described in detail in our SEC Form 20-F of 15 March 2011 in the section "Risk Factors". Copies of this document are available upon request or can be downloaded from [www.deutsche-bank.com/ir](http://www.deutsche-bank.com/ir).

