

Disclosure Report 2013

Disclosure in accordance with the German Solvency Regulation as at 31 December 2013

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Introduction

Commerzbank

Commerzbank AG is Germany's second largest bank and one of its leading banks for private and corporate customers. Our customers have one of the densest networks of any private-sector bank in Germany at their disposal. Commerzbank serves a total of around 15 million private customers and 1 million business and corporate customers worldwide. Commerzbank aims to continue strengthening its position as market leader in the private and corporate customer segments in Germany.

The focus of our activities is on the four core segments: Private Customers, Mittelstandsbank, Corporates & Markets and Central & Eastern Europe. The Bank has merged all activities in commercial real estate and ship financing, in addition to public financing, into the Non-Core Assets (NCA) run-off segment. The core segments are each overseen by a member of the Board of Managing Directors; responsibility for NCA was reallocated in mid-November 2013 to two Board members.

All staff and management functions are contained in Group Management: Group Audit, Group Communications, Group Compliance, Group Development & Strategy, Group Finance, Group Human Resources, Group Investor Relations, Group Legal, Group Treasury and the central risk functions.

The support functions are provided by Group Services. These include Group Banking Operations, Group Markets Operations, Group Information Technology, Group Organisation & Security, Group Delivery Centre and Group Excellence & Support. The staff, management and support functions are combined in the Others and Consolidation division for reporting purposes.

On the domestic market, Commerzbank AG is headquartered in Frankfurt am Main, from where it manages a nationwide branch network through which all customer groups are served. Its major German subsidiaries are comdirect bank AG, Commerz Real AG and Hypothekbank Frankfurt AG. Outside of Germany, the Bank has 7 material subsidiaries, 23 operational foreign branches and 35 representative offices in 53 countries and is represented in all major financial centres, such as London, New York, Tokyo, Hong Kong and Singapore. However, the focus of the Bank's international activities is in Europe.

A detailed description of Commerzbank Group is given in the Annual Report 2013. Information regarding the remuneration system of Commerzbank is laid down in the Remuneration Report 2013 according to the German InstitutsVergV (Instituts-Vergütungsverordnung) as well as in the section Remuneration Report in the Annual Report 2013.

Objective of the Disclosure Report

This report is intended to give the reader a detailed insight into Commerzbank's current risk profile and risk management. In particular, it contains information on:

- Commerzbank Group's structure from both a regulatory and accounting perspective,
- the Group's capital structure,
- Commerzbank Group's general risk management system,
- the Group's risk management in respect of specific types of risk.

The report may also be seen as complementary to the Annual Report pursuant to the German Commercial Code (Handelsgesetzbuch – HGB), as it – in contrast to the Annual Report primarily focuses on the supervisory perspective.

In this report Commerzbank AG as the ultimate parent company of the regulated banking group as defined by section 10a.1 sentence 1 of the German Banking Act (Kreditwesengesetz – KWG) is complying with the disclosure requirements of section 26a.1 KWG in conjunction with sections 319 to 337 of the German Solvency Regulation (Solvabilitätsverordnung SolvV) as at the reporting date 31 December 2013.

An overview of the structure of risk reporting in the Annual Report and Disclosure Report 2013 may be found in table 49 in the appendix to this document.

Scope

This Disclosure Report is based on the group of companies consolidated for regulatory purposes. The companies consolidated for regulatory purposes only include those carrying out banking and other financial business. Pursuant to section 10a KWG, the consolidated group consists of a domestic parent company and its affiliated companies. The aim of regulatory consolidation is to prevent multiple use of capital that in fact exists only once by subsidiary companies in the financial sector. The companies consolidated under IFRS, by contrast, comprise all the companies controlled by the ultimate parent company.

In accordance with the materiality principle set out in section 26a.2 KWG in conjunction with section 320.1 SolvV, this disclosure relates to the largest entities within Commerzbank Group. This enables the focus to be placed on the information that is most

material. Subsidiaries classified as material during the annual risk inventory are included in the Disclosure Report according to a uniform definition of materiality throughout the Group. In addition, at least 95 % coverage of the capital adequacy requirements of the entire Commerzbank Group must be achieved with these companies. This applies for default risks and also for market and operational risks. If this is not the case, other subsidiaries will be brought into the group of consolidated companies in order of exposure.

In accordance with this definition of materiality, the following companies – as in last year's report - are included in the Disclosure Report 2013 alongside Commerzbank AG:

- mBank S.A. (formerly BRE Bank S.A.),
- comdirect bank AG,
- Commerz Real AG,
- Erste Europäische Pfandbrief- und Kommunalkreditbank AG in Luxembourg (EPPK) and
- Hypothekenbank Frankfurt AG.

These six companies account for at least 95% of the Commerzbank Group's total capital adequacy requirement. The 95% condition is also met in each case for the individual types of risk.

The information in this Disclosure Report generally relates to the six consolidated entities listed above. Where this is not the case (e.g. with regard to the capital structure), it is explicitly stated. For selected indicators we are also providing prior-year figures. However the group of consolidated companies has not been restated retroactively for the prior year figures. All entities are fully consolidated both in accordance with IFRS and from a supervisory perspective.

In the context of the disclosure requirements (section 26a KWG in connection with sections 319 ff. SolvV) besides the Disclosure Report itself, all policies and processes have to be documented as a main component to fulfil the pillar 3 requirements. The appropriateness and practicality of the institute's disclosure practice has to be verified regularly. For this purpose Commerzbank has defined guidelines for the disclosure report which regulate the overarching, strategic part of the internal instructions. The operative targets and responsibilities are defined in addition in separate documents.

The Enhanced Disclosure Task Force (EDTF) has published a number of fundamental principles and recommendations for improved reporting across all areas of risk management. Commerzbank has largely taken these recommendations into account in this Disclosure Report and in the Annual Report 2013. For individual topics the scope and timing of implementation are still being reviewed for certain areas.

The Disclosure Report is being updated and published on a yearly basis.

Waiver rule pursuant to section 2a.1 KWG

Under the waiver rule pursuant to section 2a.1 KWG, subsidiary companies in a banking group may be exempted from the requirements relating to capital adequacy, large loan exposures and internal control systems at single-entity level, provided that among others both the parent and the subsidiary company have their registered office in Germany.

This rule is based on the assumption that the subsidiary is closely integrated within the group structure. This is assumed to be the case if the parent company has a controlling interest in the subsidiary company¹. In addition, the company being exempted must be closely integrated into the group-wide risk management and controlling processes of the parent company.

Hypothekenbank Frankfurt AG and comdirect bank AG are fully integrated into the internal processes and risk management of Commerzbank AG as the ultimate parent company of the banking group. This applies in particular to the methods used, risk management, monitoring of operations, management and reporting. The two companies are exempted from the above requirements under the waiver rule.

Pursuant to section 2a.6 KWG, parent companies within the group of companies consolidated for regulatory purposes that have their registered office in Germany are also entitled to this exemption. The opportunity this offered for Commerzbank AG as the ultimate parent company of Commerzbank Group to be exempted from the requirements at single entity level has been utilised. Commerzbank AG is integrated in Commerzbank Group's management system, and there are no legal or other obstacles to the transfer of capital to Commerzbank AG.

Application of the waiver rule has been reported to the Bundesbank and BaFin together with evidence of compliance with the requirements and is subsequently monitored and documented on occasion.

¹ A controlling interest exists in accordance with section 2a.1.1 KWG if the parent company either holds a majority of the subsidiary's voting rights or has the right to appoint the majority of its management.

Equity capital

Capital structure

A bank's equity capital serves as a cushion against risks taken, in particular default risk, operational risk and market risks, and thus has a guarantee and confidence-building function for creditors. It also safeguards the institutions' ability to do business on an ongoing basis.

The German Banking Act and the Solvency Regulation, which implemented the Basel 2 Capital Accord in Germany, impose obligations on the German banks to maintain minimum capital ratios. Banks are required to maintain a minimum ratio of capital to risk-weighted assets of 8% (total capital ratio). A minimum requirement of 4% applies for the ratio of Tier 1 capital to risk weighted assets (Tier 1 capital ratio).

A bank's total capital is made up of Tier 1, Tier 2 and Tier 3 capital. Core Tier 1 capital consists largely of subscribed capital plus reserves and non-controlling interests, less certain items such as goodwill, equity holdings and intangible assets. Adding other core capital components which include subordinated debt instruments with certain conditions gives us Tier 1 capital. Tier 2 capital comprises mainly subordinated debt instruments that are not eligible as additional Tier 1.

At the same time the European Banking Authority announced a EU-wide capital exercise which introduced a new capital requirement for Europe's major banks. This requires banks for the foreseeable future to hold a given minimum absolute amount of Core Tier 1 capital after marking their European sovereign bond exposures to market.

Commerzbank seeks to achieve the following objectives in managing its capital:

- Adherence to the statutory minimum capital requirements at Group level and in all companies included in the regulatory Group,
- ensuring that the planned capital ratios are met, including the new EBA requirements,
- provision of sufficient reserves to guarantee the Bank's freedom of action at all times,
- strategic allocation of Tier 1 capital to business segments and divisions in order to exploit growth opportunities.

The financial crisis made the importance of adequate Tier 1 capital levels for banks become an issue of increasing public concern. At Commerzbank Tier 1 capital has always been a key management target. The Bank's specifications for the capital ratios far exceed the minimum statutory requirements. The Bank's risk-bearing capacity and market expectations play an important role in determining the internal capital ratio targets. For this reason Commerzbank has stipulated minimum ratios for regulatory capital. Furthermore, Commerzbank has set itself the goal of achieving a Core Tier 1 ratio of 9.0% of risk-weighted assets by the end of 2014 (after fully implementing the transition arrangements under the Capital Requirements Regulation (CRR) and the German Banking Act). Tier 1 capital is allocated via a regular process which takes account of the Bank's strategic direction, profitable new business opportunities in the core business of each banking department as well as risk appetite issues.

All measures relating to the Bank's capital are proposed by the Bank's central Asset Liability Committee and approved by the Board of Managing Directors, subject to the authorisation granted by the annual general meeting.

During the past year Commerzbank met the minimum statutory capital requirements as well as the requirements of the EBA at all times.

To provide an overview of the entire capital available within the Group, the analyses in tables 1 to 4 relate to all of the companies consolidated for regulatory purposes. These own funds form the basis for determining the level of capital adequacy reported to the Bundesbank.

The composition of the regulatory equity capital and the total capital ratios are shown in the following table:

Table 1: Equity structure

Equity position €m	31.12.2013	31.12.2012
Total core capital pursuant to sec. 10.2a KWG (total Tier 1)	25,706	27,245
Core Tier 1	24,887	24,986
Subscribed capital	1,139	5,828
Capital reserve	15,928	11,681
Retained earning incl. distributable profit/loss and reserves for foreign currency conversion	10,503	8,714
Non-controlling interests	867	842
Other core capital – silent participation (SoFFin)	0	1,626
Items 100 % deducted from Tier 1 capital pursuant to sec. 10.2a sentence 2 KWG	-3,205	-3,049
thereof intangible assets	-1,125	-969
thereof goodwill	-2,080	-2,080
50% deduction from Tier 1 capital pursuant to sec.10.2a, sentence 2 no. 6, KWG	-345	-656
thereof deductible investments in financial sector	-45	-59
thereof advance payment risk >5 days outstanding	0	-2
thereof securitisation positions not risk weighted	-227	-340
thereof depreciation loss	-73	-255
Other capital ¹	819	2,259
thereof unlimited and without incentive to redeem	316	1,370
thereof limited or with incentive to redeem	503	889
Total supplementary capital pursuant to sec. 10.2b KWG (Tier 2)	10,945	9,878
Capital pursuant to sec. 10.5 KWG (former: profit sharing certificates)	706	731
Long-term subordinated liabilities pursuant to sec. 10.5a KWG	10,558	9,777
Eligible allowance surplus	0	0
Revaluation reserve/unrealised profits from securities positions	25	25
50% deduction from Tier 2 capital pursuant to sec. 10.2b.2, 10.6.and 6a KWG	-344	-655
thereof deductible investments in financial sector	-45	-58
thereof advance payment risk >5 days outstanding	0	-2
thereof securitisation positions not risk weighted	-227	-340
thereof depreciation loss	-72	-255
Total Tier 3 capital pursuant to sec. 10.2c KWG	0	0
Total Capital	36,651	37,123
Risk weighted assets		
Default risk	159,000	174,584
Market risk	8,675	10,999
Operational risk	22,913	22,552
Total risk weighted assets	190,588	208,135
Capital ratios %		
Core Tier 1 capital ratio	13.1	12.0
Tier 1 capital ratio	13.5	13.1
Total capital ratio	19.2	17.8

¹ Core capital pursuant to KWG (old) and not adhering to new requirements but allowable until 2040 to a limited extent (grandfathering pursuant to section 64m.1 KWG).

For Commerzbank as a banking group as defined in section 10a KWG the capital relevant to the determination of regulatory capital is based on the consolidated financial statements under IFRS. To reconcile the requirements for regulatory capital with the slightly different amounts reported in the financial statements, capital as determined under IFRS was adjusted with the aid of so-called prudential filters. The prudential filters are used in accordance with the Consolidated Financial Statements Reconciliation Regulation¹.

Starting 2014, supervisory authorities will enforce new, higher capital requirements. In accordance with the Capital Requirements

Directive (CRD IV), Capital Requirements Regulation (CRR) and the German CRD-IV Implementation Law, significantly stricter standards will apply to banks' minimum capitalisation. The new regulations contain transitional provisions under which the minimum capital requirements can be satisfied on a step-by-step basis. The Bank has already integrated these future requirements in its internal capital planning.

The reconciliation of the Group's equity reported in the balance sheet with regulatory capital was as follows:

Table 2: Reconciliation of equity with eligible capital

31.12.2013 €m	Core Tier 1	Subordinated debt instruments and other regulatory components of capital	Total Capital
Reported in balance sheet	26,936	13,714	40,650
thereof: additional Tier 1		819	819
Revaluation reserve	1,195		1,195
Cash flow hedge reserve	357		357
Non-controlling interests not to be shown in Tier I capital (incl. revaluation reserve, cash flow hedge reserve), changes in the group of consolidated companies and goodwill	-2,106		-2,106
Intangible assets	-1,125		-1,125
Parts of subordinated capital not eligible due to limited residual term		-1,321	-1,321
Deferred revaluation reserves for securities		25	25
Regulatory deduction from capital (as per Art. 10 – 6 and (6a) of the German Banking Act, KWG)	-345	-344	-689
Other differences	-25	-310	-335
Regulatory capital	24,887	11,764	36,651

Core Tier 1 capital and the sub-item comprising additional Tier 1 capital add up to the Tier 1 capital of €25,706m.

¹ The Consolidated Financial Statements Reconciliation Regulation (Konzernabschlussüberleitungsverordnung – KonÜV) dated 22 July 2009.

Equity instruments

Own funds raised externally are described as equity instruments. Commerzbank Group uses various instruments to raise and manage its capital.

In contrast to the equity structure table 1, the following tables do not take account of the impact of the revaluation effects resulting from the purchase price allocation at the time of the Dresdner Bank integration on the individual equity instruments.¹

Equity instruments are accounted for at amortised cost. Premiums and discounts are recognized under net interest income over the lifetime of the instrument.

Subscribed capital

The subscribed capital (share capital) of Commerzbank AG consists of no-par-value shares, each with an accounting par value of €1.00. The shares are issued in bearer form. Purchases and disposals of treasury shares are added to or deducted from subscribed capital at an accounting par value of €1.00.

On 22 April 2013 the 10-to-1 reverse stock split of Commerzbank shares was carried out as planned. After the reverse stock split, the number of Commerzbank shares in issue fell to 582,951,385.

In May 2013, 555,555,556 no-par-value shares were issued as part of the capital increase with pre-emptive rights. The subscribed capital stood at €1,139m, as no own shares were held as at 31 December 2013.

There are no preferential rights or restrictions on the payment of dividends at Commerzbank AG. All shares in issue are fully paid up. At 31 December 2013, the accounting par value of the authorised shares was €3,751.5m (previous year: €5,650.9m).

Other core capital – silent participations (SoFFin)

Following a combined capital increase for cash/non-cash capital contributions in May 2013, SoFFin's silent participation of €1.63bn (as at 31 December 2012) was repaid in full. Thus, the agreement dated 19 December 2008, which was adjusted at last on 29 June 2012, and the supplementary agreement dated 3 June 2009 on the establishment of a silent partnership concluded between SoFFin, represented by the FMSA, and Commerzbank Aktiengesellschaft were by mutual agreement terminated early. Compensation was paid accordingly.

Under IFRS the silent participations were reported separately under equity until their repayment. Under the repayment, compensation included the interest accrued on the silent participations and was set off directly against equity without affecting the income statement. Therefore, no further disbursement will be paid out for 2013 (previous year: €221m).

Subordinated debt instruments

Due to the wide-ranging reforms to banking regulation (Basel 3, CRR and CRD IV), the importance of the Bank's core Tier 1 capital has grown. The other capital components have been regrouped into Additional Tier 1 capital (other capital) and Tier 2 capital depending on their characteristics. Over the course of transitional periods of several years capital instruments issued in the past will either gradually lose their eligibility or will only be eligible in a different class of capital. As a result of these changes the previous reporting structure in the balance sheet, which was based on the old regulatory classification of Tier 1 and Tier 2 capital, now no longer applies. As a result we have decided to combine the previous balance sheet items subordinated capital and hybrid capital into the new item subordinated debt instruments. We have restated the prior-year figures in the balance sheet.

We report securitised and unsecuritised issues which in the event of an insolvency can only be repaid after all non-subordinated creditors have been satisfied as subordinated debt instruments. After combination of the balance sheet items, subordinated debt instruments were €13.714bn as at 31 December 2013.

At the same time as the repayment of SoFFin's silent participations in May 2013, Allianz SE's silent participation of €0.75bn (as at 31 December 2012) was paid back and the agreement concluded between Commerzbank AG and Allianz SE on 3 June 2009 concerning the establishment of a silent partnership was terminated early by mutual agreement. Compensation was paid accordingly.

¹ Details on revaluation effects may be found in the Annual Report 2009.

In 2013 the volume of subordinated debt instruments maturing amounted to €0.6bn and new issues to €0.8bn. In the year under review, the interest expense of the Group for subordinated debt instruments totalled €853m (previous year: €891m). Interest

accruals for interest not yet paid totalled €337m (previous year: €535m).

The following major subordinated debt instruments were outstanding at the end of 2013:

Table 3: Material subordinated debt instruments

Issue date	€m	m	currency	Issuer	Interest rate %	Maturity	Callable on
2011	1,254	1,254	EUR	Commerzbank AG	6.375	2019	-
2011	1,250	1,250	EUR	Commerzbank AG	7.750	2021	-
1999	725	1,000	USD	Dresdner Capital LLC I	8.151	2031	30.06.2029
2006	662	662	EUR	Commerzbank AG	5.386	2015	-
2007	600	600	EUR	Commerzbank AG	1.242 ¹	2017	-
2013	553	762	USD	Commerzbank AG	8.125	2023	-
2008	500	500	EUR	Commerzbank AG	6.250	2014	-
2006	492	492	EUR	Commerzbank AG	1.167 ¹	2016	-
2006	416	416	EUR	Commerzbank AG	5.386	unlimited	31.12.2016
2009	363	500	USD	Commerzbank AG	7.250	2015	-
2011	322	322	EUR	Commerzbank AG	3.294 ¹	2018	-
2011	300	300	EUR	Commerzbank AG	3.224 ¹	2018	-
2003	250	250	EUR	Hypothesenbank Frankfurt AG ²	5.000	2016	-
2009	250	250	EUR	Commerzbank AG	5.000	2017	-
2003	220	220	EUR	Hypothesenbank Frankfurt AG ²	5.000	2014	-
2006	204	300	CAD	Commerzbank AG	2.155 ¹	2016	-
2007	196	196	EUR	Commerzbank AG	2.080 ¹	2017	-

¹ Floating interest rate.

² Formerly Eurohypo AG.

Restrictions on or significant obstacles to the transfer of funds or equity over and above those contained in German law or EU directives currently exist within Commerzbank Group only to a limited extent. In specific cases capital transfers to entities belonging to the Group are subject to prior consent by the supervisory authorities.

The changes in Tier 1 capital were mainly the result of the capital increases in 2013. The SoFFin silent participation was also repaid in full as a result of this capital increase.

The following table gives an overview of the changes in the capital structure of the Commerzbank Group in 2013.

Table 4: Statement of changes in equity

Capital €m	31.12.2013	Changes in capital	31.12.2012
Total Tier 1	25,706	-1,539	27,245
Core Tier 1	24,887	-99	24,986
Subscribed capital	1,139	-4,689	5,828
thereof: Reverse stock split		-5,247	
thereof: subsequent capital increase		556	
Capital reserve	15,928	4,247	11,681
thereof: balance sheet restatement		-2,951	
thereof: Reverse stock split		5,247	
thereof: subsequent capital increase		1,951	
Retained earnings	10,609	1,866	8,743
thereof: balance sheet restatement		2,951	
thereof: actuarial gains and losses		-713	
thereof: currency translation reserve		-152	
Other components	761	-52	813
Other core capital – silent participation (SoFFin)	0	-1,626	1,626
Deductions	-3,550	155	-3,705
Additional Tier 1	819	-1,440	2,259
thereof: repayment Allianz participation		-750	
thereof: reduction of charges for hybrid issues		-717	
Tier 2	10,945	1,067	9,878
thereof: new issues		845	
thereof: other changes		71	
Total Capital	36,651	-472	37,123

Capital requirements

Capital requirements and the resulting total and accordingly core capital ratios are calculated for all entities that are not exempted from calculating capital adequacy at single-entity level under the waiver rule pursuant to section 2a.1 and 2a.6 KWG. The institutions subject to the waiver, as aforesaid, are Commerzbank AG, Hypothekbank Frankfurt AG and comdirect bank AG, although Hypothekbank Frankfurt AG as a separate sub-group is required

to report for the Hypothekbank Frankfurt Group. In addition, Commerz Real AG as financial company is exempted from calculating its capital ratios.

Capital ratios of material Group entities

The capital requirements and capital ratios are shown in the following table at sub-group level.

Table 5: Capital ratios of material Group entities

Company	Capital requirements	Total capital ratio	Core capital ratio
	€m	%	%
Frankfurter Hypothekbank AG	2,567	25.3	18.8
Erste Europäische Pfandbrief- und Kommunalkreditbank AG	89	46.1	45.0
mBank S.A.	1,133	19.4	14.2

The above table shows that all relevant entities are currently reporting an adequate total and core capital base. The total capital ratio gives the ratio of total eligible capital to the sum of amounts charged for default, market and operational risks multiplied by 12.5. The core capital ratio relates the core capital to the sum of amounts charged for default, market and operational risks multiplied by 12.5.

There was no under-capitalisation of subsidiaries subject to the deduction method during the period under review.

Capital requirements by risk type

The capital requirements set out below relate to the Commerzbank Group and include details of the requirements relating to the material consolidated units included in this Disclosure Report. The figures are the same with regard to content as in the capital adequacy reports submitted to the Deutsche Bundesbank under Basel 2.5 Pillar 1.

Table 6: Capital requirements and risk weighted assets by risk type

€m	31.12.2013		31.12.2012	
	Capital requirements	Risk weighted assets	Capital requirements	Risk weighted assets
Default risks	12,720	159,000	13,967	174,584
Standardised Approach to Credit Risk (SACR)	1,346	16,821	1,947	24,335
Central governments	5	60	7	84
Regional governments and local authorities	11	141	14	170
Other public sector bodies	51	644	60	756
International organisation (as defined by SolvV)	0	0	0	0
Banks	95	1,191	105	1,312
Multilateral development banks	0	0	0	2
Companies	591	7,381	782	9,775
Exposures secured by real estate property	56	696	212	2,653
Retail banking	208	2,602	442	5,520
Debt instruments backed by banks	4	53	4	53
Investment fund shares	176	2,203	140	1,747
Other exposures	58	719	76	948
Past due exposures	91	1,132	105	1,315
Advanced approach (IRBA)	10,421	130,261	10,980	137,248
Central governments	412	5,144	430	5,377
Banks	1,889	23,607	1,657	20,718
Companies	6,718	83,974	7,654	95,675
Retail banking: IRBA exposures secured by mortgage liens	636	7,952	688	8,594
Retail banking: other IRBA exposures	544	6,803	343	4,288
Retail banking: qualified revolving IRBA exposures	55	684	0	0
Other non-loan based assets	168	2,097	208	2,595
Securitisation risks	247	3,093	318	3,975
Securitised positions (IRBA)	247	3,093	318	3,975
thereof resecuritisations	36	454	95	1,183
Investment risks	137	1,707	139	1,744
Investments with method continuation (Grandfathering)	76	945	71	893
Standardised Approach	19	239	22	272
Temporarily or permanently excluded from IRBA exposures	42	523	46	579
Non-material entities	569	7,118	583	7,283
Market risks	694	8,675	880	10,999
Standardised Approach	57	707	50	630
Interest rate risk	35	439	26	321
thereof general price risk	31	384	22	274
thereof specific price risk	4	55	4	46
Specific price risk securitisations in trading book	1	14	3	36
Currency risk	19	234	22	273
Equity risk (general price risk)	0	4	0	0
Equity risk (specific price risk)	1	16	0	0
Internal model approach	632	7,897	821	10,261
Non-material entities	6	71	9	109
Operational risks	1,833	22,913	1,804	22,552
Advanced Measurement Approach (AMA)	1,811	22,633	1,779	22,238
Non-material entities	22	280	25	314
Total	15,247	190,588	16,651	208,135

Of the overall capital requirement 83% relates to default risk positions. These include balance sheet, off-balance sheet and derivative positions, as well as advance payment risk positions. Of the total capital requirement for default risks, around €0.6bn relates to the trading book. Commerzbank uses the Advanced Internal Ratings Based Approach (advanced IRBA; in the following referred to as IRBA) to determine the regulatory capital required. The Solvency Regulation gives the option of partial use. The Standardised Approach to Credit Risk (SACR) may be used for part of the portfolios. There is only an insignificant amount of processing risks (<€1m) as defined in section 15 SolvV within Commerzbank Group; accordingly no capital charge is shown for them.

Commerzbank Group and accordingly the group companies included in the disclosure are, as IRBA banks as defined in section 71.4 SolvV, generally obliged to value investments in accordance with the IRBA rules. For investments entered into prior to 1 January 2008, Commerzbank has opted to apply grandfathering. These investment positions are temporarily excluded from the IRBA and treated in accordance with the SACR rules. They are given a risk weighting of 100%. The SolvV also allows items to be permanently exempted from the IRBA. Since 31 December 2009, Commerzbank applies the partial use option pursuant to section 70 sentence 1 no. 9b SolvV and is using the SACR permanently to all investment posi-

tions which are not under the above-mentioned temporary grandfathering option.

Securitised positions in the banking book as well as counterparty risk positions from market value hedges in connection with securitisations also fall under the category of default risk positions subject to a capital requirement. Commerzbank treats these according to the IRBA rules for securitised positions. Capital deduction items of securitisations directly reduce the liable equity and thus are not included in the capital requirements.

In addition to default risk adequate capital must also be set aside for market risk positions pursuant to section 2.3 SolvV. Commerzbank uses an internal market risk model to calculate the regulatory capital requirement. This affects both the equity price and interest rate-related risk positions in the trading book. The standardised approaches are applied for smaller units in the Commerzbank Group and for the total of currency positions and commodity positions in accordance with the partial use option.

To calculate the capital adequacy requirement for operational risks, Commerzbank uses the advanced measurement approach (AMA).

The following table shows the changes in risk-weighted assets during 2013 for the whole of the Commerzbank Group. The main drivers are shown for each type of risk.

Table 7: Changes in risk-weighted assets during 2013

Risk weighted assets €bn	31.12.2013	Changes in risk weighted assets	31.12.2012
Default risk	159.0	-15.6	174.6
thereof volume effects		-6.6	
thereof default/recovery		-3.7	
thereof PD/Rating		3.9	
thereof collaterals/recovery factors		-2.2	
thereof others		-7.0	
Market risk	8.7	-2.3	11.0
thereof VaR		-1.6	
thereof stressed VaR		-0.7	
thereof incremental risk		-0.1	
thereof others		0.1	
Operational risk	22.9	0.4	22.6
thereof effects from loss data and risk scenario assessment		0.5	
thereof effects from business environment & control system		0.5	
thereof others		-0.6	
Total Risk weighted assets	190.6	-17.5	208.1

Risk-oriented overall bank management

Commerzbank defines risk as the danger of losses or profits foregone due to internal or external factors. In risk management, we normally distinguish between quantifiable and non-quantifiable types of risk. Quantifiable risks are those to which a value can normally be attached in financial statements or in regulatory capital requirements, while non-quantifiable types of risk include reputational and compliance risk.

Risk management organisation

The Chief Risk Officer (CRO) is responsible for implementing the Group's risk policy guidelines for quantifiable risks laid down by the Board of Managing Directors. The CRO regularly reports to the Board of Managing Directors and the Risk Committee of the Supervisory Board on the overall risk situation within the Group.

Risk management activities are split between Credit Risk Management Core Bank, Credit Risk Management Non-Core Assets (NCA), Intensive Care, Market Risk Management and Risk Controlling and Capital Management. In the Core Bank segments, credit risk management is separated into a performing loan area and Intensive Care, while in the NCA segment it has been merged into a single unit across all rating classes. All divisions have a direct reporting line to the CRO. The heads of these five risk management divisions together with the CRO make up the Risk Management Board within Group Management.

The Board of Managing Directors has sole responsibility for fundamental strategic decisions. The Board of Managing Directors has delegated the operational risk management to committees. Under the relevant rules of procedure these are the Group Credit Committee, the Group Market Risk Committee, the Group OpRisk Committee and the Group Strategic Risk Committee, which decides on risk issues of an overarching nature. The CRO chairs all these committees and has the right of veto. In addition the CRO is a member of the Asset Liability Committee.

Die The Chairman of the Board of Managing Directors (CEO) bears responsibility for controlling risks related to the Bank's business strategy and reputational risks. The Chief Financial Officer (CFO) assumes responsibility for controlling compliance risk with particular regard to investor protection, insider trading guidelines and money laundering.

Further details on risk management organisation can be found in the Annual Report 2013.

Risk strategy and risk management

The overall risk strategy, together with the business strategy, defines the strategic risk management guidelines for the development of Commerzbank's investment portfolio. Furthermore, the risk appetite is set as the maximum risk that the Bank is prepared and able to accept while following its business objectives without exposing itself to existential threats over and above the risks inherent in the business. The guiding idea is to ensure that the Group holds sufficient liquidity and capital. Based on these requirements, suitable limits for the capital and liquidity reserve available to the Group are defined. The overarching limits of the overall risk strategy are consistent with the recovery indicators of the recovery plan. The group-wide recovery plan was adopted at the end of 2013 and put into effect from January 2014 onwards.

Banks' core functions as transformers of liquidity and risk result in inevitable threats that can in extreme cases endanger the continued existence of the institution. For Commerzbank, in view of its business model, these inherent existential threats include, for example, the default of Germany, Poland, one or more of the other major EU countries (France, Italy, Spain or the UK) or the long-term default of the USA. Others include a deep recession lasting several years with serious repercussions for the German economy or the collapse of the financial markets. These existential threats are taken deliberately in the pursuit of the business targets. It may be necessary to adjust the business model and hence the business and risk strategies if the Board of Managing Directors' assessment of these threats to Commerzbank changes for an extended period of time.

The overall risk strategy covers all material risks to which Commerzbank is exposed. It is detailed further in the form of sub-risk strategies for the risk types which are material. These are then specified and made operational through policies, regulations and instructions/guidelines. By means of the risk inventory process – which is to be carried out annually or on an ad hoc basis as required – we ensure that all risks of relevance to the Group are identified and their materiality assessed. The assessment of the materiality of a risk is based on whether its occurrence could have a major direct or indirect impact on the Bank's risk-bearing capacity.

As part of the planning process, the Board of Managing Directors decides the extent to which the risk coverage potential of the Group should be utilised. On that basis, individual types of risk are limited in a second stage. A capital framework is allocated to the management-relevant units through the planning process. Compliance with limits and guidelines is monitored during the year and management impulse given where required. In addition, further qualitative and quantitative early warning indicators are established in the overall risk strategy and recovery plan. Potential negative developments can be identified at an early stage with the help of these indicators.

One of the primary tasks of risk management is the avoidance of risk concentrations. These can arise from the synchronous movement of risk positions both within a single risk type (intra-risk concentrations) and across different risk types (inter-risk concentrations). The latter result from a common risk driver or from interactions between diverse risk drivers of different risk types.

By establishing adequate risk management and controlling processes, we provide for the identification, assessment, management, monitoring and communication of substantial risks and related risk concentrations. Therefore we ensure that all Commerzbank-specific risk concentrations are adequately taken into account. A major objective is to ensure early transparency regarding risk concentrations, and thus to reduce the potential risk of losses. We use a combination of portfolio and scenario analyses to manage and deal with Commerzbank-specific inter-risk concentrations. Stress tests are used to deepen the analysis of risk concentrations and, where necessary, to identify new drivers of risk concentrations. Management is regularly informed about the results of the analyses.

Risk-bearing capacity and stress testing

The risk-bearing capacity analysis is a key part of overall bank management and Commerzbank's Internal Capital Adequacy Assessment Process (ICAAP). The purpose is to ensure that sufficient capital is held for the risk profile of the Commerzbank Group at all times.

Commerzbank monitors risk-bearing capacity using a gone concern approach which seeks primarily to protect unsubordinated lenders. This objective should be achieved even in the event of extraordinarily high losses from an unlikely extreme event. The gone concern analysis is supplemented here by elements aimed at ensuring the institution's continuing existence (going concern perspective).

When determining the economically required capital, allowance is made for potential unexpected fluctuations in value. Where such fluctuations exceed forecasts, they must be covered by available economic capital in order to absorb unexpected losses (capital available for risk coverage). The quantification of capital available for risk coverage is based on a differentiated view on the accounting values of assets and liabilities and involves economic valuations of certain balance sheet items.

The capital requirement for the risks taken is quantified using the internal economic capital model. When assessing the economic capital required, allowance is made for all the types of risk at Commerzbank Group that are classified as material in the annual risk inventory. The economic risk approach therefore also comprises risk types that are not included in the regulatory requirements for banks' capital adequacy. In addition it also reflects the effect of portfolio-specific interrelationships. The confidence level of 99.91% in the economic capital model is in line with the underlying gone concern assumptions and ensures the economic risk-bearing capacity concept is internally consistent. The results of the risk-bearing capacity analysis are shown using the risk-bearing capacity ratio (RBC ratio), indicating the excess of the risk coverage potential in relation to the economically required capital.

The results of the annual validation of the risk-bearing capacity concept were implemented at the beginning of 2013. Besides the regular updates of the economic capital model's risk parameters it also incorporated the results of the annual Group Risk Inventory. This in turn included the remodelling of the property value change risk, arrived at on the basis of changes in the values of property (especially real estate).

The risk-bearing capacity is monitored and managed monthly at Group level. Risk-bearing capacity is deemed to be assured as long as the RBC ratio is higher than 100%. In 2013, the RBC ratio was consistently well above 100% and was 179% as of 31 December 2013. The rise in the RBC ratio over the course of the year largely reflects the calmer mood on the financial markets and the easing of the European sovereign debt crisis. It goes hand in hand with a decline in market risk and with a decline in credit risk in response to the successful reduction of the NCA portfolio.

Table 8: Group's risk-bearing capacity

Risk-bearing capacity Group €bn	31.12.2013	31.12.2012
Economic risk coverage potential¹	29	29
Economically required capital²	16	17
thereof for credit risk	12	13
thereof for market risk	4	4
thereof for operational risk	2	2
thereof diversification between risk types	-2	-2
RBC ratio³	179%	161%

¹ Business risk, defined as a potential loss that results from discrepancies between actual income (negative deviation) and expense (positive deviation) and the respective budgeted figures, is accounted for in the risk coverage potential.

² Including property value change risk and risk of unlisted investments.

³ RBC ratio = economic risk coverage potential/economically required capital (including risk buffer).

We use macroeconomic stress tests to review the risk-bearing capacity in the event of assumed adverse changes in the economic environment. The scenarios on which they are based take into account the interdependence in development between the real and financial economies and extend over a time horizon of at least two years. They are updated quarterly and approved by the Asset Liability Committee (ALCO). The scenarios describe an extraordinary but credible adverse development in the economy, focusing in particular on portfolio priorities and business strategies of relevance to Commerzbank.

The simulation is run monthly using the input parameters of the economic capital requirements for all material risk types. It reflects the forecast macroeconomic situation. In addition to the capital required, the economic capital for risk coverage is also subjected to a stress test based on the macroeconomic scenarios. Based on this, changes in the capital available for risk coverage are simulated. In the same way as the RBC ratio is incorporated into Commerzbank's limit system, explicit limits on risk tolerance are set as an early warning system in the stressed environment. The ongoing monitoring of the limit for the unstressed and stressed RBC ratio is a key part of internal reporting. Defined escalations are triggered if the limit is breached.

In addition to the regular stress tests, so-called reverse stress tests are implemented annually at Group level. Unlike regular stress testing, the result of the simulation – a sustained threat to the business model – is determined in advance. The aim of this analysis process in the reverse stress test is to improve the transparency of Bank-specific risk potential and interactions of risk by identifying and assessing extreme scenarios and events. By doing this, for example, action fields in risk management including the regular stress tests, can be identified and taken into account in the efforts at continuing development.

Specific risk management

Default risk

Default risk refers to the risk of losses due to defaults by counterparties as well as to changes in this risk. For Commerzbank, the concept of default risk embraces not only the risks associated with defaults on loans and with third-party debtors, but also counterparty and issuer risks and country/transfer risk.

Risk management

Strategy and organisation

The credit risk strategy is derived from the overall risk strategy and is the partial risk strategy for default risks. It is embedded in the ICAAP process of the Commerzbank Group and therefore contributes to ensuring risk-bearing capacity.

It describes the strategic areas of action and gives an overview of the important management concepts in credit risk management – particularly for the management of the most important risk concentrations (groups, countries, sectors).

The credit risk strategy is a link between the Bank's overall risk management across all risk types and the operationalisation of default risk management. It relies on quantitative and qualitative management tools that take account of the specific requirements of Core Bank and run-off portfolios.

Quantitative management is carried out using clearly defined (economic and regulatory) key figures at Group, segment and sub-segment level, with the aim of ensuring an adequate portfolio quality and granularity in addition to risk-bearing capacity.

Qualitative management guidelines in the form of credit policies define the target business of the Bank. At the level of individual transactions, they regulate the transaction type with which the risk resources provided are to be used. These credit policies are firmly embedded in the credit process: transactions which do not meet the requirements are escalated through a fixed competence regulation.

In organisational terms, credit risk management in the Core Bank differs from risk management in the NCA segment. In the Core Bank, based on the separation of responsibility by the performing loan area on the one hand and Intensive Care on the other, discrete back-office areas are responsible for operational credit risk management on a portfolio and an individual case basis.

All credit decisions in the performing loan area are risk/return decisions. The front and back office take joint responsibility for risk and return from an exposure, with the back office having primary responsibility for the risk, and the front office for the return.

Accordingly, neither office can be overruled in its primary responsibility in the lending process.

Higher-risk Core Bank customers are handled by specialist Intensive Care areas. The customers are moved to these areas as soon as they meet defined transfer criteria. The principal reasons for transfer to Intensive Care areas are criteria relating to number of days overdrawn, together with event-related criteria such as rating, insolvency, third-party enforcement measures or credit fraud. This ensures that higher-risk customers can continue to be managed promptly by specialists in defined standardised processes.

For loans in Intensive Care, various restructuring and reorganisation strategies are used. Appropriate steps are taken depending on the specific problem. Customers are given close support with their loans to ensure that they adhere to any agreements made (planned repayments/ongoing amortisation). This is aimed at securing the customer's recovery and return to the performing loan area. Measures on deferments and restructurings/reorganisations for customers may include:

- Tolerance of temporary overdrafts; provided that the reason for the overdraft as well as the nature and date of settlement are transparent and foreseeable.
- Repayment agreements: unpaid loan instalments that result in an overdrawn current account are set aside as a separate amount and repaid monthly under a repayment agreement.
- Restructuring of existing credits/loans: customers' credits/loans are refinanced in order to reduce the ongoing burden for the customer. This may also be accompanied by, for example, a change in amortisation methods and/or the loan structure/term.
- Restructuring/granting of new loans: financial support in the restructuring process of a company in crisis aimed at sustainable recovery. As a rule, this means fundamental intervention in funding structures and contingent liabilities. It may also result in a capital repayment waiver, a change in the collateral positions or the application of a restructuring interest rate that is below standard market conditions.

In the NCA segment, by contrast, there is no separation of responsibilities between the performing loan area and Intensive Care. Credit risk management here has been merged into one unit across all rating classes.

Functional risk management

Commerzbank manages default risk using a comprehensive risk management system comprising an organisational structure, methods and models, a risk strategy with quantitative and qualitative management tools and regulations and processes. The risk management system ensures that the entire portfolio and the sub-portfolios, right down to individual exposure level, are managed consistently and thoroughly on a top-down basis.

The ratios and measures required for the operational process of risk management are based on overarching Group objectives. They are enhanced at downstream levels by sub-portfolio and product specifics. Risk-based credit approval regulations focus management attention in the highest decision-making bodies on issues such as risk concentrations or deviations from the risk strategy.

Management of economic capital commitment

Economic capital commitment is managed in order to ensure that the Commerzbank Group holds sufficient capital. With this object in view, all risk types in the overall risk strategy for economically required capital (ErC) are given limits on a Group-wide basis to ensure proper capital adequacy levels for Commerzbank Group, with, in particular, a CVaR limit being specified. Due to the systematically restricted options for reducing default risk on a short-term basis, it is important to take account of expected trends in credit risk (medium-term and long-term) in order to remain within limits. For this reason, medium-term forecast values of capital ratios play a key role in ongoing management. When updating forecasts, it has to be ensured that limits are met as a result of keeping to forecast. At segment and business area level, deviations from the forecast are monitored and adjustments made when necessary. There is no cascaded limit concept for credit risk below Group level, i.e. no allocation of the Group credit limit to segments/business areas.

Expected loss (EL) plays a crucial part in capital management for default risk. It consolidates key input factors of the CVaR to a meaningful ratio which has long been in established use in risk management.

Management of risk concentrations

The avoidance of risk concentrations is a core strategy of risk management. Risk concentrations are actively managed in order to identify at an early stage and to contain the increased potential for loss in the synchronous movement of risk positions. In addition to exposure-related credit risk concentrations (bulk risks), default risk also includes, among others, country and sector concentrations. Segment-specific features are taken into account here.

A uniform definition based on "all-in" is used to manage bulk risk. The all-in concept comprises all customer credit lines approved by the Bank in their full amount – irrespective of the loan utilisation to date.

Management and the Supervisory Board's Risk Committee are regularly informed about the results of the analyses.

Country risk management

The Group's country risk calculation records both transfer risks and region-specific event risks defined by political and economic events which impact on the individual economic entities of a country. Country risks are managed and limited on the basis of loss at default at country level. Country exposures which are significant for Commerzbank due to their size and exposures in countries in which Commerzbank holds significant investments in comparison to the GDP of those countries are handled by the Strategic Risk Committee on a separate basis.

Loan portfolio model

The quantification of default risks takes place through a group-wide loan portfolio model in combination with internally developed rating systems. The risk parameters probability of default (PD), exposure at default (EaD¹) and loss given default (LGD) are determined for every credit risk position. This enables the relevant expected loss to be calculated for each individual position.

¹ Economic EaD: Expected exposure amount taking into account a potential (partial) drawing of open lines and contingent liabilities that will adversely affect risk-bearing capacity in the event of default. For Public Finance securities the nominal is reported as EaD.

The loan portfolio model also produces probability statements on losses from credit defaults and rating changes at portfolio level. Unexpected loss (credit value at risk – CVaR) is quantified on a risk horizon of one year. CVaR measures the extent of potential credit risk losses over and above the expected loss and must be backed by equity capital.

Commerzbank's loan portfolio model is an in-house model which, as with the CreditMetrics or Moody's KMV model, is based on the asset value approach. A Monte Carlo simulation simulates potential realisations of borrowers' assets and changes to borrowers' creditworthiness and defaults. Possible future losses at portfolio level are calculated and statistically analysed on this basis.

The loan portfolio model firstly requires transaction and customer data: level of exposure, creditworthiness, expected loss given default, country and sector classification.

Dependencies between possible default events are also modelled through around 60 systematic risk factors. Specific model parameters (correlations) measure the connection of individual borrowers to these system factors and the correlation between system factors. This way they quantify potential diversification effects between different sectors and countries.

Rating architecture

A key component of Commerzbank's rating architecture is the use of single point of methodology rating procedures, which takes advantage of a central suite of computation kernels. This uniform process architecture not only facilitates risk management and monitoring but also lowers the risk of rating arbitrage within Commerzbank Group. In turn, the rating processes are in turn embedded in rating systems. In addition to the conventional methods of creditworthiness and risk assessment, these comprise all the processes for data collection, calculating ratings and monitoring and management.

The use of rating processes is an essential component of risk assessment in Commerzbank Group, irrespective of regulatory requirements. The resulting ratings are then used in the front and back office credit decision-making processes, the internal management processes to determine loan loss provisions under IFRS and in the internal measurement of the CVaR and risk-bearing capacity respectively. Rating processes which have already been approved are also being further revised and improved. These improvements make risk forecasts more accurate and improve management mechanisms.

The table below shows the rating processes used in the IRBA and their main elements as of the reporting date.

Table 9: IRBA rating procedure

Scope	Procedure	Hard facts	Soft facts	Overruling
Banks	RFI-BANK	▪	▪	▪
Countries	R-SCR	▪	▪	▪
Municipalities/federal states	R-LRG	▪		▪
Corporate customers	COSCO/R-CORP	▪	▪	▪
Financial Institutions (NBFI)	NBFI	▪	▪	▪
Private customers	CORES	▪		
Commercial real estate	RS-CRE	▪ ¹	▪	▪
Renewable energies	RS-REN	▪	▪	▪
Structured finance	RS-CFD	▪	▪	▪
Ship financing	RS-SHP	▪	▪	▪
ABS transactions (sponsors)	IAA	▪	▪	

¹ The calculated figures may be adjusted by the analyst.

Hard facts refer to system-based factors which are used in the rating process and allow no scope for interpretation. For instance, these may be data from companies' annual financial statements, the income of a private individual, or the age of the documents being used.

Soft facts refer to structured areas of analysis where the rating analyst needs to make an assessment and where there is therefore scope for discretion on a case-by-case basis. Examples include an assessment of management or the product quality of the customer being rated.

Overruling is a downstream area of analysis where there is a further opportunity for the analyst to assess circumstances separately based on his or her personal judgement. The system result can hereby be adjusted upwards or downwards. The relevant reason for the decision is documented. Overruling should particularly be used when there are strongly fluctuating developments (e.g. market changes) such that an adequate assessment of a company's situation based on the analysis of statistical information (e.g. annual financial statements) is not sufficient to give a future-oriented probability of default. Due to the degree of freedom this gives the rating process, overruling is subject to strict standards and regular monitoring.

The Commerzbank rating method comprises 25 rating classes for loans not in default (1.0 to 5.8) and five default classes (6.1 to 6.5). The Commerzbank master scale allocates a non-overlapping range of probabilities of default that are stable over time to each rating class. The rating methods are validated and recalibrated annually so that they reflect the latest projection based on all actual observed defaults. The default ranges assigned to the ratings

are the same for all portfolios and remain stable over time. This ensures internal comparability consistent with the master scale method. For the purpose of guidance, the Commerzbank master scale also shows external ratings. However, a direct reconciliation is not possible, because external ratings of different portfolios show fluctuating default rates from year to year.

Commerzbank master scale

Commerzbank AG rating	PD and EL mid-point %	PD and EL range %	S & P		
1.0	0	0	AAA	AAA	Investment grade
1.2	0.01	0-0.02			
1.4	0.02	0.02-0.03	AA+	AA	
1.6	0.04	0.03-0.05	AA, AA-		
1.8	0.07	0.05-0.08	A+, A	A	
2.0	0.11	0.08-0.13	A-		
2.2	0.17	0.13-0.21	BBB+	BBB	
2.4	0.26	0.21-0.31	BBB		
2.6	0.39	0.31-0.47			
2.8	0.57	0.47-0.68	BBB-	BB	
3.0	0.81	0.68-0.96	BB+		
3.2	1.14	0.96-1.34	BB		
3.4	1.56	1.34-1.81			
3.6	2.10	1.81-2.40	BB-	Non-investment grade	
3.8	2.74	2.40-3.10	B+		
4.0	3.50	3.10-3.90			
4.2	4.35	3.90-4.86	B		
4.4	5.42	4.86-6.04			
4.6	6.74	6.04-7.52			
4.8	8.39	7.52-9.35	B-		
5.0	10.43	9.35-11.64			
5.2	12.98	11.64-14.48	CCC+	CCC	
5.4	16.15	14.48-18.01			
5.6	20.09	18.01-22.41	CCC to CC-		
5.8	47.34	22.41-99.99			
6.1		>90 days past due			Default
6.2		Imminent insolvency			
6.3	100	Restructuring with recapitalisation	C, D-I, D-II		
6.4		Termination without insolvency			
6.5		Insolvency			

Commerzbank has defined an implementation plan for the successive transition of the SACR portfolios into the IRBA. As at 31 December 2013, Commerzbank has an AIRB coverage ratio at Group level of 94.5%, exceeding the AIRB exit threshold of 92% under section 66 of the Solvency Regulation (in the version applicable as at 31 December 2013). For loans and receivables that are not covered by the procedures approved by the supervisory authorities for the IRBA, the standardised approach for credit risk (SACR) applies, under which flat risk weightings are to be used or risk weightings are to be based on external assessments of the borrower's creditworthiness.

Risk parameters

In addition to classifying the default risk within the scope of the rating process, correctly assessing loss severity is essential for a reliable and holistic risk assessment. The loss severity is determined firstly by the exposure at default (EaD) and secondly by the loss given default (LGD).

When forecasting EaD unused credit lines and other contingent liabilities are included via credit conversion factors (CCFs). Depending on the transaction and the customer, the CCF describe the probability of drawdown in the event of a default within the next twelve months.

The LGD is primarily determined by the expected proceeds from collateral and unsecured portions of loans. Proceeds from collateral are modelled via recovery rates representing a discount on the previously defined market value. The recovery rate depends on the characteristics of the collateral. For instance, when modelling for properties, the collateral is differentiated by property type and location. To determine the proceeds on unsecured portions of loans, the focus is primarily on the characteristics of the customer and the transaction.

The CCF and LGD models are based on bank-internal empirical loss data. For this purpose, Commerzbank refers to a database of internal credit defaults since 1997. New defaults are recorded continuously and are made available for statistical analysis once processing is complete. For quality assurance purposes, the data collection process is monitored by a number of controls and automatic checking procedures.

Both the internal and regulatory requirements of the German Solvency Regulation are taken into account when developing statistical models for estimating EaD and LGD. Discussions with experts from back office and debt workout departments play an important role when validating the results and identifying relevant factors. In instances where there is only a small number of historical default or collateral utilisation cases, the empirical

analyses are supplemented with expert assessments. All of the models are regularly validated and recalibrated on the basis of the new findings. Empirically-based LGD and EaD parameters are used in all important internal processes at Commerzbank. The suitability of the models was verified by the Bundesbank and the BaFin as part of the inspection prior to the granting of authorisation for the advanced IRBA.

Finally, combining the above components yields an assessment of the expected loss ($EL = EaD \cdot PD \cdot LGD$) and the risk density as a ratio of EL to EaD (EL to EaD in basis points). The internal master scale is used to clearly allocate borrower PDs (customer ratings) and loan commitment risk densities (credit ratings) to the Bank's internal rating classes.

Validation

Pursuant to section 147 ff. SolvV and article 185 CRR, all risk classification procedures are subject to a regular validation and calibration of parameters. Risk Management, which is independent of the front office units, is responsible for preparing the validation reports. Any particular irregularities and necessary changes are presented to the Bank's Strategic Risk Committee for approval. Regular monitoring of procedures is an additional system control element. To check the quality of the rating procedures, Internal Audit regularly reviews the methods and processes used and inspects validation and monitoring methods.

Detailed validation concepts are defining which analyses have to be carried out rotationally for the rating systems as well as for EaD and LGD models. In addition special topics can be scheduled during a model validation phase. All of the analysis results are grouped and evaluated using a traffic-light system. If the standards and limits that have been defined in the validation concept are not met, the specific causes must be established. Concrete steps must then be defined along with a timetable for implementing them. These steps may include, for instance, measures to improve data quality or a revision of the process in question.

Generally a distinction is made between quantitative and qualitative reviews of the models. Data quality aspects and statistical analyses are of specific interest in the quantitative validation. This involves comparing the model forecasts with the reality over the course of the assessment period. The quality of the forecasts is verified using statistical methods. Assessing the discriminatory power of rating procedures may involve using Gini coefficients, concordance indices and hit rate analyses, for instance. The calibration of procedures may be checked using various statistical tests, such as the Spiegelhalter or binomial test.

Depending on the type of model a different validation procedure to back-test each single model has to be applied, as described in the following:

- **Default/non-default rating procedure:** In default/non-default models, ratio selection, parameter estimates and calibration are mainly based on internal default periods. A check is therefore made during validation to ascertain whether the internally measured default rates tally with the predicted probabilities of default. Discriminatory power is also checked by calculating the AUC value, and the Gini coefficient respectively.
- **Shadow rating procedure:** The classic back-testing methods used for default/non-default models cannot normally be applied to portfolios with very few defaults. Consequently, back-testing in shadow rating procedures relies very heavily on comparisons with external ratings. Comparing the Bank's internal ratings with those of external agencies (Standard & Poor's, Moody's and Fitch Ratings) gives indications of how the Bank's credit rating estimates should be classified in relative terms. For this benchmarking, contingency tables, for example, are produced, variances analysed and the correlation coefficient determined according to Spearman. A benchmarking analysis is naturally only useful or possible if a large number of external ratings are available. If this is not the case, pseudo discriminatory power values, for example, can be calculated using either external or final internal ratings.
- **Hybrid models:** Hybrid models are basically mixtures of default/non-default models and shadow rating procedures. In some low-default portfolios, an internal data history has had time to develop. While this alone is not sufficient to develop a default/non-default model and corresponding validation, the available data history is yet being incorporated for validation or development purposes. The validation techniques of default/non-default models and shadow rating procedures are combined in these procedures.
- **Cash flow-based procedures:** In rating procedures for special funding, the customer's credit rating derives principally from the cash flows generated by the rating object. Typically, the rating procedures are therefore based on cash flow simulations using stochastic processes. The procedures are normally used in low default and low number respectively portfolios for which only very few external benchmarks exist. The models are therefore causally produced and often calibrated using expert knowledge. Direct comparisons of the predicted PDs with realised default rates and discriminatory power analyses using the AUC are not normally very meaningful due to the low number of defaults. The statistical testing of EaD and LGD predictions of these models are likewise difficult. Key elements of the validation of these procedures are descriptive analyses of the input data and comparisons of the cash flows and volatilities predicted by the users with actual cash flows.
- **Wholly expert-based PD procedures:** No external target criterion is available for these procedures and there are no cash flow simulations. Calibration is based wholly on expert knowledge. Validation is therefore very heavily reliant on expert know-how, as is the development. For the validation, the results produced by the procedure in particular are compared with the expert opinion, e.g. by evaluating the overruling pattern.
- **EaD and LGD models:** On the basis of additional default and loss data in-sample and out-of-sample tests are carried out through statistical backtests. In this context the validity of existing parameter differentiations and the discriminatory power of the applied risk factors have always to be analysed. Data quality and the representativeness of observations for future loss events are also important subjects of analyses.

The following table gives an overview of the quantitative validation procedures used for the individual rating procedures:

Table 10: Validation of IRBA rating procedures

Rating procedures	PD validation		EaD/LGD validation	
	Methodology	Data history Years	Methodology	Data history Years
RFI-BANK	Shadowrating, default/non-default	7	Empirically calibrated	15
R-SCR	Shadowrating	7	Empirically calibrated	15
R-LRG	Shadowrating	7	Expert-based	–
COSCO/R-CORP	Shadowrating, default/non-default	5	Empirically calibrated	15
NBFI	Expert-based, shadowrating	5	Expert-based	–
CORES	Default/non-default	5	Empirically calibrated	15
RS-CRE	Default/non-default, shadowrating	7	Empirically calibrated	7
RS-CFD	Cash flow simulation	5	Cash flow simulation	7
RS-REN	Cash flow simulation	5	Cash flow simulation	7
DSB Darling	Cash flow simulation	7	Cash flow simulation	10
ABS IAA	IAA-methods ¹	–	IAA-methods ¹	–

¹ Internal classification procedure for securitisations, see page 47.

Qualitative validation is carried out in cooperation with the users of the risk models and particularly takes procedural conditions into consideration. This includes compliance of the procedures with regulations, overruling analyses and the general user acceptance. For EaD and LGD procedures the precise technical implementation of parameters in all using systems has to be verified. Asset Quality Reviews established in the back office also guarantee a continuously reliable data quality and the implementation of the model true to the process. By way of example the monthly reporting of rating coverage to the Board of Managing Directors ensures that the portfolios are valued using up-to-date and valid rating analyses.

The validations carried out in 2013 were largely unremarkable. In particular, the conservative recalibration of the rating procedure

for ship financing conducted the previous year proved to have been appropriate. The ongoing model updating process led to only slight changes in the rating procedure. The table below summarises the validation results for all separately calibrated AIRB parameters and submodels under the different procedures, i.e. PD, LGD and EAD. It shows the cases in which the tolerance limits set by the corresponding validation concepts were exceeded, thereby making adjustments necessary.

At the end of 2013 / beginning of 2014, the adjustments were implemented in the productive systems. Altogether, the measures are expected to result in a rise in RWA of less than €0.5bn. This will feed through fully over the course of 2014.

Table 11: Validation results

Validation	PD		LGD		EaD	
	Number	EaD in %	Number	EaD in %	Number	EaD in %
Adequate	44	99	276	87	21	99
Too conservative – adjustment necessary	1	1	4	2	1	0
Too progressive – adjustment necessary	0	0	32	12	1	1
Total	45	100	312	100	23	100

Risk mitigation

At Commerzbank, risk mitigation takes the form of guarantees, collateral and netting.

The collateral mainly takes the form of mortgages on owner-occupied and rented residential properties, mortgages on commercial properties and various forms of guarantees. The ship finance portfolio is mostly backed by ship mortgages.

Within the scope of IRBA assessments, processes for offsetting collateral instruments were recognised; in particular this includes financial collateral, guarantees, credit derivatives, life insurances, mortgage liens in the land register and other real collateral.

In the IRBA, the Bank takes account of credit risk mitigating effects arising from the receipt of eligible guarantees (guarantees/sureties, credit default swaps, comparable claims on third parties) by using the risk parameters (PD and LGD) of the guarantor. Under the SACR, the Bank uses the risk weightings laid down by the supervisory authority.

As part of the assessment of their declaration of liability, all guarantors are essentially subject to a review of their creditworthiness and rating in accordance with the sector and business to which they belong. The aim of the creditworthiness review is to establish a guarantor's maximum ability to pay.

In accordance with the German Solvency Regulation, the quality of the collateral received is subject to rigorous review and is continuously monitored. In particular, this includes establishing the legal enforceability of the collateral and ensuring that it is valued regularly and managed appropriately. The recoverability of the collateral instruments is reviewed after reaching a certain threshold on a regular basis during the term of a loan as part of the regular credit processing. Depending on the collateral type, this usually takes place annually, but may be at shorter intervals. Positive correlations between the creditworthiness of the borrower and the value of the collateral or guarantee are established in the lending process and collateral instruments affected are not offset. Processing the collateral for corporate customers is in the exclusive responsibility of the risk function's collateral management.

The Bank carries out collateral concentration analyses for all lending collateral (physical and personal collateral). Various aspects such as collateral category, borrower's rating class and regional allocation of the collateral are examined. With reference to these aspects, the Board of Managing Directors is kept informed on a regular basis of the development of the collateral pool and possible anomalies/concentrations.

In addition to the listing of principles for the use of collateral, the valuation and management (processing) of collateral are governed by universally applicable standards and collateral-specific instructions (guidelines, manuals, descriptions of processes, IT instructions, legally validated standard contracts and samples).

The standards established to hedge against or mitigate the risks of loans, which also take account of the regulatory requirements of SolvV, include:

- Legal and operational standards for documentation and data collection as well as valuation standards (each commitment to be analysed at least once a year).
- Standardisation and updating of the collateral valuation are ensured by: laying down valuation processes, prescribing standardised valuation methods, parameters and defined discounts for collateral, clearly defining responsibilities for the processing and valuation process, as well as the requirements for revaluations at regular intervals.
- Other standards for taking account of specific risks, e.g. operational risks, correlation and concentration risks, maturity date and duration risks, market price change risks (e.g. due to currency fluctuations), country risks, legal risks or risks of changes in the law, environmental risks and risks of insufficient insurance cover.

For the vast majority of its derivative default risk positions, Commerzbank Group uses the internal model method (IMM) according to section 223 SolvV. The credit equivalent amounts are determined as expected future exposure through the simulation of various market scenarios, taking netting and collateral into account.

For securities repurchase, lending and comparable transactions involving securities or goods, the net assessment basis is determined in accordance with section 215.1 SolvV, taking any offsetting agreements in accordance with section 209 SolvV and the application of section 215.5 SolvV and section 155 ff. SolvV into account. Guarantees and credit derivatives are taken into account via the substitution approach. The double-default procedure defined under section 86.3 SolvV is applied.

Quantitative information on default risks

Commerzbank Group's IRBA portfolio

The IRBA portfolio of all Commerzbank Group companies included in this Disclosure Report is shown below, broken down into the relevant IRBA asset classes. The structuring of the rating classes corresponds to the Commerzbank internal management via the PD master scale. These have been grouped into five main classes for reasons of clarity. Rating class 6 comprises borrowers in default according to IRBA regulations, whereby the IRBA definition of default is also used for internal purposes. The risk parameters PD and LGD are calculated as exposure-weighted averages; the same also applies to the average risk weighting (RW).

The IRBA exposure value refers to the exposure values to be defined according to section 99 SolvV. These represent the expected amounts of the IRBA position that will be exposed to a risk of loss. The exposure value for off-balance sheet default risk exposures is calculated by weighting using a conversion factor.

Commerzbank AG, Hypothekbank Frankfurt AG, mBank S.A. and comdirect bank AG use the advanced IRB approach. They may therefore use the internal estimates of credit conversion factors (CCFs) for regulatory purposes, too. CCFs are necessary for off-balance sheet transactions in order to assess the likely exposure in the event of a possible default on commitments that have not yet been drawn.

In tables 12 to 14, only portfolios which fall under the scope of application of the IRBA and are rated with a rating process that has been approved by the supervisory authority are shown. Positions in the asset class other non-loan-related assets are not listed. These assets amounting to €2.6bn do not have any creditworthiness risks and are therefore irrelevant for the management of default risks. Furthermore, mBank S.A. positions in the amount of €0.7bn are not included; they are subject to the IRBA slotting ap-

proach. Securitisation positions in the IRBA are presented separately in the securitisations section in this chapter.

The exposure values shown in this section (EaD) generally differ from those EaD values in the Annual Report (economic EaD) due to the following:

- For derivative positions, there are differences in definitions between the exposures reported in the Annual Report and the regulatory figures presented in this Disclosure Report.
- Some transactions are not included in risk-weighted assets (RWA) for regulatory purposes but are included in the EaD of the Annual Report and Risk Report respectively.
- The figures presented in this Disclosure Report relate to six entities within the Commerzbank Group considered important for disclosure. By contrast, the figures in the Annual Report relate to all companies that have to be consolidated according to IFRS.

All of the IRBA exposures are presented as follows:

Table 12: IRBA exposures (EaD) by rating class – on-balance and off-balance

Rating category €m		Central govern- ments	Banks	Compa- nies	Retail			Total 2013	Total 2012
					IRBA mortgage exposure	Other retail	Qualified revolv. IRBA- positions		
Investment Grade (0-0.68%)									
Rating 1 (0.00- 0.08%)	EaD	23,246	24,128	15,087	11,068	5,711	4,810	84,051	77,312
	RWA	752	3,524	2,317	220	284	77	7,174	7,043
	LGD in %	10.9	36.3	37.7	14.6	34.5	58.6	27.8	24.3
	PD in %	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	RW in %	3.2	14.6	15.4	2.0	5.0	1.6	8.5	9.1
Rating 2 (0.08- 0.68%)	EaD	17,568	28,562	79,677	30,288	11,379	1,652	169,127	169,617
	RWA	2,821	10,933	34,414	2,756	2,397	122	53,443	52,695
	LGD in %	12.4	38.4	35.1	16.8	36.9	58.4	30.4	28.6
	PD in %	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
	RW in %	16.1	38.3	43.2	9.1	21.1	7.4	31.6	31.1
Non-Investment Grade (0.68-99.99%)									
Rating 3 (0.68- 3.10%)	EaD	3,702	8,313	26,374	7,275	6,317	742	52,722	55,761
	RWA	1,059	6,803	20,754	1,802	2,731	229	33,378	34,972
	LGD in %	12.0	36.8	33.7	16.6	37.3	58.5	31.1	29.7
	PD in %	1.4	1.7	1.4	1.3	1.4	1.5	1.4	1.4
	RW in %	28.6	81.8	78.7	24.8	43.2	30.9	63.3	62.7
Rating 4 (3.10- 9.35%)	EaD	1,279	2,015	9,757	1,694	1,504	179	16,428	15,248
	RWA	284	1,976	12,394	1,003	814	137	16,608	16,503
	LGD in %	6.5	30.6	33.7	16.7	34.4	58.5	29.8	27.5
	PD in %	5.9	5.0	5.7	5.3	5.3	5.3	5.6	5.4
	RW in %	22.2	98.1	127.0	59.2	54.2	76.7	101.1	108.2
Rating 5 (9.35- 99.99%)	EaD	877	383	6,711	1,232	678	84	9,965	11,030
	RWA	229	372	9,183	1,326	517	118	11,746	14,689
	LGD in %	5.5	20.6	28.3	19.2	34.9	57.6	25.5	22.1
	PD in %	20.0	17.5	29.9	22.4	20.4	16.5	26.9	25.0
	RW in %	26.1	97.2	136.8	107.6	76.3	140.7	117.9	133.2
Default (100%)									
Rating 6 (100%)	EaD	0	973	12,374	942	548	13	14,850	17,415
	RWA	0	0	4,340	845	59	0	5,245	6,368
	LGD in %	73.8	59.6	38.3	33.0	58.3	53.4	40.1	35.7
	PD in %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	RW in %	57.7	0.0	35.1	89.7	10.8	0.0	35.3	36.6
Total 2013									
	EaD	46,673	64,374	149,980	52,500	26,137	7,480	347,143	
	RWA	5,144	23,609	83,402	7,952	6,803	684	127,593	
	LGD in %	11.3	37.4	35.0	16.7	36.7	58.5	30.1	
	PD in %	0.8	2.1	10.4	2.8	3.4	0.7	5.7	
	RW in %	11.0	36.7	55.6	15.1	26.0	9.1	36.8	
Total 2012									
	EaD	45,987	64,334	169,293	51,231	15,538	0		346,383
	RWA	5,377	20,716	95,109	8,594	4,288	0		132,270
	LGD in %	12.6	32.7	32.7	16.7	37.7	55.9		27.9
	PD in %	1.2	1.5	11.1	3.1	2.8	4.4		6.4
	RW in %	11.7	32.2	56.2	16.8	27.6	12.9		38.2

The next two tables exclusively show the off-balance sheet IRBA exposures:

Table 13: IRBA exposures (EaD¹) for off-balance sheet transactions by rating class – unutilised lending commitments

Rating category €m		Central governments	Banks	Companies	Retail			Total 2013	Total 2012
					IRBA mortgage exposure	Other retail	Qualified revolv. IRBA-positions		
Investment Grade (0-0.68%)									
Rating 1 (0.00-0.08%)	Total sum	2,319	608	9,326	379	3,442	7,388	23,462	11,496
	Ø CCF (%)	46	44	46	100	62	64	54	50
	EaD	1,233	628	4,254	377	2,158	4,701	13,350	6,296
	Ø EaD	26	29	62	2	2	0	28	39
Rating 2 (0.08-0.68%)	Total sum	868	960	44,507	699	5,373	2,268	54,675	48,859
	Ø CCF (%)	48	48	45	97	61	61	48	48
	EaD	389	578	19,967	676	3,293	1,374	26,277	22,980
	Ø EaD	21	22	27	0	1	0	22	26
Non-Investment Grade (0.68-99.99%)									
Rating 3 (0.68-3.10%)	Total sum	297	370	8,565	181	2,266	588	12,267	11,155
	Ø CCF (%)	45	48	47	98	61	57	51	52
	EaD	103	166	3,668	177	1,362	333	5,809	5,403
	Ø EaD	39	20	16	0	0	0	12	21
Rating 4 (3.10-9.35%)	Total sum	62	212	1,218	23	321	95	1,931	1,042
	Ø CCF (%)	49	47	60	98	57	55	58	51
	EaD	24	65	637	22	180	52	980	495
	Ø EaD	7	8	62	0	0	0	40	4
Rating 5 (9.35-99.99%)	Total sum	170	7	517	7	58	19	778	679
	Ø CCF (%)	47	47	48	96	54	54	49	45
	EaD	49	2	247	7	30	10	346	255
	Ø EaD	19	2	11	0	0	0	11	15
Default (100%)									
Rating 6 (100%)	Total sum	0	1	174	1	17	1	195	399
	Ø CCF (%)	45	50	43	43	35	39	42	44
	EaD	0	1	74	0	6	0	81	162
	Ø EaD	0	1	1	0	0	0	1	8
Total									
	Total sum	3,717	2,159	64,307	1,290	11,477	10,359	93,308	73,631
	Ø CCF (%)	47	46	46	98	61	62	50	49
	EaD	1,798	1,439	28,847	1,259	7,029	6,471	46,844	35,592
	Ø EaD	26	24	31	1	1	0	23	27

¹ EaD is calculated from the assessment basis, CCFs, collateral deposits and withdrawals, and substitution effects.

Table 14: IRBA exposures (EaD¹) for off-balance sheet positions by rating class – other unutilised non-derivative off-balance sheet assets²

Rating category €m		Central govern- ments	Banks	Compa- nies	Retail			Total 2013	Total 2012
					IRBA mortgage exposure	Other retail	Qualified revolv. IRBA- positions		
Investment Grade (0-0.68%)									
Rating 1 (0.00- 0.08%)	Total sum	1,883	689	3,854	0	201	0	6,626	6,969
	Ø CCF (%)	44	43	27	0	22	0	34	31
	EaD	919	622	1,098	0	45	0	2,684	2,601
	Ø EaD	12	22	15	0	0	0	15	17
Rating 2 (0.08- 0.68%)	Total sum	2,255	3,846	16,759	0	502	0	23,361	23,090
	Ø CCF (%)	45	44	33	0	22	0	36	32
	EaD	1,067	1,859	5,385	0	109	0	8,420	7,365
	Ø EaD	8	33	32	0	0	0	29	23
Non-Investment Grade (0.68-99.99%)									
Rating 3 (0.68- 3.10%)	Total sum	1,398	2,372	3,357	0	246	0	7,372	7,437
	Ø CCF (%)	43	46	23	0	27	0	35	30
	EaD	538	945	641	0	65	0	2,188	1,928
	Ø EaD	39	11	2	0	0	0	12	10
Rating 4 (3.10- 9.35%)	Total sum	913	1,524	577	0	53	0	3,067	3,389
	Ø CCF (%)	32	49	26	0	25	0	38	28
	EaD	280	626	145	0	13	0	1,065	895
	Ø EaD	17	10	1	0	0	0	10	13
Rating 5 (9.35- 99.99%)	Total sum	1,055	430	321	0	16	0	1,823	1,849
	Ø CCF (%)	34	45	22	0	29	0	35	23
	EaD	352	178	65	0	5	0	599	388
	Ø EaD	17	28	0	0	0	0	17	33
Default (100%)									
Rating 6 (100%)	Total sum	0	14	303	0	20	0	338	434
	Ø CCF (%)	50	44	24	0	29	0	25	27
	EaD	0	6	69	0	6	0	81	114
	Ø EaD	0	2	1	0	0	0	1	1
Total									
	Total sum	7,504	8,874	25,172	0	1,038	0	42,588	43,168
	Ø CCF (%)	41	45	30	0	23	0	35	31
	EaD	3,155	4,237	7,402	0	243	0	15,037	13,292
	Ø EaD	16	23	24	0	0	0	22	19

¹ EaD is calculated from the assessment basis, CCFs, collateral deposits and withdrawals, and substitution effects.² Securities lending and repurchase transactions are not included.

The following table shows the scope of the credit risk mitigation effects of financial collateral, guarantees, credit derivatives, mortgage liens and life insurances under the IRBA. Besides the collateral in the SACR, some physical and other collateral which is only

eligible for recognition under the IRBA, is also offset. In the table below, financial collateral and IRBA collateral are shown separately from the guarantees.

Table 15: Total collateralised IRBA exposures (EaD) – financial and other collateral/guarantees¹

Asset class €m	Financial collateral	Guarantees	Life insurances	Credit derivatives	Mortgage liens	Other IRBA collateral ²	Total 2013	Total 2012
Retail banking: sub-class IRBA exposures secured by mortgage liens	676	38	153	0	31,768	5,618	38,254	37,110
Companies	4,649	5,115	55	877	20,194	3,719	34,609	45,230
Retail banking: other IRBA exposures	1,402	433	0	0	4,397	551	6,782	3,518
Central governments	2,372	3,158	0	0	111	467	6,109	4,993
Banks	1,479	2,021	0	8	61	54	3,623	5,448
Total 2013	10,579	10,765	208	885	56,531	10,410	89,377	
Total 2012	8,399	13,347	257	1,132	40,214	32,951		96,300

¹ For reasons of materiality, secured investment positions have not been presented.

² Exposures secured by mortgage liens on residential and commercial property do not form an asset class of their own under the IRBA. They are therefore shown under other IRBA collateral. Mortgage liens in the land register also fall into this category.

The calculation of collateral is based on market values weighted with recovery rates. These recovery rates are based on empirical data and form part of the LGD models. By definition, the rates cannot exceed 100%; therefore, the figures shown are normally lower than the market values. By contrast, under the IRBA the so-called substitution approach to offset guarantees and credit derivatives is used – both subsumed as guarantees in the SolvV. The protection does therefore not take effect in the LGD as is the case with financial and other IRBA collateral but via the substitution of the debtor's risk parameters with those of the guarantor. Alternatively, the double-default procedure may be used in the IRBA.

Commerzbank Group's SACR portfolio

The portfolios currently excluded from the IRBA are measured in accordance with SACR regulations as permitted under partial use provisions. In contrast to the IRBA, the SACR is largely based on a flat risk weighting or external ratings. Commerzbank has nominated the rating agencies Standard & Poor's Rating Services, Moody's Investors Service and Fitch Ratings for the use of external ratings.

For a large portion of the non-security positions, there are no position-specific external credit ratings. In these cases, it is possible to transfer issue ratings subject to specific requirements. In order to determine the specific external credit ratings to be used, Commerzbank has implemented a binding algorithm in accordance with section 43 ff. SolvV.

The allocation of external ratings and flat risk weightings, respectively, is carried out according to the following procedure:

- **A clear ISIN** can be allocated to the position: The process is based on the provisions of section 44 sentence 3 and 4 SolvV for the credit assessments of rated SACR positions. A long-term issue rating is allocated to the position via the ISIN. If there is no long-term issue rating available, a short-term issue rating may only be allocated via the ISIN for positions belonging to the SACR asset class companies. If this is also not available, the asset is treated as though no ISIN has been allocated to it.
- **No ISIN** can be allocated to the position: The process is based on the provisions of section 45 sentence 2 and 3 SolvV for external credit assessments of unrated SACR positions. In this case, comparable exposures are used to derive credit assessments. Comparable exposures are defined as issues with the same issuer, which have an unsecured long-term foreign currency rating. All comparable exposures with a higher or pari passu ranking and an SACR risk weighting > 100% are transferred to the exposure being assessed. If the rating cannot be transferred, either comparable exposures ranking pari passu with an SACR risk weighting < 100% or lower-ranking comparable exposures will be selected or no issue rating will be allocated to the receivable. In the latter case, the allocation of the flat SACR risk weighting is carried out according to the provisions of SolvV.

SACR portfolio by risk weightings The risk weightings determined by external ratings or flat risk weightings and the allocations of the exposures to these risk weightings are shown below.

The table shows the SACR exposures (EaD) before and after credit risk mitigation techniques (CRMT) according to section 8 SolvV.

Table 16: Exposures in the Standardised Approach to Credit Risk – before credit risk mitigation techniques

Asset class €m	Risk weightings										Total
	0%	10%	20%	35%	50%	70%	75%	100%	150%	Other	
Central governments	37,513	0	94	0	0	0	0	0	0	0	37,607
Regional government/local authorities	28,373	0	489	0	11	0	0	0	0	0	28,873
Other public-sector bodies	15,278	0	2,683	0	217	0	0	92	0	0	18,270
International organisations	1,238	0	0	0	0	0	0	0	0	0	1,238
Banks	1,917	0	4,849	0	935	0	0	117	4	0	7,824
Multilateral development banks	31	0	0	0	0	0	0	0	0	0	31
Companies	245	0	1,818	0	2,238	0	0	11,085	0	0	15,385
Loans backed by real estate	0	0	0	981	705	0	0	0	0	0	1,686
Retail	0	0	0	0	0	0	3,576	0	0	0	3,576
Debt instruments backed by banks	0	30	0	0	100	0	0	0	0	0	130
Investment funds	0	0	0	0	0	0	0	0	0	4,870	4,870
Other items	710	0	21	0	0	0	0	715	0	0	1,446
Past due items	0	0	0	0	0	0	0	363	582	0	945
Investments	0	0	0	0	0	0	0	1,707	0	0	1,707
Total 2013	85,305	30	9,955	981	4,206	0	3,576	14,079	586	4,870	123,588
Total 2012	77,389	30	9,882	3,832	4,475	0	8,575	18,156	687	4,522	127,547

Table 17: Exposures in the Standardised Approach to Credit Risk – after credit risk mitigation techniques

Asset class €m	Risk weightings										Total
	0%	10%	20%	35%	50%	70%	75%	100%	150%	Other	
Central governments	42,765	0	180	0	47	0	0	0	0	0	42,993
Regional government/local authorities	31,048	0	583	0	48	0	0	0	0	0	31,679
Other public-sector bodies	15,682	0	2,613	0	217	0	0	12	0	0	18,525
International organisations	1,238	0	0	0	0	0	0	0	0	0	1,238
Banks	2,049	0	4,756	0	259	0	0	110	0	0	7,175
Multilateral development banks	31	0	0	0	0	0	0	0	0	0	31
Companies	49	0	1,300	1	453	0	0	6,894	0	0	8,697
Loans backed by real estate	0	0	0	981	705	0	0	0	0	0	1,686
Retail	0	0	0	0	0	0	3,469	0	0	0	3,469
Debt instruments backed by banks	0	30	0	0	100	0	0	0	0	0	130
Investment funds	0	0	0	0	0	0	0	0	0	4,870	4,870
Other items	710	0	21	0	0	0	0	715	0	0	1,446
Past due items	0	0	0	0	2	0	0	331	533	0	866
Investments	0	0	0	0	0	0	0	1,707	0	0	1,707
Total 2013	93,572	30	9,454	982	1,831	0	3,469	9,771	533	4,870	124,512
Total 2012	81,214	30	10,199	3,903	3,852	0	7,360	12,620	570	4,522	130,309

In order to mitigate credit risk in the SACR, Commerzbank Group takes financial collateral and guarantees into consideration. These will be dealt with separately in the section risk mitigation. Furthermore, collateral in the form of property charges also reduce the risk weighting.

To determine the SACR exposure before the credit risk mitigation techniques, the SACR assessment basis before credit risk mitigation is multiplied with the respective SACR conversion factor pursuant to section 50 SolvV. In accordance with section 48 SolvV, the exposure after credit risk mitigation techniques is equal to the product of the SACR assessment basis after credit risk mitigation pursuant to section 49.1 SolvV and the respective SACR conversion factor for each exposure pursuant to section 50 SolvV. For the SACR assessment basis, in contrast to the IRBA, the valuation allowances based on each of the positions are deducted. The risk weightings' column other shows the exposures derived from SACR investment units for which the look-through-approach has been applied by the investment company.

Under the SACR, guarantees are treated according to the substitution principle. This means that the borrower's risk weighting is replaced by that of the guarantor. Consequently, the guaranteed amount is transferred from the borrower's risk weighting class to

that of the guarantor. However, this shift only takes place if the risk weighting of the guarantor is lower than that of the borrower. This is why the exposure before CRMT for assets guaranteed by central governments for example is less than after CRMT. This can be seen in the table under the 0% risk weighting.

Past due positions are shown with a risk weighting of 150%. Depending on the valuation allowances based on them (SLLP, Port LLP impaired) or the collateral, this may lead to a shift to lower risk weighting classes. No deductions from capital were made for SACR positions as of 31 December 2013.

The following table shows the scope of the credit risk mitigation effects of financial collateral, guarantees, credit derivatives, mortgage liens and life insurances under the SACR. The effectively secured exposures, i.e. taking into consideration all of the relevant haircuts for the collateral, are allocated to the SACR asset class. In taking financial collateral into account as a credit-risk mitigating technique, Commerzbank generally uses the comprehensive method as defined under sections 186 to 203 SolvV. The assessment basis for the default risk position is reduced by the value of the financial collateral. For smaller entities the basic method pursuant to section 185 SolvV is used in parallel.

Table 18: Collateralised SACR exposures¹

Asset class €m	Financial collateral	Guarantees	Life insurances	Credit derivatives	Mortgage liens	Total 2013	Total 2012
Companies	1,923	4,771	6	0	560	7,260	8,751
Retail	87	17	3	0	1,126	1,233	5,576
Banks	1,014	16	0	0	0	1,030	271
Central governments	0	0	0	0	0	0	3
Regional governments and local authorities	1	0	0	0	0	1	1
Other public-sector bodies	13	150	0	0	0	163	251
Past due items	2	77	1	0	43	122	370
Total 2013	3,040	5,030	10	0	1,729	9,808	
Total 2012	2,233	5,878	441	0	6,671		15,224

¹ For reasons of materiality, secured investment positions have not been presented.

The secured positions shown under mortgage liens are the exposures that are allocated to the SACR asset class exposures secured by mortgage liens. For the purposes of comparability with the figures shown under the IRBA, this asset class is not presented separately and the exposures secured by mortgage liens are instead classified by the respective asset class of the borrower.

Overarching portfolio analyses

This section provides an overview of the total portfolio containing default risks with an assessment basis amounting to €520bn. For balance sheet positions, we make a distinction between the lending business and securities. Off-balance sheet positions, e.g. loan commitments or placed guarantees, other non-derivative off-balance sheet assets and derivative instruments, are shown separately.

We show the sum of SACR and IBRA positions with their assessment basis, as defined in sections 49 and 100 SolvV. The IRBA assessment basis for loans represents the amount claimed by the customer. Unlike the volume of assets determined in accordance with IFRS accounting standards, valuation allowances are not deducted. Off-balance sheet positions relate to the amount committed to but not yet claimed by the customer. A weighting with the conversion factor does not take place. For securities, the IRBA assessment basis is determined from the highest value of the acquisition costs or the sum of the carrying amount and default risk-

related write-downs. For derivative positions, the credit equivalent amount as defined in section 17 in combination with section 18 ff. SolvV is applied. The SACR assessment basis is calculated using the IFRS carrying value of the positions giving consideration to the write-downs of the last approved annual financial statement. The assessment basis includes all positions subject to credit risks regardless of whether the positions are listed in the banking or the trading book.

Effectively securitised positions are not included in the tables below. In accordance with section 232 SolvV, positions are deemed to be effectively securitised if there has been an effective and operative transfer of risk. This applies regardless of whether these are traditionally or synthetically securitised positions. Securitisation positions arising from Group companies included in this Disclosure Report acting as investors or sponsors have also not been shown. Due to their particular significance, these are shown in the separate chapter on securitisations.

Other non-loan-related assets and other items, respectively, are only listed when they are characterised as claims. These are mainly cash items in the process of collection and accrued items. Other non-loan-related assets which are largely formed through tangible assets as well as other positions which are not characterised as claims are not included in the following tables. Only positions exposed to credit risks are shown.

Table 19: Assessment basis by asset class

Asset class €m	On-balance assets		Off-balance assets			Total 2013	Total 2012
	Loans	Securities	Commitments	Derivatives	Guarantees and others		
SACR							
Central governments	12,946	13,781	140	10,871	0	37,739	31,470
Regional governments and local authorities	17,399	10,182	1,096	1,247	25	29,950	32,053
Other public-sector bodies	11,527	3,908	377	2,730	3	18,545	15,048
Multilateral development banks	0	31	0	0	0	31	129
International organisations (in terms of SolvV)	98	1,140	0	0	0	1,238	95
Banks	4,703	1,608	335	1,481	24	8,151	7,756
Debt instruments backed by banks	0	130	0	0	0	130	130
Companies	8,738	4,570	517	423	1,728	15,976	19,664
Retail	3,366	0	3,768	13	59	7,207	26,010
Loans backed by real estate	1,674	0	4	11	1	1,690	6,525
Investment funds	829	4,041	0	0	0	4,870	4,522
Other items	924	114	0	0	0	1,039	1,248
Past due items	1,566	9	6	1	9	1,591	2,026
Total SACR	63,770	39,514	6,244	16,778	1,849	128,155	146,677
IRBA							
Central governments	11,347	4,460	80	866	862	17,615	22,529
Banks	27,659	23,063	2,159	8,817	8,874	70,572	72,263
Retail banking: sub-class IRBA exposures secured by mortgage liens	51,278	0	1,290	0	0	52,568	51,264
Retail banking: other IRBA exposures	18,591	0	11,477	273	1,038	31,379	18,578
Retail banking: qual. revolv. IRBA exposures	1,009	0	10,359	0	0	11,367	1
Companies	105,857	661	64,536	10,301	25,172	206,528	223,968
Other loan-independent assets	1,472	205	0	0	0	1,678	1,991
Total IRBA	217,213	28,389	89,900	20,257	35,946	391,706	390,594
Total 2013	280,983	67,903	96,144	37,036	37,795	519,861	
Total 2012	302,026	72,524	92,306	31,672	38,742		537,270

The selected country cluster corresponds to the geographical classification of the assessment basis used for internal purposes.

Table 20: Assessment basis by country cluster (independent of segment classification)

Country cluster €m	On-balance assets		Off-balance assets			Total 2013	Total 2012
	Loans	Securities	Commitments	Derivatives	Guarantees and others		
Germany	164,034	22,497	63,858	18,219	17,658	286,266	289,574
Western Europe (without Germany)	42,649	33,803	19,435	14,706	9,264	119,856	131,741
Central- and Eastern Europe	36,234	2,248	5,023	486	2,127	46,118	45,961
thereof Poland	26,615	796	3,691	225	821	32,149	31,160
North and South America	19,867	5,669	4,962	1,866	2,314	34,677	38,517
thereof USA	10,338	3,065	4,426	1,631	1,065	20,525	24,547
Asia	13,560	1,386	2,485	817	4,860	23,107	20,272
Other	4,640	2,300	382	941	1,573	9,836	11,206
Total 2013	280,983	67,903	96,144	37,036	37,795	519,861	
Total 2012	302,026	72,524	92,306	31,672	38,742		537,270

The breakdown by sector is based on a system used internally by the Bundesbank. For comprehension purposes, the assessment bases for sectors with a volume of less than €10bn have been grouped under the other item.

Table 21: Assessment basis by sector

Sector €m	On-balance assets		Off-balance assets			Total 2013	Total 2012
	Loans	Securities	Commitments	Derivatives	Guarantees and others		
Banking and insurance	52,655	33,349	6,672	26,677	13,799	133,151	124,303
thereof Banks	40,310	26,004	1,670	19,341	9,646	96,970	89,985
thereof insurance companies	1,630	0	1,648	1,764	1,869	6,911	7,136
thereof other financial institutions	10,716	7,345	3,354	5,572	2,284	29,270	27,182
Public sector, defence and social security	40,228	32,306	1,339	3,495	27	77,396	84,272
Manufacturing industry	26,881	0	35,739	1,582	13,044	77,245	79,826
Private households	57,286	0	18,373	104	113	75,876	74,790
Real estate, renting and business activities	42,984	40	5,720	1,953	1,748	52,445	67,209
Transport and communications	20,882	770	4,639	1,166	1,086	28,544	32,542
Trade, maintenance and repair of motor vehicles and consumer goods	12,094	0	10,769	476	2,617	25,956	25,586
Energy and water supply	7,433	1,089	5,595	936	2,835	17,888	16,931
Other public and personal service activities	7,335	22	1,378	217	409	9,360	10,197
Other	13,206	328	5,920	428	2,118	22,000	21,615
Total 2013	280,983	67,903	96,144	37,036	37,795	519,861	
Total 2012	302,026	72,524	92,306	31,672	38,742		537,270

The breakdown according to residual term is based on maturity. The focus is on relatively long-term financing transactions and overnight receivables. Overnight receivables include call and overnight transactions and credit lines that can be terminated at any time.

Table 22: Assessment basis by maturity

Maturity €m	On-balance assets		Off-balance assets			Total 2013	Total 2012
	Loans	Securities	Commitments	Derivatives	Guarantees and others		
daily maturity	35,706	612	55,445	10,896	15,865	118,523	113,249
> 1 day up to 3 months	28,383	2,707	1,942	2,629	5,384	41,045	40,930
> 3 months up to 1 year	31,950	4,002	8,703	3,066	7,225	54,947	53,068
> 1 year up to 5 years	63,468	27,772	28,548	7,333	4,829	131,950	142,166
> 5 years	121,477	32,810	1,507	13,112	4,492	173,397	187,859
Total 2013	280,983	67,903	96,144	37,036	37,795	519,861	
Total 2012	302,026	72,524	92,306	31,672	38,742		537,270

Default risks arising from derivative positions

In addition to market risks, derivative positions also give rise to default risks when a claim arises against the counterparty in the form of positive market values.

Commerzbank also looks at the so-called wrong way risk. This occurs when a counterparty's exposure and credit quality are negatively correlated. Wrong way risk is therefore an additional

risk source, as the exposure is generally measured independently from the counterparty's creditworthiness.

The derivative positions shown in the tables below do not include securitisation positions as defined in SolvV as these are shown in the securitisations chapter. This means that interest rate and currency swaps or credit derivative transactions entered into with special-purpose securitisation companies are not included.

Table 23: Positive replacement values by risk type before/after netting/collateral

Risk type €m	Replacement values	
	2013	2012
Interest rate risk	154,961	255,137
Currency risk	12,553	13,519
Equity risk	1,868	1,642
Precious metal risk	121	59
Commodity price risk	352	244
Credit derivatives	1,908	1,972
Collateral	13,722	21,619
Replacement values before netting/collateral	185,485	294,193
Nettable value	158,584	261,324
Eligible collateral	8,664	14,318
Replacement values after netting/collateral	18,237	18,552

The positive market values listed in the table are the expenses which would be incurred by the Bank to replace the contracts originally concluded with transactions of an equivalent financial value. From the Bank's point of view, a positive market value thus indicates the maximum potential counterparty-specific default risk. The positive market value is understood as a replacement expense in the regulatory sense. The amounts shown in the table reflect the positive replacement values before taking related collateral into account and before exercising offsetting agreements. The replacement values are broken down according to risk types in the contracts involved. The collateral provided for derivative positions is shown as a separate risk type as it cannot be allocated to other specific risk types.

The market values arising from equity risk relate to the derivative default risk positions pursuant to section 11 SolvV and do not

take the rules for embedded derivatives pursuant to IAS 39 into account. Listed derivatives are not included in the disclosure, as they are processed via central counterparties on a daily basis. By contrast, OTC derivatives are included. The proportion of derivatives processed via a central counterparty was 55% as at the end of 2013.

In order to minimise both the economic and the regulatory credit risk arising from these instruments, Commerzbank concludes master agreements (bilateral netting agreements) such as the 1992 ISDA Master Agreement Multicurrency Cross Border or the German Master Agreement for Financial Futures with the respective business partners. By means of such bilateral netting agreements, the positive and negative fair values of the derivatives contracts included under a master agreement can be offset against one another and the future regulatory risk add-ons for these

products can be reduced. This netting process reduces the credit risk to a single net claim on the contracting party (close-out netting).

For both regulatory reports and the internal measurement and monitoring of the credit commitments, these risk-mitigating techniques are only used if Commerzbank considers them enforceable in the jurisdiction in question, should the counterparty become insolvent. Legal opinions are obtained from various international law firms in order to verify enforceability.

Similar to the master agreements are the collateral agreements (e.g. collateral annex for financial futures contracts, credit support annex), which Commerzbank concludes with its business associates to secure the net claim or liability remaining after netting (receipt or provision of collateral). As a rule, this collateral management reduces credit risk by means of prompt – mostly daily or weekly – measurement and adjustment of the customer exposure. The – mostly cash – collateral and netting opportunities shown in the aforementioned table reduce the exposure to counterparties to €18,237m (2012: €18,552m).

The basis for determining the offset amounts for the default risk from derivative positions is not the positive market values but instead the credit equivalent values. To determine the assessment basis of derivative default risk positions, Commerzbank uses the internal model method (IMM) pursuant to section 223 SolvV, the market valuation method pursuant to section 18 SolvV and the maturity method pursuant to section 23 SolvV.

The approach to risk quantification under the IMM is generally based on a risk simulation which generates future market scenar-

ios and creates portfolio valuations based on these scenarios. Netting and collateral agreements are taken into account.

In applying the internal model method, the EaD is defined per counterparty as the product of the alpha factor and the calculated effective expected positive exposure E*. Risks that are not taken into account when determining E*, correlation risks for example, are included in the capital adequacy calculation through the alpha factor. Banks can either estimate the alpha factor themselves or use the supervisory value of 1.4. Commerzbank does not estimate its own alpha factor, preferring instead to use the supervisory value to calculate exposure at default.

The credit equivalent values for the counterparty default risk from derivative positions – including exchange-traded derivatives – used to determine the (net) assessment basis amounted to €19,961m at the end of 2013 using the market valuation method and €18,419m using the internal model method. Credit equivalent values effectively correspond to the exposures of on-balance sheet default risk positions as a credit conversion factor of 100% is applied to derivative positions. Transactions with central counterparties are not shown here as their assessment basis is zero and there is therefore no capital requirement.

All operative units, branches and subsidiaries are, subject to compliance with the regulations, authorised to use credit derivatives to hedge credit risks in loan portfolios (i.e. purchase of hedges). This allows them to hedge credit risks with a credit derivative without having to sell or assign the loan.

Table 24: Breakdown of credit derivative business in the banking and trading book

Type of credit derivative	Nominal value €m	Banking book		Trading book	
		Buy position	Sell position	Buy position	Sell position
Credit Default Swap		4,268	3,578	44,175	43,774
Total Return Swap		0	0	3,009	0
Total 2013		4,268	3,578	47,184	43,774
Total 2012		4,849	4,408	63,045	59,315

Contractual agreements that oblige Commerzbank to provide additional collateral to its counterparties in the event of a downgrading of its own rating are governed in the Credit Support Annexes which are established as part of the netting master agreements for the OTC derivative business.

The counterparty ratings (from Standard & Poor's, Moody's and Fitch Ratings) are automatically uploaded on a daily basis via interfaces with Reuters/Telerate/Bloomberg into the collateral management system, which can simulate downgrade scenarios if necessary. This makes it possible to carry out an advance analysis of the potential effects on the collateral amounts.

Loan loss provisions for default risks

The responsibility for processing non-performing loans for the Core Bank lies with Group Risk Management Intensive Care, whereas Group Risk Management – Credit Risk NCA is responsible for the Non-Core Assets segment. These two areas bring together the specific expert knowledge needed to support customers undergoing restructuring and to successfully process default commitments including collateral realisation.

The lending risks reported under the IFRS category LaR are taken into account by forming specific loan loss provisions (SLLP), portfolio loan loss provisions (PLLP) and general loan loss provisions (GLLP) for on- and off-balance sheet loan assets on the basis of the rules and regulations according to IAS 37 and 39.

When determining loan loss provisions, the fundamental criteria include whether the claims are in default or not and whether the claims are insignificant (exposure up to €3m) or significant (exposure over €3m).

All claims which are in default under the Basel regulations are defined as in default or non-performing. The following events are decisive in determining the default of a customer:

- Imminent insolvency (over 90 days past due).
- The Bank is assisting in the financial rescue/restructuring measures of the customer with or without restructuring contributions.
- The Bank has demanded repayment of its claim.
- The customer becomes insolvent.

A portfolio loan loss provision or allowance, respectively (PLLP impaired) is recognised for non-significant defaulted claims on the basis of internal parameters. For significant defaulted claims, the net present value of the expected future cash flows is used to calculate both specific loan loss provisions and specific valuation allowances (SLLP). The cash flows include both the expected payments and the expected proceeds from realising collateral and other recoverable cash flows. The

loan loss provision is equal to the difference between the claim amount and the net present value of all the expected cash flows. The calculation of the general loan loss provision (GLLP and PLLP non-impaired) for on-balance sheet and off-balance sheet transactions takes place at the level of each individual transaction using internal default parameters (PD, LGD) and taking the LIP factor into account (LIP = loss identification period). Country risks are not accounted for separately under IFRS but are included for the purposes of the SLLP calculation in the individual cash flow estimates and given a lump-sum value in the LGD parameters when calculating portfolio loan loss provisions.

Impairment tests are also performed for securities classified as available for sale (AFS) and loans and receivables (LaR) if the fair value is below the amortised acquisition costs due to the credit rating. At each balance sheet date, it will be reviewed whether there is objective evidence (trigger event) of impairment and whether this case of loss would impact on the expected cash flows. The trigger event will be reviewed on the basis of the creditworthiness of the borrower/issuer or the issue rating, e.g. for Pfandbriefe (mortgage bonds) and ABS transactions. Trigger events may include:

- Past due/default in payments of interest or principal on the part of the issuer/borrower.
- Restructuring of the debt instrument due to significant financial difficulties on the part of the issuer (of a security) or debtor (of a loan).
- Increased probability of a restructuring procedure.
- Increased probability of insolvency.

The trigger events are operationalised through a combination of rating and fair value changes. To achieve this, the individual securities are split into three groups (listed and unlisted equity instruments and debt instruments) that form the basis for further individual impairment reviews. If trigger events are found, an impairment affecting the income statement is made and the corresponding claim is deemed to be non-performing. For AFS positions, if no trigger event is found but the fair value is below the amortised acquisition cost, the revaluation reserve is charged. The impairment amount is determined from the difference between the amortised acquisition cost and the fair value.

The total amount of the loan loss provisions, insofar as they relate to claims on the balance sheet, is deducted from the respective balance sheet items. Provision for risks in off-balance-sheet business – guarantees, endorsement liabilities, lending commitments – is shown as other provisions for specific/portfolio risks in lending business.

In accordance with the Group's write-down policy, impaired positions are written down to the net present value of the claim two years after the notice of termination using existing loss provisions and valuation allowances (SLLPs/PLLPs impaired). Amounts recovered on claims written down are recognised in the income statement.

The tables below on loan loss provisions show the total amount of non-performing claims or those past due in the IFRS categories LaR (loans) including the related loan loss provisions with the corresponding write-downs grouped by sector and country of residence of the respective borrower.

Past due loans refer to all loans that are in arrears by at least one day up to 90 days and are not defined as loans in default under consideration of the minimum threshold (2.5% of the limit or €100).

The table below sets the on-balance and off-balance sheet total claims from non-performing and past due claims against the loan loss provisions, net allocations and direct write-downs. The following definitions are used here:

- SLLP on-balance is the sum of specific loan loss provisions for significant claims, determined on the basis of individual cash flow estimates.
- PLLP impaired on-balance is the sum of portfolio loan loss provisions for insignificant non-performing claims, determined on the basis of internal risk parameters per portfolio.
- SLLP and PLLP impaired off-balance is the total sum of provisions for significant and insignificant off-balance sheet claims. These provisions are determined in the same way as for on-balance sheet claims.
- GLLP/PLLP non impaired (NI) on-/off-balance) is the sum of general loan loss provisions relating to past due claims.

The net additions column shows the net position from additions and reversals of loan loss provisions for on-balance and off-balance sheet transactions. This does not include direct write-downs and recoveries on written-down assets. These are shown separately in the columns Direct write-up/-downs and Recoveries on written-down assets.

Table 25: Non-performing and past due loans by sector

Sector €m	Non-performing loans	SLLP on-balance	PLLP impaired on-balance	SLLP+PLLP impaired off-balance	Direct write-up/ -downs
Agriculture and forestry	16	5	4	0	0
Fisheries	97	83	0	0	0
Mining and quarrying of stone	23	8	1	0	0
Manufacturing industry	2,107	913	102	55	90
Energy and water supply	120	40	1	2	2
Construction	322	146	26	16	23
Trade, maintenance and repair of motor vehicles and consumer goods	696	316	77	14	36
Hotels and restaurants	76	22	10	0	2
Transport and communication	3,404	1,394	15	12	148
Banking and insurance	671	355	9	11	-36
Real estate ¹	5,342	1,489	81	8	113
Public sector ²	5	1	1	0	1
Education and training	11	1	2	0	2
Health, veterinary and social work	174	36	10	2	2
Other public and personal service activities	362	51	33	2	7
Private households	1,224	27	448	3	83
Non-profit organizations	23	1	2	0	0
Total 2013	14,671	4,888	823	126	476
Total 2012	17,591	5,958	769	206	453

¹ Including the rental of movable property and business service deliveries.

² Including defence and social security.

Table 25 continued: Non-performing and past due loans by sector

Sector €m	Past due loans	GLLP/PLLP NI on-/off-balance for past due loans	Net additions	Recoveries on written-down assets
Agriculture and forestry	13	0	2	0
Fisheries	0	0	79	0
Mining and quarrying of stone	51	0	0	0
Manufacturing industry	434	2	150	51
Energy and water supply	42	1	22	0
Construction	67	1	16	0
Trade, maintenance and repair of motor vehicles and consumer goods	333	2	104	0
Hotels and restaurants	285	2	-10	0
Transport and communication	467	14	461	4
Banking and insurance	438	0	2	57
Real estate ¹	534	7	434	24
Public sector ²	79	2	0	0
Education and training	5	0	1	0
Health, veterinary and social work	42	0	41	0
Other public and personal service activities	62	1	14	0
Private households	534	14	115	93
Non-profit organizations	4	0	9	0
Total 2013	3,391	45	1,441	229
Total 2012	4,032	50	1,590	217

¹ Including the rental of movable property and business service deliveries.

² Including defence and social security.

Commerzbank bases its definition of the total sum of non-performing and past due claims on its accounting. Pursuant to section 315a.1 of the German Commercial Code, the Commerzbank Group issues consolidated financial statements based on International Financial Reporting Standards (IFRS). For this reason, the book values according to IFRS are applied for the total amount of non-performing and past due claims. Credit risk mitigation techniques which can mitigate risks for the purposes of determining the capital requirement are not relevant for the determination of the claim amount for accounting procedures.

The total non-performing and past due claims amount to €18.1bn, of which €14.7bn is attributable to the default portfolio (non-performing loans) and €3.4bn is attributable to past due loans. In addition to the loan loss provisions presented below, collateral value is also held against the total non-performing claims, which is taken into account accordingly in the calculation of the SLLP, PLLP and GLLP. The amounts recovered from written-down claims amounting to €229m are booked as income in the loan loss provisions.

Table 26: Non-performing and past due loans by country cluster

Country cluster €m	Non-performing loans	SLLP on- balance	PLL impaired on-balance	SLLP+ PLL impaired off-balance	Direct write-up/ -downs	Past due loans	GLLP/PLL NI on-/off-balance for past due loans
Germany	7,181	2,273	577	95	330	1,804	21
Western Europe (excl. Germany)	5,319	1,908	13	20	134	685	10
Central and Eastern Europe	1,240	376	227	8	2	429	13
North and South America	618	216	3	2	9	209	0
Asia	260	74	2	1	1	74	1
Other	53	41	1	0	0	191	0
Total 2013	14,671	4,888	823	126	476	3,391	45
Total 2012	17,591	5,958	769	206	453	4,032	50

The breakdown by country cluster reflects Commerzbank Group's focus on Germany and selected markets throughout Europe. This means that the vast majority of the loan loss provisions are attributable to borrowers based in these regions.

The table below only shows the development of loan loss provisions relating to the lending business. Only claims or loan commitments under the IFRS category LaR and their corresponding loan loss provisions are included in the table. Details on the development of the loan loss provisions can be found in the Annual Report 2013.

Table 27: Development of loan loss provisions in 2013

Type of provision €m	Opening balance	Additions	Reversals	Utilisation	Exchange rate changes	Other changes	Closing balance
SLLP on-balance	5,958	2,421	1,184	1,438	-90	-779	4,888
PLL impaired on-balance	769	491	236	232	-3	34	823
SLLP+PLL impaired off-balance	206	64	140	1	-2	0	126
GLLP/PLL NI on/off-balance	866	296	242	0	-3	0	918
Total	7,800	3,271	1,803	1,671	-98	-745	6,755

The realised losses over the entire period are compared below with the calculated expected losses of the non-defaulted portfolio at the end of the period. Losses incurred in the lending business

refer to direct write-downs and the utilisation of valuation allowances for claims classified as IRBA positions according to Basel 2. Amounts recovered on written-down claims reduce the realised loss.

Table 28: Expected and realised losses 2013

Asset class €m	Expected loss as at 31.12.	Total	Realised loss			
			thereof utilisation of risk provision	thereof direct write-downs	thereof write-ups	thereof recoveries on written-down assets
Companies	979	1,159	1,076	102	4	15
Retail	246	176	148	34	2	5
IRBA exposures secured by mortgage liens	100	89	79	15	0	5
Qualified revolving IRBA- positions	23	1	1	0	0	0
Other IRBA exposures	122	86	69	19	2	0
Banks	133	-17	4	0	0	21
Central governments	27	0	0	0	0	0
Total 2013	1,384	1,318	1,229	136	6	41
Total 2012	1,356	682	734	163	2	212

Table 29: Expected and realised losses since 2012

Asset class €m	2013		2012	
	Expected loss as at 31.12.	Realised loss	Expected loss as at 31.12.	Realised loss
Companies	979	1,159	1,024	487
Retail	246	176	178	192
IRBA exposures secured by mortgage liens	100	89	105	157
Qualified revolving IRBA-positions	23	1	0	25
Other IRBA exposures	122	86	74	10
Banks	133	-17	128	3
Central governments	27	0	26	0
Total	1,384	1,318	1,356	682

Deviating from the Annual Report, the expected loss amounts reported in this Disclosure Report do not include SACR or securitisation positions. Also, due to the change to SACR (permanent partial use pursuant to section 70 SolvV) in 2009, the asset class investments is not shown here.

Investments in the banking book

Investment risks or shareholder risks are potential losses arising from the provision of equity capital to investments as a result of a fall in their value. They can be caused by general market fluctuations or company-specific factors.

Risk Management

Commerzbank's portfolio of holdings is broken down in accordance with its significance to business policy. The bulk of the investments held as financial assets (banking book) and all holdings in consoli-

dated companies are designed to further the Bank's business objectives by supporting business lines/segments in the Bank (segment-supporting investments) or by having a strategic management or service function for the Group as a whole (other strategic investments).

There are also other non-strategic investments, some of which are allocated to the Non-Core Assets segment. A divestment concept is applied here, the aim of which is to optimise Commerzbank's market value, capital and income statement under appropriate market conditions.

The investment risks are managed centrally as part of the ongoing management and monitoring of Commerzbank's holdings by the Development & Strategy department and locally by the segments. The central monitoring is primarily concentrated on the non-strategic investments, while the strategic investments that form part of the Bank's core business are controlled on a decentralised basis by the Commerzbank segments responsible for them. The strategic investments are mainly majority holdings.

Valuation of investments for regulatory purposes

Commerzbank Group and accordingly the group companies included in the disclosure report are, as IRBA banks as defined in section 71.4 SolvV, generally obliged to value investments in accordance with the IRBA rules. For investments entered into prior to 1 January 2008, Commerzbank has opted to apply grandfathering. These investment positions are temporarily excluded from the IRBA and treated in accordance with the SACR rules. They are given a risk weighting of 100%. The SolvV also allows items to be permanently exempted from the IRBA. Since 31 December 2009 Commerzbank applies the partial use option pursuant to section 70 sentence 1 no. 9b SolvV and is using the SACR permanently to value all investment positions which are not under the above-mentioned temporary grandfathering option.

Valuation and accounting principles

Investments and shares in the banking book comprise equity instruments classified as available for sale (AFS) and those reported in the financial statements as fully consolidated or using the equity method are also included. Therefore all equity instruments not held in the trading portfolio are accounted for in this category.

Investments classified as AFS are reported at their fair value if it is available. Differences between historic costs and fair value are reported as equity capital not affecting net income. Not listed or listed but not traded equity instruments are reported at their historic costs if their fair value is not reliably determinable.

Listed investments are continuously monitored with regard to their market price development. External analysts' opinions and share price forecasts (consensus forecasts) are included in the risk assessment. The listed holdings are monitored by means of impairment tests carried out at least quarterly by Group Finance in accordance with the impairment policy and tested for any significant qualitative or quantitative indicators (trigger events) of

impairment. As soon as there are any indications of significant or lasting impairment, unrealised losses are written down.

Risks arising from unlisted holdings are subject to regular monitoring involving a database-supported year-end valuation, a monitoring of trigger events to each balance sheet reporting date and special monitoring of investments classified as critical. Various valuation methods (e.g. capitalised earnings value, net asset value, and liquidation value) are used to quantify the risks, depending on the book value, status (e.g. active, inactive or in liquidation) and type of business activity (e.g. operational, property holding company or holding) of the investment. If the intention is to sell the investment, it will be written down, if necessary, to a lower expected selling price; appreciation in value would be reported as revaluation reserve without net income effects. With companies valued using the equity method, the valuation is equal to the proportionate IFRS equity capital.

Quantitative information on investments This section covers investments as defined in section 25.13 SolvV. This means that only equity investments that are not consolidated for regulatory purposes but relate to the companies covered by this report are shown. The definition of an investment in SolvV is wider than the usual accounting definition. For example, shares in limited companies (GmbHs), profit-sharing certificates with equity characteristics, promissory notes and derivative positions whose underlying is an investment position have to be classified as investments for regulatory purposes. Classical forms of investments nevertheless make up the majority of this SolvV asset class.

The table below shows the book value and fair value of the investment instruments under IFRS as reported in the financial statements for the investment groups relevant to the Group's objectives and strategy.

Table 30: Valuations of investment instruments

Investment group €m	Book value (IFRS)		Fair value		Market value (listed positions)	
	2013	2012	2013	2012	2013	2012
Segment-supporting investments	347	480	332	474	40	58
thereof listed positions	55	60	40	58	40	58
thereof unlisted positions	292	421	292	417	–	–
Other strategic investments	27	25	27	25	–	–
Other investments	297	210	297	220	3	58
thereof listed positions	3	59	3	58	3	58
thereof unlisted positions	294	151	294	162	–	–
Funds and certificates	1,037	1,027	1,037	1,027	33	20
Investments total	1,709	1,743	1,693	1,747	76	136

For listed positions the market value is given as well. For listed investments the book value under IFRS equals their historic costs. Differences between book value under IFRS and fair value of listed investments result from the revaluation reserve.

For unlisted companies the book values under IFRS are used as fair value. Special purpose vehicles (SPVs) are not shown as they are not investments pursuant to regulatory definitions. The positions shown under Other strategic investments as well as Funds and certificates are unlisted positions. All unlisted positions are classified as adequately diversified investment portfolios.

Shares in investment funds are allocated to the investment group funds and certificates if the precise composition of the investment fund is not known and an average risk weighting supplied by the investment company is not used for capital adequacy purposes. Only shares in investment funds that invest wholly or partly in investment instruments are relevant. Shares in investment funds that are solely invested in fixed-income securities (e.g. bond funds) are not reported here.

Table 31: Realised and unrealised profits/losses from investment instruments

€m	Realised profit/loss from sale/liquidation	Total	Unrealised revaluation profit/loss	
			thereof accounted for in Tier 1 capital	thereof accounted for in Tier 2 capital
2013	65	54	0	24
2012	291	53	0	24

The unrealised gains and losses refer to changes in the value of investments in the revaluation reserve that are not recognised in the income statement. Group companies included within the disclosure sold investments held in the banking book for a total profit of €65m in the past year. This profit was generated from sales revenue above the IFRS book values.

Write-downs and write-ups of holdings recognised as income in 2013 are not considered as realised profits or losses. In addition, there is a deferred revaluation profit totalling €54m. From the unrealised revaluation profit, contributions of €24m from the six material entities at group level are taken into account in the Tier II capital.

Securitisations

Securitisation process

In the securitisation business Commerzbank acts in the three roles provided for in regulatory legislation, namely as originator, sponsor and investor.

› **Originator** Parts of the Bank's own loan portfolio are placed selectively on the capital markets through securitisation transactions. The transfer of the credit risk is mainly by means of synthetic securitisations where the portfolio is hedged through financial guarantee contracts. In September 2013, the synthetic securitisation structure CoTrax Finance II-1 was issued in order

to free up economic and regulatory capital. This instrument is backed by a diversified US\$500m portfolio of trade financing transactions with banks, mainly in emerging markets. The transaction TS Co. mit One was terminated after falling due in June 2013. As at the reporting date of 31 December 2013, out of the outstanding securitisation by Commerzbank AG, risk exposures of €5.2bn (securitised volume €5.4bn) were retained. By far the largest portion of these exposures (€5.0bn) consist of senior tranches that are nearly all rated good or very good. As at the reporting date, the Commerzbank Group's securitisation transactions placed on the capital markets and used to free up regulatory capital were as follows:

Table 32: Securitisation transactions with regulatory capital relief

Securitisation programme ²	Type ¹	Securitisation pool	Maturity	Issue currency	Current volume €m
CoSMO Finance II-1	S	Companies	2016	EUR	1,000
CoSMO Finance II-2	S	Companies	2022	EUR	2,000
Coco Finance II-1	S	Companies	2022	EUR	2,000
CB MezzCAP	T	Companies	2036	EUR	70
CoTrax Finance II-1	S	Banks	2021	USD	362
Total Commerzbank AG					5,432
Provide Gems 2002-1	S	RMBS	2048	EUR	108
Semper Finance 2006-1	S	CMBS	2048	EUR	367
Semper Finance 2007-1	S	CMBS	2046	EUR	218
Glastonbury Finance 2007-1	T	CMBS	2047	GBP	425
Opera Germany 2	T	CMBS	2014	EUR	500
Opera Germany 3	T	CMBS	2022	EUR	495
Total Hypothekbank Frankfurt AG					2,113
Total					7,545

¹ S = synthetic, T = true sale.

² Securitisation of own customer receivables.

In the reporting year, due to the structure of the transactions, Commerzbank did not hold any securitisation exposures for which additional capital was required as a result of an investor share to be taken into consideration by the originator under sections 245 ff. and 262 ff. SolvV. In addition, in recent years Commerzbank has issued two own-asset securitisations, Rügen Eins (initial volume of receivables €1.6bn) and TS Lago One (initial volume of receivables €15bn) that are not eligible to free up regulatory capital. Where Commerzbank cooperated with rating agencies in connection with originator securitisation transactions (both synthetic and true sale), the agencies in question were Standard & Poor's, Moody's and Fitch Ratings. The assets securitised by Commerzbank AG belong to the Bank and derive from its lending business with the Mittelstand, from business with large customers, and from trade finance transactions with banks. In the case of Hypothekbank Frankfurt AG's originator securitisation transactions, the underlying securitised assets are commercial real estate loans and private

residential mortgages. As part of the overall management of the Bank, the Commerzbank Group is constantly reviewing opportunities to securitise its own assets. This process is primarily influenced by the market conditions prevailing at any one time. As at the reporting date, no further specific securitisation transactions were planned for 2014.

› **Sponsor** By securitising their own portfolios of receivables, i.e. selling their receivables on a non-recourse basis, Commerzbank's customers are able to tap alternative sources of funding on the capital markets. Structuring, arranging and securitising these receivables portfolios, particularly those of customers in the Mittelstandsbank and Corporates & Markets segments, is a key component of the structured finance product range. Typically special purpose vehicles (purchasing entities) are established to manage these assets. The purchases of receivables are funded primarily by the issue of short-term commercial papers (CP) under the Bank's

asset-backed commercial paper (ABCP) programme Silver Tower (conduit). The commercial papers issued are rated by the rating agencies Standard & Poor's, Moody's and Fitch Ratings. As sponsor, the Bank is responsible for structuring and, as a rule, purchasing and refinancing the transactions. Commerzbank provides the special purpose entities with liquidity facilities so that they have access to short-term liquidity. All liquidity lines are counted in full when determining the risk-weighted exposures. The highly diversified portfolios of receivables generally derive from customers' working capital, such as trade receivables and car, machinery and equipment leases. The receivables portfolios therefore reflect the differing businesses of those selling the receivables. As a result of new business, the volume in the Silver Tower conduit rose by €0.5bn to €3.6bn in 2013. The securitisation exposures deriving from the strategic conduit Silver Tower largely consist of liquidity facilities and back-up lines. In addition to the strategic business of providing funding opportunities for customers of Mittelstandsbank and of Corporates & Markets, a single non-strategic transaction from the ABCP conduit Beethoven with a volume of €100m is still held. It is planned to terminate the Beethoven conduit completely in 2014.

› **Investor** In the past, the Commerzbank Group invested under both its regulatory trading book as well as its banking book in securitisation positions. Compared with 2012, existing positions were restructured and reduced on a large scale through the processing unit (Structured Credit Legacy). As a result, the volume of securitised positions fell by around €800m during the reporting period. The Bank's internal credit risk strategy provides limited scope for entering into new securitisation positions provided that the risk profile of each securitisation position is subjected to a differentiated analysis and documentation. This allows transaction risk drivers that may impact directly or indirectly on the securitised position's risk content to be taken into account.

Risk Management

The internal processes for monitoring the risk profile of securitisation positions are based on the provisions of section 25a and sections 18a and b KWG (or article 122a CRD) and on the principles of the Minimum Requirements for Risk Management (MaRisk) as amended. They apply equally to all securitisation exposures, irrespective of whether they are part of the regulatory trading or banking book, or whether Commerzbank acts as the originator, sponsor or investor.

The processes put in place by the Bank take account of the individual risk profile of securitisation exposures on the basis of a wide range of information sources. They ensure that various risks directly and indirectly affecting the probability of default of the

securitised positions are monitored in a continuous and timely manner. This also includes carrying out regular stress tests that take account of macroeconomic factors and the individual risk profile of the securitised positions.

› **Originator** The credit process for loans to customers does not distinguish between loans which the Bank will securitise at a later date and those for which it will continue to assume the risk. If the Bank retains securitisation exposures from its own securitisations, these remain subject to an ongoing credit process. The credit process is the same as that applying to investor positions. The amount retained in securitisation transactions in accordance with section 18a KWG is reviewed at least once annually or as circumstances require and is published in the Investor Report. A potential placement risk for Commerzbank's transactions is completely accommodated, as the receivables are included in full in the Bank's risk and capital management process up until the actual risk transfer by means of securitisation and placement.

› **Sponsor** The customer transactions funded via conduits are subject to an ongoing credit process. A risk analysis of the transactions is conducted when the transactions are structured and again in regular reviews which are carried out annually and as circumstances require. A rating is assigned using the ABS rating systems certified by the banking regulators (internal assessment approach). For this purpose we take into account all significant risk drivers of the securitised receivables portfolio (e.g. type of receivable, default rates, collateral provided, diversification, dilution risks, commingling risks) and of the securitisation structure (e.g. whether the creditor claims have a waterfall structure, credit enhancements). Qualitative risk drivers ascertained from an on-site visit to the seller of receivables as well as the seller's financial position are also taken into account. For trade receivables, structure-inherent covers through credit insurances are taken into account in the rating model and credit analysis. Credit insurances are used in order to mitigate concentration risk. The main counterparties here are Euler Hermes Kreditversicherungs AG and the German branch of Coface S.A. Factors that are not inherent in the structure of the securitisation but nevertheless affect its risk profile are also considered. Such factors include, for instance, potentially negative developments in the market environment which could have an impact on the securitisation transaction. Before any purchase of customer receivables, the minimum conditions agreed in the contract documentation are reviewed and any non-qualifying receivables are excluded. After the receivables have been bought, their quality is reviewed continuously. If any potential problems come to light a full credit analysis of the structure is carried out.

› **Investor** Strict internal guidelines must be followed when acquiring a new securitisation position. Such positions are subject to a specific internal credit process that also ensures that the specific requirements for securitisation positions regarding due diligence and regarding retention under sections 18a and 18b KWG are met. In the credit process applied to the Bank's securitisation portfolio, the risk profile of the securitisation positions is analysed continuously or as circumstances require. In preparing a credit assessment, at the level of the individual tranche a securitisation-specific rating system is used which has been developed internally within the Bank, while external standard models are also applied. In the case of resecuritisations, the analysis relates not just to the securitisation exposures contained in the pool but also covers the underlying portfolios on a risk basis (look through principle). As with securitisation exposures, the ranking of the individual tranches contained in the pool within a securitisation structure are taken into account in this analysis, as are the specific features of the asset classes and of the different jurisdictions, in order to generate the expected aggregate cash flow. The results are then used to model the entire waterfall structure at the level of the resecuritisation.

Commerzbank takes into account not only the original default risk of the securitised receivables, but also secondary risks, such as market value risk, liquidity risk, refinancing risk, legal risk and operational risk. These directly or indirectly affect default risk. This process looks, for example, at the performance reports for the securitised receivables, changes in external ratings and movements in the market value of the securitisation exposures.

When determining market risk, changes resulting from interest rates, foreign currency rates or credit spreads, among others, are taken into account in order to calculate the future cash flows of each tranche. In addition, the combination of various conventional risk measures (for example, VaR, volatilities) ensures the appropriate management of market risk concentrations at Group level.

Liquidity risk refers in this context to the risk that Commerzbank will be unable to meet its payment obligations on a day-to-day basis. Liquidity risks from ABS transactions are modelled conservatively in the internal liquidity risk model. Firstly, a worst case assumption is made that Commerzbank has to take on the entire funding of the Silver Tower and Beethoven conduits. Secondly, the Bank's holdings of securitisation transactions only qualify as liquid assets if they are eligible for rediscount at the European Central Bank. These positions are only included in the liquidity risk calculation after applying conservative discounts. This applies in particular to the Bank's own securitisation transactions, TS Lago One

and Rügen Eins. With regard to the Silver Tower conduit, it is not only assumed that external refinancing of the conduit will be replaced by Commerzbank on expiry, but also that additional draw-downs on credit lines by clients of the conduit will have to be refinanced by Commerzbank.

Legal risk in the context of securitisation transactions is the risk that the Bank might suffer losses as a result of flaws in legal transaction structures or as a result of missing or flawed legal documentation. Commerzbank's independent Legal Services department is responsible for examining legal structures and all transaction contracts. In terms of content, risks are divided into those arising from the sphere of the originator itself or those directly connected with the portfolio to be securitised. The subsequent refinancing and collateral structure is also a key element of legal structuring and risk assessment.

As well as being associated with legal risk as a risk type under the overall heading of operational risk, securitisation business is subject to the Group-wide management of operational risks. It therefore falls within the framework of the certified advanced measurement approach used by Commerzbank to measure operational risks.

Valuation of securitisations for regulatory purposes

Securitisation positions in the banking book In 2013, Commerzbank applied the regulations of the advanced IRBA for regulatory purposes. This was in accordance with the principle of accessory prescribed for securitisations in SolvV.

› **Originator** The ratings-based approach is used for externally rated securitisation exposures that have been retained from the Commerzbank Group's own securitisation transactions. Capital is held against synthetic securitisation tranches that have been placed on the market based on the risk weighting of the party providing the collateral. Counterparties to the hedging instruments used (financial guarantees, credit derivatives) are institutional investors, such as international financial institutions whose collateral deposits with banks are backed by very good creditworthiness. For the majority of transactions the supervisory formula approach (SFA) is used and capital deductions are made for several other single securitisation positions due to a lack of external ratings. The requirements of sections 245 ff. and 262 SolvV regarding the investor shares that have to be considered by the originator do not apply due to the structure of the Commerzbank Group's transactions.

› **Sponsor** The majority of sponsor transactions have to be allocated to the conduit business. Only in a few cases Commerzbank holds other sponsor positions. Under the internal assessment approach (IAA), ABS rating systems certified by the supervisory authority are used for the Silver Tower conduit sponsored by Commerzbank. In 2013, we applied our own rating systems to the Silver Tower conduit for the following classes of receivables: Trade receivables, car finance and leasing, equipment leasing and consumer lending. The rating systems are developed in accordance with the stipulations of MaRisk, independently of the market side by Commerzbank's risk function. In accordance with SolvV, the methodology follows the guidelines of the rating agencies Standard & Poor's, Moody's and Fitch Ratings. The systems were certified at the outset by BaFin and the Bundesbank. They are subject to a regular review by the supervisors and internal audit. In addition, the internal assessment approach is subject to an annual validation by Commerzbank's risk function.

The various internal assessments take account of all features of the securitised receivables portfolio identified by the rating agencies as significant risk drivers as well as the specific structuring characteristics of the securitisation exposure. Other quantitative and qualitative risk components that are regarded as material by Commerzbank are also included in the assessment. These include, in particular, seller risks and qualitative risk drivers that are evaluated via structured qualitative questionnaires. The result of the rating process is a tranche-specific rating derived from the quantitative and qualitative results of the assessment approach. Depending on the specific approach used, this rating is based on the probability of default or expected loss (EL) of the securitised tranche. No external ratings from the above-mentioned rating agencies are available for the securitisation exposures subject to the internal assessment approach. The results of the internal assessment approach are used to determine regulatory capital requirements. They are also used within the internal capital model, in portfolio monitoring and in setting limits (ICAAP processes).

The approaches to modelling probability of default or expected loss (EL) for securitisation tranches differ depending on the type of securitised asset class. For the asset classes trade receivables, car finance and leasing, equipment leasing and consumer lending, a range of different stress factors used by the rating agencies are

applied, depending on the main risk drivers for the relevant transactions. These are, for example, stress factors on concentration risks, default risks, dilution risks and interest rate risks. Quantitative and qualitative modelling components devised by the Bank are also used. When calculating loss buffers, stress factors are determined individually for different securitised asset types on the basis of the risk profiles of the securitisation transactions. In addition, the rating-based approach (RBA) is used, as well as the practice of making a capital deduction where no applicable external rating is available. The supervisory formula approach (SFA) is only used in one single case.

› **Investor** For investor positions, external ratings are generally available, which lead to the ratings-based approach (RBA) being applied. Commerzbank takes account of all available external ratings from the three rating agencies Standard & Poor's, Moody's and Fitch Ratings, nominated by Commerzbank AG. It does so irrespective of the type of receivables securitised and the type of securitisation exposure. The EIF (European Investment Fund) has provided a bilateral, directly-enforceable and irrevocable guarantee for a part of Hypothekbank Frankfurt International S.A.'s investor positions. The underlying assets of the guaranteed securitisation exposures are loans to small and medium-sized companies from various European countries. The guarantee is taken into account in the calculation of RWAs by substituting the risk weighting of the EIF for the risk weighting of the securitisation. In only a few cases a capital deduction as a result of the lack of an applicable external rating is used.

Companies which are consolidated within the Commerzbank Group for regulatory purposes may, as part of the Group-wide business and risk strategy, on occasion act as investors in securitisation transactions in which the Bank is acting as sponsor or originator. Commerzbank AG and Hypothekbank Frankfurt International S.A. currently hold securitisation exposures from securitisation transactions, acting in the role of sponsor or originator. All retentions or repurchases of securitisation exposures from the Bank's own transactions with recognised regulatory risk transfer and securitisation exposures from transactions where Commerzbank has acted as sponsor are subject to the calculation of the regulatory capital requirement. In the case of transactions without recognised regulatory risk transfer, the regulatory capital requirement is determined for the securitised portfolio.

Securitisation exposures in the trading book As of 31 December 2013, only securitisation positions which are hedged against performance-induced market risks by means of credit default swaps and total return swaps with counterparties of good credit quality as well as securitisations allocated to the correlation trading book are included in the trading book. The capital adequacy requirements are determined by application of section 303 in conjunction with section 255 SolvV.

Accounting and measurement policies

In true sale or synthetic securitisation transactions via special purpose vehicles, the IFRS accounting regulations require the Bank to review, whether or not the securitising special purpose entities need to be consolidated in accordance with IFRS 10 (International Financial Reporting Standard 10). This review process is centralised in Commerzbank Group in the accounting department. The central unit is informed of the establishment or restructuring of a special purpose entity. On the basis of the information submitted, it carries out a review to determine whether or not the special purpose entity needs to be consolidated.

› **Originator** If the special purpose vehicle is consolidated as part of the Commerzbank Group, no further derecognition test is carried out under IAS 39 rules. The asset is not derecognised in this case. If the special purpose vehicle does not have to be consolidated, in true sale securitisations the possible derecognition of the securitised asset from the balance sheet is assessed. Following an assessment of the risks and rewards of ownership as the primary derecognition criterion and the control concept as the secondary derecognition criterion (IAS 39.15 ff.), a derecognition or partial derecognition (continuing involvement) is reported where appropriate. In the case of synthetic securitisations, the underlying assets remain on the balance sheet. As with securitised assets in true sale securitisations that are not derecognised, they are reported in their original IFRS category. These assets continue to be accounted for in accordance with the rules for this IFRS category. Where securitised assets are derecognised, any resultant gains or losses are reported in the income statement. In some cases, the derecognition of assets may lead to the first-time recognition of new exposures, for example bonds issued by special purpose vehicles. Under IFRS these exposures are categorised on the basis of the intention with which the securities were acquired and the type of securities in one of the three IAS 39 categories (held for trading, loans and receivables or available for sale). Please refer to Note 5 to the IFRS consolidated financial statements for a detailed explanation of the classification rules and the related valuation procedures. No securitisation transactions leading to derecognition of assets were carried out in the period under review. As a result, no gains or losses were realised from the sale of assets in connection with securitisation transactions during the reporting period.

The securitising special purpose entities for the following transactions are currently not consolidated for accounting purposes: Cosmo Finance II-1 Ltd., Cosmo Finance II-2 Ltd., Coco Finance II-1 Ltd., Cotrax Finance II-1 Ltd., CB MezzCAP Limited Partnership, Rügen Eins GmbH and TS Lago One GmbH. However, these entities are not consolidated for regulatory purposes. The securitising special purpose entities for the following transactions are currently not consolidated either for accounting purposes or for the purposes of regulatory capital adequacy requirements: Provide Gems 2002-1, Semper Finance 2006-1 Ltd., Semper Finance 2007-1 GmbH, Gastonbury Finance 2007- plc, Opera Germany 2 plc and Opera Germany 3 Ltd. If assets are earmarked for securitisation, this has no direct impact on their accounting treatment or measurement within the applicable IFRS categories.

› **Sponsor** Under IFRS the funding entity Beethoven Funding Corporation is consolidated. In the case of Silver Tower, the funding entities Silver Tower Funding Ltd. and Silver Tower US Funding LLC are not consolidated, and nor are any purchasing entities. However, for regulatory purposes, no purchasing or funding entities for the Beethoven or Silver Tower programmes are consolidated. If a beneficiary special purpose entity is not consolidated under IFRS, the liquidity line provided to it is recorded in the Notes to the Annual Report as a contingent liability in its full unutilised amount. Any utilised amount is recognised as a claim in the IFRS category loans and receivables.

› **Investor** Under IFRS, investor positions are categorised on the basis of the intention with which the securities were acquired and the type of securities in one of the three IAS 39 categories (held for trading, loans and receivables or available for sale). For a detailed explanation, please refer to Note 5 in the IFRS consolidated financial statements, which also explains the related valuation procedures. If the securitisation exposures are traded on liquid markets with observable pricing, they are valued on the basis of independent market prices. If a direct measurement at market prices is not possible, the value of the securitisation exposure is determined with the help of valuation models. This involves the application of a discounted cash flow approach, with the cash flows and the other relevant parameters being based on data observable on the market. Moreover, the approach is calibrated with market data for application to similar securitisation structures. In some cases, the prices estimated by external providers are used. There were no significant changes in the methods used to value securitisation positions in the period under review.

Quantitative information on securitisations

Securitisation exposures in the banking book The following information relates to transactions for which risk-weighted exposures are determined in accordance with sections 225 to 268 SolvV in conjunction with section 1b KWG. This also includes Commerzbank Group's own securitisation transactions for which capital relief is available and made use of for regulatory purposes.

The total volume of all retained or acquired securitisation exposures (on- and off-balance-sheet) was €15.4bn on the reporting date. This amount corresponds to the IRBA exposure after deducting eligible collateral.

In the following a breakdown of retained and acquired securitisation exposures by exposure type and the regulatory role assumed by Commerzbank is given.

Table 33: Retained or acquired securitisation exposures in the banking book by type of exposure

€m	Originator		Investor		Sponsor	
	2013	2012	2013	2012	2013	2012
Receivables ¹	4,951	4,789	35	70	667	990
Securities ²	242	253	5,563	6,173	712	457
Other positions on-balance	0	0	26	54	0	0
Liquidity facilities	3	2	0	19	2,738	2,523
Derivatives ³	0	2	419	531	5	1,018
Other positions off-balance ⁴	0	0	6	6	21	19
Total	5,196	5,045	6,050	6,853	4,144	5,007

¹ For example, drawdowns on liquidity facilities, cash loans, on-balance positions from synthetic transactions etc.

² ABS, RMBS, CMBS etc.

³ Counterparty risk from market value hedges (interest rate and currency risks).

⁴ Guarantees etc.

The table below provides a breakdown of the securitisation exposures shown above by type of underlying assets.

Table 34: Retained or acquired securitisation exposures in the banking book by type of asset

€m	Originator		Investor		Sponsor	
	2013	2012	2013	2012	2013	2012
Loans to companies/SMEs	5,029	4,676	773	1,301	245	259
Commercial real estate	48	200	46	142	0	8
Residential real estate	39	1	563	678	110	110
Consumer loans	0	0	3,936	3,859	286	0
Securitised positions	81	168	337	423	180	1,200
Leasing receivables	0	0	75	97	1,551	1,582
Trade receivables	0	0	0	0	1,766	1,540
Other	0	0	320	352	8	308
Total	5,196	5,045	6,050	6,853	4,144	5,007

Based on the country of the securitised claim, the securitisation exposures originate predominantly from Germany (54%, in 2012: 47%), the USA (32%, in 2012: 40%) and the UK/Ireland (5%, in 2012: 5%).

The next table provides a breakdown of acquired and retained securitisation exposures by risk weighting bands. Risk weightings are ascertained by applying the risk approach applicable to each securitisation exposure as per section 255 SolvV, which sets out a hierarchy of regulatory approaches for IRB securitisation exposures. If a securitisation exposure has an external rating of B+ or

worse, half of the exposure is deducted from Tier 1 capital and half from Tier 2 capital. The capital requirements are determined by the exposure and its risk weighting after taking account of any impairments.

Table 35: Retained or acquired securitisation exposures in the banking book by risk weighting band

2013	RBA		IAA		SFA	
Risk weighting band €m	Position value	Capital requirement	Position value	Capital requirement	Position value	Capital requirement
≤ 10%	4,385	26	1,533	11	4,916	28
> 10% ≤ 20%	272	4	1,622	23	242	4
> 20% ≤ 50%	267	6	447	11	0	0
> 50% ≤ 100%	154	9	110	7	0	0
> 100% ≤ 650%	206	56	0	0	25	3
> 650% < 1,250%	0	0	0	0	33	26
Total	5,283	101	3,712	52	5,216	60

2012	RBA		IAA		SFA	
Risk weighting band €m	Position value	Capital requirement	Position value	Capital requirement	Position value	Capital requirement
≤ 10%	4,663	28	1,694	11	4,572	26
> 10% ≤ 20%	550	6	1,248	19	256	4
> 20% ≤ 50%	321	9	153	3	0	0
> 50% ≤ 100%	352	18	174	13	0	0
> 100% ≤ 650%	211	43	0	0	25	3
> 650% < 1,250%	0	0	0	0	29	22
Total	6,098	105	3,269	47	4,882	55

As at 31 December 2013 the value of the securitisation exposures (including resecuritisations) deducted from equity capital was €856m (2012: €1,061m). After taking account of impairments, the capital deduction amounted to €364m (2012: €521m).

The next table provides a breakdown of acquired and retained resecuritisation exposures by risk weighting bands. The capital requirement values do not consider hedge positions or insurances.

Table 36: Retained or acquired securitisation exposures in the banking book by risk weighting band

2013		RBA	
Risk weighting band €m		Position value	Capital requirement
≤ 10%		0	0
> 10% ≤ 20%		8	0
> 20% ≤ 50%		166	5
> 50% ≤ 100%		9	0
> 100% ≤ 650%		140	31
> 650% < 1,250%		0	0
Total		323	36

2012		RBA		SFA	
Risk weighting band €m		Position value	Capital requirement	Position value	Capital requirement
≤ 10%		0	0	0	0
> 10% ≤ 20%		12	0	0	0
> 20% ≤ 50%		227	7	998	18
> 50% ≤ 100%		4	0	0	0
> 100% ≤ 650%		355	87	0	0
> 650% < 1,250%		0	0	0	0
Total		598	95	998	18

The exposures for which the supervisory formula approach (SFA) was used were fully run down in 2013.

The table below shows the outstanding volumes of Commerzbank Group's securitisation transactions. These were originator

transactions with recognised regulatory risk transfer or ABCP-funded sponsor transactions.

Table 37: Securitised assets outstanding

€m	Originator Traditional		Originator Synthetic		Sponsor ABCP	
	2013	2012	2013	2012	2013	2012
Loans to companies/SMEs	70	198	5,331	5,000	0	0
Commercial real estate	996	1,419	218	863	0	0
Residential real estate	0	0	474	135	101	104
Consumer loans	0	0	0	0	280	0
Securitised positions	272	0	0	0	0	0
Leasing receivables	0	0	0	0	1,486	1,406
Trade receivables	0	0	0	0	1,438	1,110
Other	0	0	0	0	0	125
Total	1,338	1,617	6,023	5,999	3,304	2,745

On the reporting date, the securitised portfolios included non-performing or past due loans as shown below.

Table 38: Non-performing and past due securitised assets

€m	Non-performing loans		Past due loans	
	2013	2012	2013	2012
Loans to companies/SMEs	32	6	11	13
Commercial real estate	9	19	0	12
Residential real estate	25	6	3	9
Total	65	32	14	33

In the period under review the portfolio incurred losses due to originator transactions in the amount of €13m (2012: €271m). We have taken the information on portfolio losses and on impaired and past due claims from the investor reports for the respective underlying transactions.

Securitisation exposures in the trading book The information in this section relates to securitisation exposures in the trading book for which risk-weighted exposure values are determined in accordance with sections 294-318 SolvV. This comprises securitisation exposures where Commerzbank acts as sponsor or investor.

The total net exposure of all retained or acquired securitisation positions which are not included in the correlation trading portfolio was €63m at the reporting date, including credit derivative hedges according to section 299 SolvV. There are no further off-balance-sheet hedge positions.

The table below shows the retained and acquired securitisation exposures which are not assigned to the correlation trading portfolio.

Table 39: Retained or acquired securitisation exposures in the trading book by type of exposure

€m	Investor	
	2013	2012
Securities	53	63
Derivatives	9	43
Total	63	105

The table below provides a breakdown of the securitisation exposures shown above by type of underlying assets.

Table 40: Retained or acquired securitisation exposures in the trading book by type of asset

€m	Investor	
	2013	2012
Securitized positions	3	5
Residential real estate	5	5
Commercial real estate	18	20
Loans to companies/SMEs	31	70
Other	6	6
Total	63	105

Based on the country of the securitised claim most of these securitisation exposures originate from the USA.

The table below shows the retained and acquired securitisation exposures in the trading book which are not assigned to the correlation trading portfolio, broken down by risk weighting band. Risk weightings are ascertained by applying the risk approach applicable to each securitisation exposure as per section 255 SolvV,

which sets out a hierarchy of regulatory approaches for IRB securitisation exposures. If a securitisation exposure has an external rating of B+ or worse, half of the exposure is deducted from Tier 1 capital and half from Tier 2 capital. The capital requirements are determined by the net exposure and by the risk weighting assigned to the position.

Table 41: Retained or acquired securitisation exposures in the trading book by risk weighting band

Risk weighting band €m	RBA			
	2013		2012	
	Position value	Capital requirement	Position value	Capital requirement
≤ 10%	0	0.0	0	0.0
> 10% ≤ 20%	12	0.1	9	0.1
> 20% ≤ 50%	13	0.2	14	0.5
> 50% ≤ 100%	0	0.0	0	0.0
> 100% ≤ 650%	1	0.2	0	0.1
> 650% < 1,250%	0	0.0	0	0.0
Total	26	0.5	24	0.6

The next table provides a breakdown of the retained and acquired resecuritisation exposures in the trading book which are not assigned to the correlation trading portfolio, broken down by risk weighting band.

Table 42: Retained or acquired resecuritisation exposures in the trading book by risk weighting band

Risk weighting band €m	RBA			
	2013		2012	
	Position value	Capital requirement	Position value	Capital requirement
≤ 10%	0	0.0	0	0.0
> 10% ≤ 20%	10	0.2	20	0.3
> 20% ≤ 50%	20	0.4	37	0.7
> 50% ≤ 100%	0	0.0	0	0.0
> 100% ≤ 650%	0	0.0	10	1.2
> 650% < 1,250%	0	0.0	0	0.0
Total	31	0.6	67	2.3

As at 31 December 2013, the value of the securitisation exposures (including resecritisations) to be deducted from equity capital and the capital requirement were both €5m (2012: €15m).

Market risk

Market risk is the risk of financial losses due to changes in market prices (interest rates, commodities, credit spreads, exchange rates and equity prices) or in parameters that affect prices such as volatilities and correlations. Losses may impact profit or loss directly, e.g. in the case of trading book positions. However, for banking book positions they would be reflected in the revaluation reserve or in hidden liabilities/reserves.

Risk management

Strategy and organisation

Commerzbank's market risk strategy is derived from its overall risk strategy and the business strategies of the individual segments. It sets targets for market risk management in relation to Commerzbank's main business activities. Its core tasks are the identification of all key market risks and drivers of market risk and the independent measurement and evaluation of these. These results and estimates serve as the basis for the risk/return-oriented management.

The Board of Managing Directors of Commerzbank is responsible for ensuring the effective management of market risk throughout the Group. Specific levels of authority and responsibility in relation to market risk management have been assigned to the appropriate market risk committees.

Within the Bank, various market risk committees have been established. Segment representatives discuss current risk positioning issues and management measures with the risk function and the finance function and decide on appropriate action. Chaired by the risk function, the Group Market Risk Committee, which meets monthly, deals with the Group's market risk position. Discussions centre on the monthly market risk report which is also presented to the Board of Managing Directors for their consideration. The report summarises the latest developments on financial markets, the Bank's positioning and subsequent risk ratios. The Segment Market Risk Committee, which focuses on the trading-intensive Corporates & Markets and Treasury segments, meets once a week. This committee also manages market risks arising from non-core activities and assets.

The risk management process involves the identification, measurement, management, and monitoring of risks and reporting on them. It is the responsibility in functional terms of market risk management, which is independent of trading activities. Central market risk management is complemented by decentralised market risk management units at segment level and for regional units

and subsidiaries. The close integration of central and local risk management with the business units means that the risk management process starts in the trading areas themselves. The trading units are responsible in particular for the active management of market risk positions, e.g. reduction measures or hedging.

Functional risk management

Commerzbank uses a wide range of quantitative and qualitative tools to manage and monitor market risk. Quantitative limits for sensitivities, value at risk, stress tests, scenario analyses and data on economic capital limit the market risk. Our comprehensive rulebook, in the form of market risk policies and guidelines as well as restrictions on portfolio structure, new products, maturities or minimum ratings establish the qualitative framework for market risk management.

The market risk strategy lays down the weighting of figures in each segment by reference to their relevance. Thereby allowance is made for the varying impact of the parameters for the management of the segments in line with the business strategy.

The quantitative and qualitative factors limiting market price risk are determined by the market risk committees by reference to the Group's management of economic capital. The utilisation of these limits, together with the relevant net income figures, is reported daily to the Board of Managing Directors and the responsible heads of the business segments. Based on qualitative analyses and quantitative ratios, the market risk function identifies potential future risks, anticipates, in collaboration with the finance function, potential financial losses, and draws up proposals for further action, which are discussed with the market units. Voting on the proposed measures or risk positions takes place in the market risk committees and is subsequently submitted to the Board of Managing Directors for approval.

Risk concentrations are restricted directly with specific limits or are indirectly avoided, for example, using stress test limits. In addition, the combination of various conventional risk measures (for example, VaR, sensitivities) ensures the appropriate management of concentration risks. Furthermore, risk drivers are analysed on a regular basis in order to identify concentrations. The risk management of existing concentrations is also reviewed using situation-driven analyses and, where necessary, supplemented by targeted measures, such as limits.

Any limit breaches are dealt with in a separate escalation process. After identifying the limit breach, action is taken by the front office and risk entities to bring the relevant portfolio back within limit. If the limit breach cannot be remedied within a few days, it is escalated by the market risk function with the assistance of the next highest hierarchy level.

Regulatory risk parameters not included in the economic risk bearing capacity are limited and managed separately. These include e.g. stressed VaR and IRC.

Market risk model

Value at Risk

A standardised value at risk model incorporating all positions is used for the internal management of market risk. The VaR quantifies the potential loss from financial instruments as a result of changed market conditions over a predefined time horizon and with a specific probability.

Our VaR market risk model is based on an historical simulation with a 1-year interval of historical market data. The historical simulation determines the profit and loss distribution of the current portfolio by means of revaluation using historical changes in market rates, prices and volatility. This is done on the basis of independent market data which is quality-assured on a daily basis and fed into a central market database at a standard defined time. Market data is provided for all relevant positions in our asset classes interest rates, credit spreads, equities, foreign currencies and commodities. This market data takes the form of prices quoted directly on the market or derived market data, such as yield and credit spread curves, derived using internal methods. A proxy concept is used if no market data is available for individual exposures. In this case, prices are derived from those for comparable instruments.

For internal management purposes, a confidence level of 97.5% and a holding period of 1 day are assumed. The value at risk concept makes it possible to compare risks over a variety of business areas, and to aggregate many positions, taking account of correlations between different assets. This ensures a consolidated view of the market risk at all times. A comprehensive internal limit system broken down to portfolio level is implemented and represents an important part of internal market risk management.

The VaR market risk model described above is also used to calculate regulatory required capital. This regulatory capital backing is required for trading book risks and for currency and commodity price risks in the banking book. A confidence level of 99% and a 10-day holding period are used for the regulatory capital adequacy requirement. These assumptions meet the requirements of the Basel Committee and other international standards on the management of market risk. For certain evaluations, such as back-testing and disclosure, the VaR is also calculated on the basis of a 1-day holding period. In order to provide for a consistent presenta-

tion of the risk parameters in this report, all figures relating to VaR are based on a confidence level of 99 % and a holding period of 1 day.

Stress test

As the VaR concept gives a prediction of potential losses on the assumption of normal market conditions, it is supplemented by the calculation of stress tests. These stress tests measure the risk to which Commerzbank is exposed, based on unlikely but still plausible events. These events may be simulated using extreme movements on various financial markets. The key scenarios relate to major changes in credit spreads, interest rates and yield curves, exchange rates, share prices and commodities prices. Examples of stress tests include price losses by all equities of 10%, a parallel shift in the yield curve or a change in the steepness of this curve.

Extensive group-wide stress tests and scenario analyses are carried out as part of risk monitoring. The bank-wide stress test calculation is based on a combination of short-term stress test scenarios and scenarios based on macro-economic variables. The stress test framework is completed by portfolio-specific stress tests and ad-hoc scenario analyses.

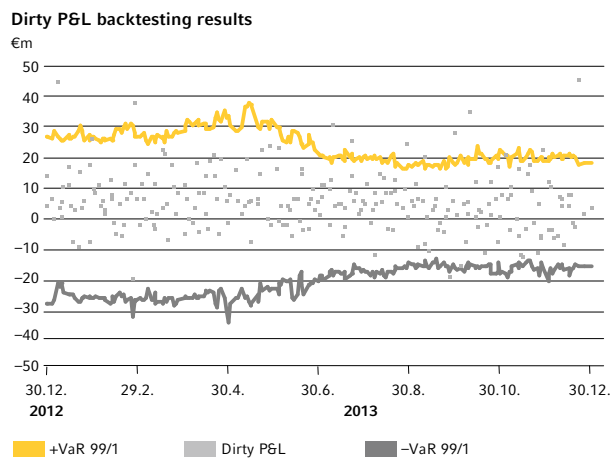
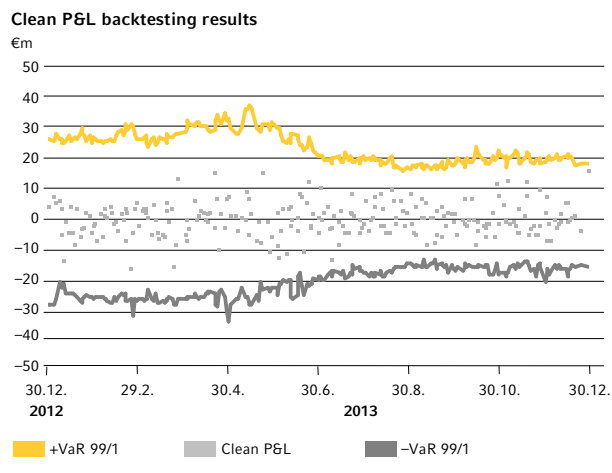
Stress tests are intended to simulate the impact of crises and extreme market conditions on the Bank's overall market risk position. The impact on the respective components of capital and income statement is also quantified in these tests.

In order to manage and monitor risks, short-term scenarios are calculated daily, compared to fixed limits and reported to the Board of Managing Directors. The longer-term scenarios are calculated on a monthly basis and discussed in the respective committees.

Model validation

The reliability of the internal model is monitored by back-testing procedures on a daily basis, in which the VaR calculated is set against actually occurring profits and losses. The process draws a distinction between "clean P&L" and "dirty P&L"-backtesting. In the former, exactly the same positions in the income statement are used as were used for calculating the VaR, so that the profits and losses result only from the price changes that occurred on the market. In dirty P&L-backtesting, by contrast, profits and losses from newly-concluded and expired transactions from the day under consideration are included. If the loss thus arrived at exceeds the VaR, it is described as a negative back-testing outlier.

Analysing the results of backtesting provides guidance for checking parameters and for improving the market risk model. Backtesting is also used by the supervisory authorities for evaluating internal risk models. In this case, negative outliers are classified by means of a traffic-light system laid down by the supervisory authorities. All negative backtest outliers on group level (from both clean P&L and dirty P&L) must be reported to the supervisory authorities, citing their extent and cause. In 2013, we saw no negative outliers in clean P&L-backtesting and found only one in the dirty P&L process. As such, the results are in line with statistical expectations and confirm the quality of the VaR model.



The individual components of the internal model are also regularly validated for their appropriateness for risk measurement. These include the underlying model assumptions and parameters and the proxies used. The validation analyses are carried out using a materiality and risk-oriented prioritisation and planning process established by the central Market Risk Model Validation Panel. In addition to the validation of key components of the economic capital model for market risk, the focus of the validation activities in 2013 was on capturing risk for interest rates and interest rate volatilities and on the portfolio-specific validation for banking book positions.

All of the validations performed are reported on a quarterly basis to the Segment Market Risk Committee and the Board of Managing Directors. The identification and elimination of any model shortcomings are of particular importance. These are classified in terms of their impact on VaR and monitored using specific scenario scales. Against this background, other model adjustments were implemented in 2013 that have continued to improve the accuracy of risk measurement. In particular, the internal market risk model was expanded to take account of changed market standards on the proper illustration of interest rate risks when recording tenor-specific basic risk and collateral-specific discounting (OIS).

Measurement of financial instruments

Valuation models must be consistent with accepted economic methodologies for pricing financial instruments. They must incorporate all factors that market participants would consider appropriate in setting a price. At Commerzbank Group, standards have been established in the form of internal controls and procedures for the independent verification and validation of all fair values. These controls and procedures are managed or coordinated by the Independent Price Verification (IPV) Group within the finance function. The models, inputs and resulting fair values are reviewed regularly by Senior Management and the risk function.

The IPV process is founded on a risk-based approach. This also takes into account internal factors such as changes in business strategy, the expansion or downsizing of business activities and external factors such as developments in markets, products and valuation models. The regular independent price testing mainly consists of analysing prices or input parameters and calculating the associated change in fair value and the P&L. A price is defined as a directly observable price, e.g. the settlement price of a future or the market price of a share. The products are valued at the bid or offer price as appropriate, depending on whether they are a long or a short position. A parameter is defined as an input to a valuation model for determining fair value, e.g. implied volatilities or dividends to value a share option. Derivatives valued using models are measured and tested at mid-market, plus any possible bid-offer reserves.

The new IFRS 13, which is to be applied prospectively, brings together the rules for measuring fair value, which until now were spread across several standards. Under IFRS 13, the fair value of an asset is the amount for which it could be sold between knowledgeable, willing, independent parties in an arm's length transaction. The fair value therefore represents an exit price.

The fair value of a liability is defined as the price at which the debt could be transferred to a third party as part of an orderly transaction. The fair value of a liability also reflects the own non-performance risk.

The most suitable measure of fair value is the quoted price for an identical instrument in an active market (fair value hierarchy level I). In cases where no quoted prices are available, valuation is based on quoted prices for similar instruments in active markets. Where quoted prices are not available for identical or similar financial instruments, fair value is derived using an appropriate valuation model where the data inputs are obtained, as far as possible, from observable market sources (fair value hierarchy level II).

Most valuation methods are based on data from observable market sources. However, some valuation models use inputs for which sufficient observable current market data is not available. These valuation methods inherently include a greater level of management judgement. These unobservable inputs may include data that is extrapolated or interpolated, or may be derived by approximation to correlated or historical data. However, such inputs maximise market or third-party inputs and rely as little as possible on company-specific inputs (fair value hierarchy level III).

Quantitative information on market risks

Market risk in the trading book

The development of regulatory market risk ratios in the trading book portfolio is shown below. Commerzbank's trading book positions are mainly in the Corporates & Markets and Treasury business areas.

Value-at-Risk at risk fell from €28m to €16m in 2013. The main reason for the fall is that the VaR calculation is no longer affected by crisis days from 2012, as these are now outside the model time series (given that they date back more than one year). The changed positions of Corporates & Markets and Treasury have additionally relieved the risk situation.

Table 43: VaR of trading book portfolios (based on regulatory capital requirement)

VaR ¹ €m	2013	2012
Minimum	13	21
Average	21	39
Maximum	34	70
Year-end figure	16	28

¹ 99% confidence level, holding period 1 day, 254-day history.

The market risk profile is diversified across all asset classes. Credit spread risk is the dominant asset class, followed by foreign exchange risk and interest risk. To a lesser extent, value at risk is also affected by equity, commodities and inflation risk.

Further risk ratios are being calculated for regulatory capital adequacy as part of Basel 2.5 reporting. This includes the stressed VaR calculation, which is based on the internal model and in line with the VaR methodology described above. The main difference lies in the market data used to value the assets. In stressed VaR, the risk of the present position in the trading book is evaluated by reference to market movements from a specified crisis period in the past. The crisis observation period used for this is checked regularly through model validation and approval processes and adjusted where necessary. The last time that an adjustment was required was in the first half of 2012.

Table 44: Stressed VaR of trading book portfolios

VaR ¹ €m	2013	2012
Minimum	21	24
Average	33	35
Maximum	45	52
Year-end figure	25	35

¹ 99% confidence level, holding period 1 day, 254-day history.

In addition, the incremental risk charge and equity event VaR ratios quantify the risk of deterioration in creditworthiness and event risks in trading book positions. Equity event VaR is conceptually part of the historical simulation taking into account empirical equity events over long observation periods. It is a component in the regulatory VaR calculation and included in the values of table 43.

The incremental risk charge is based on the credit VaR model with historical data for rating migration and default probabilities and for recovery factors. The model shows current gains and losses on positions in the event of rating changes. In addition, in calculating the incremental risk charge, assumptions are made regarding liquidity (average regrouping/liquidity horizon). These liquidity horizons are set on a portfolio-specific basis, taking into account market structure and activity and concentrations of positions. The incremental risk charge as at 31 December 2013 was as follows:

Table 45: Incremental risk charge

IRC €m	2013	2012
Minimum	92	121
Average	123	171
Maximum	155	309
Year-end figure	142	150

Table 46: Incremental risk charge by sub-portfolio

Sub-portfolio	IRC ¹ €m	Average regrouping horizon months
Corporates & Markets	133	5.4
Treasury	31	12.0

¹ Excluding diversification effects between sub-portfolios.

Stressed VaR decreased by €10m year-on-year to €25m. There was a moderate decline in the incremental risk charge, down €8m to €142m. The reason for the falls in these two figures was the continued reduction in risk positions in the Corporates & Markets business area. In addition, transactions were reclassified from the trading book to the regulatory banking book based on valid attribution criteria.

Market liquidity risk

Commerzbank also takes account of market liquidity risk in measuring economic capital adequacy. This is the risk of the Bank not being able to liquidate or hedge risky positions in a timely manner, to the desired extent and on acceptable terms as a result of insufficient liquidity in the market. First, a realistic liquidation profile is determined for each portfolio with reference to its product and risk strategy and on the basis of a corresponding market estimate. This enables portfolios to be classified in terms of their convertibility into cash using a so-called market liquidity factor. The market liquidity factor takes into account the higher volatility of the portfolio's value based on an extended holding period for risk positions that corresponds to the portfolio's liquidation profile. The market risk of every portfolio is then evaluated based on a one-year view and weighted with the market liquidity factor.

As at the end of 2013, Commerzbank held €0.2bn in economic capital earmarked to cover market liquidity risk in the trading and banking book. Asset-backed securities and restructuring portfolios in particular have higher market liquidity risk.

Table 47: Market liquidity VaR

Capital requirement €m	2013	2012
Minimum	174	218
Average	211	415
Maximum	257	697
Year-end figure	187	218

Interest rate risk in the banking book

The interest rate risk is one of the most significant financial risks posed by banking operations. This includes in particular the risk of value adjustments as a result of interest rate fluctuations over time. The maturity of interest positions and their refinancing structure are fundamental factors in the management of interest rate risks. In commercial business, the model includes assumptions on early repayments and on investor behaviour when deposits are opened. The risk of a flattening or steepening in the interest rate curve is also covered. Interest rate risks may also arise if positions are closed as a result of hedging transactions with a different pricing type to the underlying transaction (basis risks). Interest rate risks relate to Commerzbank's banking book and trading book. The combined position of both books results in Commerzbank's overall interest rate risk.

Strategy and organisation

The interest rate risk in the Commerzbank Group's banking book primarily results from the commercial business. Interest rate risks arise here if interest positions in the customer business are not hedged or are only partially hedged. Interest rate risks also arise from the investment models used by the central ALCO (Asset Liability Committee) which comprise in particular the investment and/or refinancing of products without contractually fixed interest rates, e.g. for equity capital, savings and sight deposits.

In Commerzbank Group, the interest rate risk in the banking book lies in the responsibility of Group Treasury within the scope of the business strategy. In addition to the positions of the central Group Treasury, the treasury activities of branches and all subsidiaries are also taken into consideration.

The Treasury's main tasks include the management of the balance sheet structure and of liquidity risks. The aim is to generate a positive interest margin from interest income and refinancing expenses. This gives rise to interest rate risks if positions are not refinanced with matching maturities and matching currencies.

Management

Commerzbank jointly manages the interest rate risk from both the trading and banking book. This is done strategically by means of risk policies and operationally by means of appropriate limit systems. The risks are consolidated in the central risk management. The central risk management is supplemented by a risk management unit for Treasury within the market risk function.

Interest rate risks in the banking book are managed in line with the business strategy by means of maturity- and currency-congruent refinancing and the use of interest rate derivatives. Interest rate swaps that have sufficient market liquidity, for instance, enable a prompt response to management changes. However, some products without fixed maturities, such as sight and savings deposits or equity capital, are available to the Bank in the long term. Here the Bank uses appropriate models to manage interest rate risks and stabilise earnings performance. Our models are regularly monitored.

Quantitative information on interest rate risks in the banking book

The measurement of interest rate risk is completely integrated into the Bank's daily measurement and monitoring of risk. As with the measurement of trading book risks, the risk quantification in the banking book is also calculated using the value at risk method. Stress tests and scenario analyses are also calculated on a daily and monthly basis. For this purpose, the aforementioned stress test calculations are used. This standardised procedure is intended to ensure transparency of the interest rate risks in both the trading and banking book.

A further control variable for interest rate risks in the banking book are interest rate sensitivities. These indicate how the interest income varies following a change of the interest level by, for example, one basis point (bp). Interest rate sensitivities are also monitored on a daily and monthly basis. This monitoring takes place at both a portfolio and segment level as well as for Commerzbank Group. For management purposes, the interest sensitivities are limited to the various maturity bands at both a Group and segment level. The focus is particularly placed on interest sensitivities relating to long maturity periods.

For regulatory purposes, the influence of an interest rate shock on the economic value of the banking book is simulated on a monthly basis. The applicable changes in interest rates have been specified by the supervisory authorities at +200 and -200 basis points. As at the end of 2013, the +200 basis point scenario resulted in a potential loss of €1,488m, while the -200 basis point scenario resulted in a potential gain of €514m. These figures include the exposures of Commerzbank AG and its significant subsidiaries.

Table 48: Interest rate risk in the banking book by currency

€m	2013		2012	
	-200 bp ¹	+200 bp ¹	-200 bp ¹	+200 bp ¹
EUR	390	-1,360	-667	-1,129
USD	-61	-12	662	-573
GBP	227	-97	296	-165
JPY	-11	-3	-18	17
CHF	-11	-27	-112	191
Other	-20	11	-44	38
Total	514	-1,488	118	-1,621

¹ Interest rate shock.

The potential gains and losses are primarily caused by movements in the euro yield curve. Changes in the UK and Swiss yield curves also made an impact, but to a lesser extent. The numbers represent a clear undershooting of the defined threshold value for a potential reduction in equity capital (20% for so-called outlier banks). Commerzbank manages its interest rate risk on the basis of total bank positions (including the trading book). This has to be kept in mind when assessing the simulation results.

Liquidity risk

In a narrower sense, Commerzbank defines liquidity risk as the risk that the Group will be unable to meet its daily payment obligations. In a broader sense, liquidity risk describes the risk that future payments cannot be funded to the full amount, in the required currency and at standard market conditions, as and when they are due.

Risk management

Strategy and organisation

The global framework for liquidity risk management is the liquidity risk strategy derived from the Bank's business and risk strategy and approved by the Board of Managing Directors. It contains guidelines for liquidity risk management and risk tolerance. It also takes the increasing regulatory requirements for liquidity risk management into account. As the ability to meet payment obligations at all times is an existential requirement, liquidity risk management focuses on a combination of liquidity provisioning and risk limitation. The guidelines of the liquidity risk strategy are supplemented by regulations such as the Liquidity Risk Policy, the Model Validation Policy, the Model Change Policy and the Limit Policy. These four documents have been incorporated into the Bank's recovery plan.

Group Treasury is responsible for the Group's liquidity management. Group Treasury is represented in all major locations of the Group in Germany and abroad and has reporting lines into all subsidiaries. Liquidity risks occurring over the course of the year are monitored by the independent risk function using an internal liquidity risk model. Key decisions on liquidity risk management and monitoring are taken by the central Asset Liability Committee, subject to confirmation by the Board of Managing Directors. This includes, for example, the determination of liquidity risk limits and the definition of the liquidity reserve. There are further sub-committees at the operational level, which consider liquidity risk issues at the local level as well as methodological issues of lesser significance for the Group.

As part of contingency planning, the central Asset Liability Committee can decide upon different measures to secure liquidity. This contingency plan is based on an integrated process which consists of the liquidity risk contingency plan and the sup-

plementary liquidity contingency measures of the Treasury. This concept enables a clear allocation of responsibility for the processes to be followed in emergency situations as well as the adequate definition of any action that may need to be taken.

Functional risk management

As part of the operating liquidity management, Group Treasury manages daily payments and access to central banks, as well as planning expected payment streams. Liquidity management also deals with access to unsecured and secured sources of funding on the money and capital markets and the management of the liquidity portfolio. The Group Risk Management area is responsible for strategic liquidity management. This includes preparing and analysing maturity profiles for liquidity-relevant assets and liabilities. It also involves modelling the proportion of customer deposits that will be available on a lasting basis, i.e. the core deposit base. The Group's issuing strategy thus generated is operationalised in Group Treasury. Group Finance is responsible for determining and allocating the liquidity costs that are included in the management of the Bank's business activities.

The limit concept in place ensures that the Bank can identify an emerging liquidity bottleneck at the earliest possible stage and take appropriate steps to correct it in time. Under the limit concept, liquidity risk limits for the Commerzbank Group are specified using the risk tolerance, which is defined in the liquidity risk strategy. These limits are then broken down into the individual Group entities, both for individual currencies and through all currencies. In addition to liquidity limits for the time horizon of up to one year, the Bank has defined a target corridor for structural long-term liquidity risk.

In 2013, while the recovery plan was being drafted, liquidity risk management was expanded by the addition of so-called early warning indicators. This enables the Bank in due time to set in motion a range of suitable measures to secure its long-term financial solidity.

The Bank is looking closely at the central issues arising from Basel III, the offsetting of liquidity costs and the management of liquidity risk within the internal liquidity risk model. In a strategic project we are constantly monitoring the further development of the management tools. In this connection, the range of analysis options available in liquidity risk reporting is being continually expanded.

Liquidity risk model

As with the future Basel III ratios, ensuring Commerzbank's ability to meet its payment obligations is quantified and monitored on the basis of two interdependent concepts:

- Period of up to one year: Available net liquidity (ANL) concept.
- Period of over one year: Stable funding concept.

Available net liquidity concept

Our Bank's own liquidity risk model calculates the available net liquidity (ANL) for the next 12 months based on various scenarios at a specified reference date. Commerzbank's available net liquidity is calculated for various stress scenarios using the following three components: deterministic, i.e. contractually agreed cash flows, statistically expected economic cash flows for the relevant scenario, and the realisable assets in the relevant scenario.

The stress scenario underlying the model, which is relevant for management purposes, allows for the impact of both a bank-specific stress event and a broader market crisis. This assumes liquidity outflows from the withdrawal of deposits and drawdowns on credit lines as well as a severely restricted liquidity of assets due to a market crisis.

Risk concentrations can lead to increased outflows of liquidity, particularly in a stress situation, and thus to increased liquidity risk. They can, for example, occur with regard to maturities, large individual creditors or currencies. By means of ongoing monitoring and reporting, concentration risks on the funding front can be recognised in a timely manner.

The stress scenarios relevant for management in the ANL model are run daily and reported to management. The underlying assumptions and the limits set are checked regularly and adjusted to reflect changed market conditions as necessary. The described stress scenarios also serve as the basis for the detailed emergency planning described above.

The liquidity surplus is also reported in the daily liquidity risk report, as well as its composition and the free availability (encumbrance) and level of liquid assets. In the regular analyses (weekly and monthly reports) there is a particular emphasis on the quality of the available assets and on reasonable diversification.

In order to ensure solvency in every currency, the limit system of the internal liquidity risk model also comprises currency-specific limits. Due to the prompt and frequent informing of the Board of Managing Directors and the integration of ALCO, possible liquidity gaps can be recognised at an early stage and impeded using suitable measures. Movements in the liquidity surpluses in the internal stress scenarios relevant for management and in the survival period scenario according to MaRisk were always within the limits set by the Board of Managing Directors for the whole of 2013. Commerzbank's solvency was therefore sufficient at all

times, not only in terms of the external regulatory requirements of the German Liquidity Regulation (figure as at 31 December 2013: 1.31), but also in terms of internal risk-setting.

Stable funding

The stable funding approach, which comes under the responsibility of Group Finance, identifies the structural liquidity requirement for the Bank's core lending business as well as those assets that cannot be liquidated within one year, and compares these to the liabilities available to the Bank over the long term (including customer deposit bases). The aim is to finance the Bank's illiquid assets and core business as much as possible with long-term liabilities in terms of volume and maturity.

The Commerzbank Group's short-term and medium-term funding relies on an appropriately broad diversification in terms of investor groups, regions and products. Liquidity management also regularly analyses the structure of the various sources of funding of liabilities in order to actively manage the funding profile.

Long-term funding is mainly ensured by means of structured and non-structured capital market products that may or may not be collateralised, as well as customer deposits.

The results derived from the comparison form the basis for our capital market issuance planning.

Stress tests

Commerzbank carries out stress tests on an ongoing basis. The parameterisation of the stress scenario is derived from the risk tolerance that is determined in accordance with the overall risk strategy and updated as required. We draw a distinction between bank-specific, general stress scenarios on the one hand and, on the other, scenario combinations that map all relevant projection periods. The aim is to prevent potential liquidity bottlenecks, even under difficult market conditions.

As part of the survival period scenario under MaRisk, an acute collapse of the interbank and capital market in particular is simulated over several days, followed by a further stress phase of up to one month with a moderate recovery in the short-term money market.

These stress scenarios that are relevant for management are also supplemented by additional reverse and adverse scenario analyses which exceed the defined risk tolerance. Reverse stress tests are carried out to establish which events could threaten the survival of the institution. The emphasis here is on "critical reflection" on the events in question. An adverse scenario portrays a severe deterioration in individual parameters which would not, however, necessarily place the bank's survival under threat.

Central bank securities are used to cover the liquidity requirement in a stress scenario, and these are brought into the calculation of available net liquidity (ANL) as balance sheet liquidity. In order to hedge against sudden unexpected payment obligations in particular, the Treasury maintains a portfolio of disposable highly liquid securities which are held by the central bank.

Operational risk

Operational risk (OpRisk) at Commerzbank is based on the German Solvency Regulation and is defined as the risk of loss resulting from the inadequacy or failure of internal processes, systems and people or from external events. This definition includes legal risks; it does not cover reputational or strategic risks.

Risk management

Strategy and organisation

Within Commerzbank, OpRisk and governance issues of the Internal Control System (ICS) are closely connected in terms of both organisational structure and methodology. This is because many OpRisk cases are closely linked with failures in the control mechanisms. It follows that a properly functioning ICS helps to reduce or avoid losses from operational risks. Conversely, the operational risk management systems enable the ICS to adapt itself consistently to them. The reinforcement of the ICS structure is an essential aspect of the pro-active reduction/prevention of operational risks.

Chaired by the CRO, the Group OpRisk Committee meets four times a year and deals with the management of operational risks within Commerzbank Group. It also acts as the escalation and decision-making committee for key OpRisk topics that span all areas. The Segment OpRisk Committees deal with the management of operational risk in the relevant units. They conduct structured analyses of all OpRisk issues that affect them, such as loss events, and define subsequent measures or recommend action.

Commerzbank's OpRisk strategy is approved on an annual basis by the Board of Managing Directors after it has been discussed and voted upon in the Group OpRisk Committee. It describes Commerzbank's risk profile, key elements of the desired risk culture (including risk limit), its management framework and measures to be taken by the Bank in respect of operational risk.

Implementation of the OpRisk strategy is intended to prevent major OpRisk losses before they materialise using proactive measures and therefore to protect the Bank against serious negative effects. It also enables potential problem areas in the process organisation to be identified, thus providing a basis for optimisation.

As such, OpRisk management is based on three consecutive levels (three lines of defence) which, when taken together, are crucial for reaching the given strategic aims.

The segments and the management/service units form the first line of defence. They have direct responsibility for identifying and managing operational risk in their areas of responsibility and provide effective and prompt risk management.

The OpRisk & ICS area as the second line of defence provides uniform and binding methods and systems to the Bank's units to help to identify, evaluate and monitor operational risk. These are used throughout the Group, supplemented by tools and regulations of other monitoring functions and used to mitigate operational risk.

Internal and external control bodies, such as the internal auditors, are the third line of defence. They are entrusted with the independent auditing of OpRisk and ICS methodologies and their implementation at Commerzbank.

Functional risk management

Commerzbank takes a pro-active approach to managing operational risk, based on a Group-wide uniform framework and aiming to systematically identify OpRisk profiles and risk concentrations and to define, prioritise and implement risk mitigation measures. Operational risks are managed pre-emptively by the segments and cross-sectional units on the basis of an overarching risk strategy for them.

The systematic approach adopted in doing so differs from that adopted in dealing with credit or market risks. OpRisk management is neither client- nor position- nor portfolio-based but holistic and applicable to all business processes.

It includes an annual evaluation of the Bank's ICS and of the risk scenario assessments and OpRisk loss events are subjected to ongoing analysis and to backtesting in the ICS if necessary. Where loss events involve \geq €1m, lessons learned activities are carried out. External OpRisk events at competitors are also systematically evaluated.

OpRisk ratios at Group level are managed through economically required capital (ErC) and regulatory capital (risk-weighted assets, RWA).

A structured, centralised and decentralised reporting system ensures that the management of the Bank and its segments, members of the OpRisk Committees and the supervisory bodies are informed regularly, promptly and fully about operational risk. OpRisk reports are prepared on a monthly and quarterly basis and form part of the risk reporting process to the Board of Managing Directors and to the Risk Committee of the Supervisory Board. They contain the latest risk assessments of the segments, their main loss events, current risk analyses, changes in the capital requirement and the status of measures implemented.

OpRisk model

Commerzbank measures regulatory and economic capital for operational risk using the advanced measurement approach (AMA), which is based on quantitative and qualitative methods. The capital charge determined using quantitative methods is supplemented by qualitative components, in line with the requirements of SolvV. The AMA is applied throughout the group. The capital of subsidiaries not included in the AMA is calculated using the basis indicator approach (BIA) or as an outside AMA.

Quantitative components

The AMA model's quantitative components include internal and external OpRisk loss data along with mathematical/stochastic modelling.

Group-wide internal OpRisk loss data in line with regulatory requirements is collected from a starting threshold of €5,000 in a Group-wide loss database. As the internally calculated loss data history cannot always reflect extreme OpRisk events adequately, additional external OpRisk events must be factored into the AMA model. For this purpose we use relevant external data from the Operational Riskdata eXchange Association, Zurich (ORX), a data consortium of international banks. For stochastic modelling, the data is grouped by combinations of business line, event type and region. Loss frequency is modelled on the basis of internal loss data, while distribution is modelled on the basis of internal and external loss data.

A modelling of insurance and alternative OpRisk transfers does not currently take place.

Qualitative components

Qualitative methods (the risk scenario assessment and the business environment and control system) are used to complement the information from the quantitative model components. They aim to

establish a uniform qualitative assessment of processes across the entire Group.

The risk scenario assessment represents an ex-ante risk assessment of operational risks. Based on expert opinions and in accordance with the requirements of MaRisk, they serve to identify exceptional but plausibly possible risk events which could jeopardise the Bank's existence or severely affect its results and incorporate these into modelling.

The business environment and control (BEC) system provides incentives to reduce operational risk and to improve risk management. The impact of business environment and internal control factors on regulatory and economic OpRisk capital is shown in the OpRisk model in the form of capital premiums and discounts. The BEC system takes into account the following qualitative OpRisk elements:

- Evaluation of the internal control system (ICS): As part of the annual ICS review, the company-wide ICS control mechanism is evaluated in terms of its functionality.
- Mapping of human resources risk and IT risk: The human resources risk report prepared by the Group Human Resources division presents risk information on the basis of set criteria. In doing so, it takes into account the current areas of human resources activity. In addition, risk information regarding information technology is gathered by means of a standardised questionnaire.
- Key Risk Indicators (KRIs): KRIs are used to manage operational risk by means of early warning signals.
- Valuation of OpRisk management: The OpRisk & ICS area evaluates the active OpRisk management of all units on the basis of a uniform list of criteria. In addition, information on the resolving status of audit findings are included in the BEC system.
- Top Level Adjustments (TLAs): TLAs are only used in well-founded exceptional cases in order to establish a risk buffer for extraordinary changes in the OpRisk environment and to include it in the OpRisk capital calculation at short notice. Currently no TLA is applied.

Other risks

In addition to those risks explicitly defined in the German Solvency Regulation, further risk types are also systematically and actively managed within Commerzbank Group. For details on other risks please refer to the Annual Report 2013.

Appendix

Overview of risk reporting

The structure of risk reporting as at 31 December 2013 in the Annual Report and Disclosure Report can be seen in the following table:

Table 49: Overview risk reporting

Topic	Detail	Disclosure report	Annual Report
Equity capital	Capital structure	P. 5–7	P. 251–253
	Equity instruments	P. 8–10	P. 218–222
	Capital requirements	P. 11–13	P. 251–253
Risk-oriented overall bank management	Risk management organisation	P. 14	P. 100–101
	Risk strategy and risk management	P. 14–15	P. 101–102
	Risk parameters		P. 102
	Risk-bearing capacity and stress testing	P. 15–16	P. 103–104
	Regulatory environment		P. 104–105
Default risk	Strategy and organisation	P. 17–18	P. 106–107
	Risk management	P. 18	P. 107–110
	Credit risk model	P. 18–19	
	Rating architecture	P. 19–21	P. 109
	Quantitative information on default risks	P. 24–37	P. 110–121
	Analysis by segment		P. 113–119
	Analysis by regulatory approach (IRBA/SACR)	P. 24–35	
	Default risks from derivative positions	P. 35–37	
	Loan loss provisions for default risks	P. 37–41	P. 111–119
	Investments in the banking book	P. 41–43	P. 196–199
Market risks	Securitisations	P. 44–53	P. 120–121
	Strategy and organisation	P. 54	P. 122
	Risk management	P. 54–55	P. 122–123
	Market risk model	P. 55–57	
	Quantitative information on market risks	P. 57–58	P. 123–125
	Market liquidity risk	P. 58	P. 125
	Interest rate risk in the banking book	P. 58–59	P. 124–125
Liquidity risks	Strategy and organisation	P. 60	P. 126
	Risk management	P. 60	P. 126
	Quantification and stress testing		P. 126–127
	Liquidity risk model	P. 61–62	
Operational risks	Strategy and organisation	P. 62	P. 128
	Risk management	P. 62–63	P. 128–129
	OpRisk model	P. 63	
Other	Human resources risk		P. 130
	Business strategy risk		P. 130
	Reputational risk		P. 130
	Compliance risks		P. 131
	Legal risks		P. 131
	Remuneration		P. 29–39

Consolidation matrix and material Group entities

While the Commerzbank Group's Annual Report is based on the group of consolidated entities under IFRS definitions, the information in this Disclosure Report relates to the entities consolidated for regulatory purposes.

Subsidiaries or controlled companies for the purposes of IFRS accounting that are not in the financial sector are not consolidated for regulatory purposes. They are, however, consolidated in the Group financial statements under IFRS.

The consolidation matrix (see following table 50) shows the regulatory consolidation categories for the various companies in Commerzbank Group. The material companies included in this Disclosure Report are shown individually in the upper part of the matrix.

The immaterial companies which are of lesser financial significance in accordance with the definition of materiality are shown in the lower part of the matrix.

The classification of the companies is based on section 1 KWG, supplemented by insurance companies and capital investment companies. The Commerzbank Group's investments that are not consolidated for regulatory purposes are not shown.

The Bank's classification includes both universal banks and specialist banks. Financial services institutions include investment companies, holding companies and other financial companies.

The special purpose vehicles that are deemed to be controlled by Commerzbank AG under the criteria of IFRS 10 are mainly securitisation vehicles and special funds consolidated under IFRS. 144 special purpose vehicles were consolidated under IFRS at the reporting date; there is currently no requirement to consolidate these vehicles for regulatory purposes.

Material companies of the Commerzbank Group are listed by name in the Company column in the consolidation matrix. The number of subsidiaries as well as investments of material companies which are relevant for regulatory purposes is shown, broken down into segments, by consolidation type in the Consolidation column. There are two types of consolidation for regulatory

purposes: full and pro rata. Full consolidation is applied to subsidiaries and pro rata consolidation for qualified minority interests.

To avoid the deduction for investments pursuant to section 10.6 KWG, equity investments in institutions and financial companies may also be voluntarily consolidated on a pro rata basis.

The material entities in the Group – besides Commerzbank AG – are the following:

- mBank S.A. was created in 2013 from the merger of BRE Bank, mBank and MultiBank as a modern bank operating in the Direct Banking area. As such, it serves customers in retail, corporate and investment banking in Poland, and in retail banking in the Czech Republic and Slovakia. At the end of 2013, mBank had a market share of around 8%, making it the fourth-largest bank in Poland. The mBank Group includes mBank Hipoteczny S.A. (the leading mortgage bank in Poland).
- comdirect bank AG, a comdirect Group company, is the market leader among Germany's online brokers. comdirect bank AG is a full-service bank and offers brokerage, banking and advice to its customers
- Commerz Real AG is a provider of leasing and investment solutions, managing assets of €34bn.
- Erste Europäische Pfandbrief- und Kommunalkreditbank AG in Luxembourg (EEPK) is a specialist bank concentrating on public finance.
- Hypothekbank Frankfurt AG is a specialist bank concentrating on real estate and public finance.

Risk-weighted investments shown in table 51 below are investments that are consolidated under IFRS but not for regulatory purposes. They are allocated to the equity investments asset class under the Solvency Regulation and are treated like any other investment position in this asset class.

Information on the group consolidation of Commerzbank AG is set out in the notes to the Annual Report (online version; Note 104: Ownership interests).

Table 50: Consolidation matrix

Company	Classification according to KWG	No.	Consolidation
Material companies			
Commerzbank AG	Provider of secondary services	14	full
	Financial services institutions	3	full
		32	deduction
	Financial companies	1	pro rata
		50	full
	Capital investment companies	1	full
		7	deduction
	Banks	2	pro rata
		5	full
		Special purpose vehicles	143
comdirect bank AG	Banks	2	full
Commerz Real AG	Financial services institutions	2	deduction
		5	full
	Financial companies	176	deduction
		26	full
	Capital investment companies	2	full
Erste Europäische Pfandbrief- und Kommunalkreditbank AG	Banks	1	full
Hypothekenbank Frankfurt AG	Provider of secondary services	3	full
	Financial companies	11	deduction
		7	full
	Banks	2	full
		Special purpose vehicles	1
mBank S.A.	Provider of secondary services	1	full
	Financial services institutions	1	deduction
		3	full
	Financial companies	7	deduction
		3	full
	Banks	2	full
	Insurance companies	1	deduction
Immaterial companies			
	Provider of secondary services	14	full
	Financial services institutions	1	full
		12	deduction
	Financial companies	31	full
	Capital investment companies	2	full

Table 51: Investments consolidated under IFRS

Classification according to KWG	No.	Consolidation under IFRS
Provider of secondary services	12	full
Financial services institutions	1	at equity
	1	full
Capital investment companies	1	at equity
Other companies	8	at equity
	79	full

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List of abbreviations

ABCP	Asset-backed Commercial Paper	IRBA	Internal Ratings Based Approach
ABS	Asset-backed Securities	IRC	Incremental risk charge
AFS	Available for Sale	ISDA	International Swaps and Derivatives Association
ALCO	Asset Liability Committee	ISIN	International Securities Identification Number
AMA	Advanced Measurement Approach	KonÜV	Konzernabschlussüberleitungsverordnung (Consolidated Financial Statements Reconciliation Regulation)
ANL	Available Net Liquidity	KRI	Key Risk Indicators
AUC	Area under the curve (concentration measure)	KWG	Kreditwesengesetz (German Banking Act)
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Financial Supervisory Authority)	LaD	Loss at Default
BEC	Business Environment and Control System	LaR	Loans and Receivables
BIA	Basisindikatoransatz (Basic Indicator Approach)	LGD	Loss Given Default
CCF	Credit Conversion Factor	LIP	Loss Identification Period
CDO	Collateralised Debt Obligation	MaRisk	Mindestanforderungen an das Risikomanagement (Minimum Requirements for Risk Management)
CDS	Credit Default Swap	NBFI	Non-Bank Financial Institution
CEO	Chief Executive Officer	NCA	Non-Core Assets
CFO	Chief Financial Officer	NI	Non-impaired
CMBS	Commercial Mortgage-backed Securities	OIS	Overnight Index Swap
CP	Commercial Paper	OpRisk	Operational Risk
CRMT	Credit Risk Mitigation Techniques	ORX	Operational Riskdata eXchange Association, Zurich
CRO	Chief Risk Officer	PD	Probability of Default
CVaR	Credit Value at Risk	PI	Portfolio Impaired
EaD	Exposure at Default	P&L	Profit & Loss
EBA	European Banking Authority	RBA	Ratings Based Approach
ECB	European Central Bank	RBC ratio	Risk-bearing capacity ratio
EDTF	Enhanced Disclosure Task Force	RMBS	Residential Mortgage-backed Securities
EEPK	Erste Europäische Pfandbrief- und Kommunalkreditbank AG in Luxembourg, Luxembourg	RW	Risk weight
EL	Expected Loss	RWA	Risk-weighted asset
ErC	Economically required Capital	SACR	Standardised Approach to Credit Risk
GLLP	General Loan Loss Provisions	SFA	Supervisory Formula Approach
HGB	Handelsgesetzbuch (German Commercial Code)	SIC	Standing Interpretations Committee
IAA	Internal Assessment Approach	SLLP	Specific Loan Loss Provisions
IAS	International Accounting Standards	SMEs	Small and medium-sized enterprises
ICAAP	Internal capital adequacy assessment process	SoFFin	Sonderfonds Finanzmarktstabilisierung (Special Fund for Financial Market Stabilisation)
ICS	Internal Control System	SolvV	Solvabilitätsverordnung (German Solvency Regulation)
IFRS	International Financial Reporting Standards	SPV	Special Purpose Vehicles
IMM	Internal model method	TLA	Top Level Adjustment
IPV	Independent Price Verification	VaR	Value at Risk

Disclaimer

Reservation regarding forward-looking statements

This report contains forward-looking statements on Commerzbank's business and earnings performance, which are based upon our current plans, estimates, forecasts and expectations. The statements entail risks and uncertainties, as there is a variety of factors which influence our business and to a great extent lie beyond our sphere of influence. Above all, these include the economic situation, the state of the financial markets worldwide and possible loan losses. Actual results and developments may, therefore, diverge considerably from our current assumptions, which, for this reason, are valid only at the time of publication. We undertake no obligation to revise our forward-looking statements in the light of either new information or unexpected events.

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