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Regulatory Disclosure Report for the 2012 financial year of Aareal Bank Group



### **Key Financial Indicators**

	Annual Report 1)	Regulatory Report 2)
€mn	·	
Regulatory capital	2,991	2,774
Tier 1 capital	2,430	2,383
Tier 2 capital	561	391
Tier 3 capital	-	-
Regulatory capital requirements	1,161	1,161
Counterparty risk	1,067	1,067
Market risk	8	8
Operational risk	86	86
Surplus	1,830	1,613
%		
Tier 1 ratio	16.7	16.42
Total capital ratio	20.6	19.11

<sup>&</sup>lt;sup>1)</sup> Amounts after confirmation of the 2012 financial statements of Aareal Bank AG.

The inclusion of retained earnings transferred as part of Aareal Bank AG's liable equity as at 31 December 2012 is subject to approval by the Annual General Meeting.

 $<sup>^{\</sup>mbox{\tiny 2)}}$  Figures reported to the supervisory authorities as at the reporting date of 31 December 2012.

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# Regulatory Disclosure Report for the 2012 financial year

### **Preface**

In addition to the details contained in the Aareal Bank Group Annual Report, this Regulatory Disclosure Report explains the business policy standards and facts that are relevant for assessing our situation from a regulatory perspective. Besides providing a qualified description of the manner in which our risks are identified, evaluated, weighted and reviewed, the report also contains detailed quantitative statements about the sizes of the individual areas.

The Regulatory Disclosure Report is prepared in accordance with Bank internal provisions and procedures stipulated in writing in order to fulfil disclosure requirements.

The new disclosure requirements regarding remuneration systems within the Capital Requirements Directive (Directive 2010/76/EU – "CRD III") were transposed into German law by the German Ordinance on Remuneration in Financial Institutions (Instituts-Vergütungsverordnung – "InstitutsVergV"). Disclosures regarding remuneration systems are published in a separate Remuneration Report available on the Bank's website.

### **Summary**

Aareal Bank Group is subject to disclosure pursuant to sections 10 and 10a of the German Banking Act (Kreditwesengesetz – "KWG") in the 2012 financial year. This is due to the fact that Aareal Bank Group has elected to use the waiver option provided by section 2a (6) of the KWG, whereby the reports for financial holding companies or banking groups may be prepared on a consolidated basis. Aareal Bank AG, whose registered office is in Wiesbaden, Germany, is the parent institution of the Group.

The details we have published in this disclosure report are based on both the Credit Risk Standard Approach (CRSA) and the advanced IRB Approach (Advanced Internal Ratings Based Approach – "AIRBA"). We only mention the disclosure requirements explicitly relevant for us.

In accordance with section 320 (1) sentence 2 of the German Solvency Ordinance (Solvabilitätsverordnung – "SolvV"), we only reported those facts that were not already disclosed in the Group's Annual Report. If facts are already described in our Annual Report, we refer specifically to the information included in the corresponding source references.

### **Regulatory Capital**

The legislator stipulated in sections 10 and 10a of the KWG that institutions and companies operating in the financial sector must calculate existing regulatory capital on a regular basis, and present these detailed results to the supervisory authority on specific dates.

Strict regulatory criteria are applied to the availability and sustainability of the qualifying capital when calculating regulatory capital. These provisions are not consistent with the recognition rules pursuant to the German Commercial Code (Handelsgesetzbuch – "HGB") or IFRS.

Regulatory capital is determined on the basis of balance sheet items recognised in accordance with the HGB. On the other hand, the amounts shown in the "Equity" line item in the Aareal Bank Group Annual Report are calculated in accordance with IFRS.

For this reason, the details stated regarding equity correspond to the equity amounts recognised in the statement of financial position (as shown in the Group Annual Report) with respect to certain items only. Furthermore, a comparison is hampered with respect to the regulatory and accounting treatment of the various companies within the scope of consolidation, as well as due to the different carrying amounts applied at times for individual Group entities.

	Annual Report	Regulatory Report
€mn		
Total Tier 1 capital in accordance with section 10 (2a) of the KWG	2,475	2,470
Paid-in capital	1,617	1,612
Other eligible reserves	678	678
Special item for general banking risks	168	168
Other components of Tier 1 capital	26	26
Amounts to be deducted from Tier 1 capital	-14	-14
Tier 2 capital pursuant to section 10 (2b) of the KWG	607	478
Class 1 Tier 2 capital	192	63
Class 2 Tier 2 capital	431	431
Amounts to be deducted from Tier 2 capital	-16	-16
Liable equity capital pursuant to section 10a of the KWG	3,082	2,948
Amounts to be deducted pursuant to section 10 (6a) nos. 1		
to 3 of the KWG	-91	-174
Modified available equity	2,991	2,774
Tier 3 capital pursuant to section 10 (2c) of the KWG	-	_
Regulatory capital	2,991	2,774

### Overview

The regulatory capital stated as at the reporting date 31 December 2012 was based on the previous year's statement of financial position. We took into account changes to recognised items that occurred before the end of the year only to the extent permissible, and where necessary.

The overview includes the regulatory capital stated in the report as at 31 December 2012 pursuant to sections 10 and 10a of the KWG, as well as the amounts stated after confirmation of the 2012 financial statements of Aareal Bank AG. The inclusion of retained earnings transferred as part of Aareal Bank AG's liable equity as at 31 December 2012 is subject to approval by the Annual General Meeting.

After confirmation of the financial statements as at the reporting date of 31 December 2011, Aareal Bank Group had total assets in the amount of  $\in$  41.8 billion. Regulatory capital as defined by the KWG totalled approx.  $\in$  2,988 million.

Compared with 2011, our regulatory capital as at the reporting date of 31 December 2012 amounted to  $\in$  2,991 million, while total assets amounted to  $\in$  45.7 billion. These figures were influenced by opposing effects, primarily as a result of silent participations no longer being included and the reduced inclusion of Tier 2 capital due to maturing funds and a remaining term to maturity of less than two years, compared to the addition to reserves at Aareal Bank AG for the financial year 2012 as well as the issuance of new Tier 2 capital.

The composition of equity as reported in the balance sheet is explained in our Annual Report. Regulatory facts are presented in the following sections.

### Tier 1 capital

Tier I capital, which amounted to approx. € 2,482 million as at 31 December 2011, decreased to € 2,470 million one year later. The total amount comprises 74.9 % paid-in capital including the silent participation by SoFFin as well as capital reserves and other reserves eligible for inclusion.

Contributions to the Group's aggregate issued share capital and recognised capital in the amount of  $\in$  211 million are primarily made from Aareal Bank AG ( $\in$  180 million).

Aareal Bank AG's capital comprises approx. 59.9 million no-par value bearer shares ("unit shares"). Each share carries one vote. In the interest of achieving repayment at the earliest opportunity of the silent participation by SoFFin, Aareal Bank will not distribute a dividend to its shareholders for the 2012 financial year.

Preferential participation certificates issued by Aareal Bank Capital Funding LLC are included as equity component. The total equivalent of these certificates is recognised as "other capital" as a component of Tier I capital (so-called "innovative Tier I model") for regulatory purposes. The voting rights are held by Aareal Bank AG alone. The issue that was rated "A" by Fitch Ratings at issuance has an indefinite term but can be called by the bank on the quarterly coupon payment date. Interest payments are dependent upon Aareal Bank AG's net retained profit; interest payments omitted are not paid retrospectively. The interest payments for the financial year 2012 amounted to 7.13 %.

Contributions by silent partners to Aareal Bank AG in the amount of  $\in$  220 million are recognised and used as regulatory Tier I capital as "other capital" in the amount of  $\in$  190 million. This amount is available to us for an unlimited term, and bears interest at an average of 3.98 %. Contributions by silent partners in the amount of  $\in$  30 million will expire on 31 December 2013 and no longer qualify as Tier I capital.

The unlimited silent participation by SoFFin in the amount of  $\in$  300 million is now classified as "other capital" within regulatory Tier I capital and bears interest at 9 %.

Capital reserves shown as paid-in capital are generated mainly from Aareal Bank AG's business activities. Including consolidation effects, capital reserves eligible for inclusion amount to  $\in$  661 million.

The largest individual share by far in its capital reserves is held by Aareal Bank AG. The same applies to retained earnings, which amount to  $\in$  678 million.

Other Tier 1 capital components result from the excess amount from goodwill in accordance with section 10a (6) sentences 8 and 9 of the KWG.

### Tier 2 capital

Tier 2 capital mainly consists of profit-participation certificates in the amount of  $\in$  63 million and subordinated liabilities (promissory note loans and bearer bonds) in the amount of  $\in$  431 million which fulfil the requirements of section 10 (5) and (5a) of the KWG.

The profit-participation certificates have a value of  $\in$  138 million, of which  $\in$  63 million are used for regulatory purposes. This results from the non-eligibility of issues maturing in less than two years. Certificates in the amount of  $\in$  52 million mature in less than five years, while certificates in the amount of  $\in$  11 million mature after more than five years. The average interest for eligible profit-participation certificates is 6.04 %.

Pursuant to the terms and conditions of issue, holders of profit-participation certificates have a claim on interest payments that takes preference over the profit entitlements of shareholders. Where such distribution during the term of the profit-participation certificates would cause a net loss, said interest claim would be reduced, possibly down to zero, creating a claim for back payment during the term of the certificates at the same time.

Repayment takes place on the repayment date at the nominal amount in accordance with the relevant terms and conditions (subject to any loss sharing), on the day following the Annual General Meeting passing resolutions regarding the relevant financial year. The profit-participation certificates evidence creditors' rights; they do not grant any share in the liquidation proceeds.

Of the subordinated liabilities in a total amount of  $\in$  574 million,  $\in$  431 million are eligible for regulatory purposes. This results from the reduced inclusion of issues maturing in less than two years. Certificates in the amount of  $\in$  157 million mature in up to five years, while certificates in the amount of  $\in$  274 million mature after more than five years. Interest was paid on subordinated liabilities at an average rate of 4.00 %.

Subordinated funds raised in accordance with section 10 (5a) of the KWG do not provide for any early repayment obligation. In the event of liquidation or insolvency, claims on interest and principal from these liabilities are subordinated to the claims of all other creditors, which are not themselves subordinated. This also applies to those subordinated funds raised that are not specified in detail.

As at the balance sheet date, the bank had no knowledge of any individual items exceeding 10 % of total subordinated liabilities.

### Amounts to be deducted

Deductions of  $\in$  14 million for intangible assets are recognised in Tier 1 capital, in accordance with section 10 (2a) sentence 2 no. 2 of the KWG. Tier 2 capital is reduced by  $\in$  16 million from goodwill, pursuant to section 10a (6) sentences 9 and 10 of the KWG.

Under the AIRBA, amounts to be deducted from liable equity in relation to valuation adjustment deficits and securitisation exposures pursuant to section 10 (6a) of the KWG in the amount of  $\in$  174 million need to be reported to the regulatory authorities. This item is reduced, after confirmation of the financial statements of Aareal Bank AG, to  $\in$  91 million.

### **Group Structure**

Aareal Bank AG, whose registered office is in Wiesbaden, Germany, and is the parent institution of the Group, prepares this disclosure report in accordance with section 10a (1) of the KWG.

Aareal Bank Group is one of the leading international specialist property banks. Our business model comprises two pillars:

In the Structured Property Financing segment, we finance commercial property, particularly offices, shopping centres, logistics properties and hotels. We facilitate property projects for our domestic and international clients within the framework of a three-continent strategy covering Europe, North America and Asia. In this context, our particular strength lies in the success we have in combining local market expertise and sector-specific knowhow.

In the Consulting/Services segment, Germany is our core market; we are also active in several other European countries. The segment offers a wide range of services to the German institutional housing industry – specifically, IT systems plus related consultancy services, combined with integrated payments systems, as well as a comprehensive range of services for managing property portfolios.

### **Consolidated companies**

Aareal Bank Group comprises various controlled entities, some of which hold participating interests in each other. These entities are consolidated for accounting and regulatory monitoring purposes. Applicable accounting and regulatory rules differ in some areas in relation to their objectives.

Hence, the scope of consolidation created on the basis of the legal requirements differs, in terms of the number of consolidated entities, as well as regarding the method of consolidation. The following consolidation matrix lists all subsidiaries, joint ventures and associates of Aareal Bank AG for each of the two operating segments which are consolidated on the basis of regulatory aspects or which are included in consolidated

financial reporting<sup>1)</sup> as at the reporting date as their equity capital amounts to at least  $\in$  1 million. Smaller or bare-shell companies are not listed, as they are deemed irrelevant.

		Regulat	Consolic accordance			
	Co	nsolidation	Deduction	risk-weighted		equity
	full	pro-rata	method	shareholdings	full	method
Operating segment						
Structured Property Financing						
Aareal Bank Asia Ltd., Singapore	Х				Х	
Aareal Capital Corporation, Wilmington	X				Х	
Aareal Bank Capital Funding LLC, Wilmington	X				Х	
Aareal Estate AG, Wiesbaden	Х				Х	
Aareal Gesellschaft für Beteiligungen und Grundbesitz						
Erste mbH & Co. KG, Wiesbaden	X				X	
Aareal Partecipazioni S.p.A., Rome	Х				Х	
Aareal Property Services B.V., Amsterdam				Х	Х	
Aareal Valuation GmbH, Wiesbaden	Х				X	
arsago Alternative Investments SPC, Grand Cayman	Х				X	
B & P / DSF Windpark GbR, Frankfurt/Main			Х			Х
BauBo Bau- und Bodenverwertungs- und						
-verwaltungsgesellschaft mbH, Wiesbaden	X				X	
BauContact Immobilien GmbH, Wiesbaden				Х	Х	
Deutsche Operating Leasing AG, Frankfurt/Main				Х		Х
Deutsche Structured Finance GmbH, Frankfurt/Main	Х				Х	
Deutsche Structured Finance GmbH & Co.						
Alphard KG, Frankfurt/Main				X	X	
DSF Anteils GmbH, Frankfurt/Main	Х				X	
DSF German Office Fund GmbH & Co. KG,						
Frankfurt/Main	Х				Х	
DSF LUX INTERNATIONAL S.à.r.I, Luxembourg	Х				X	
DSF Verwaltungsgesellschaft mbH, Frankfurt/Main			X		Х	
DSF Vierte Verwaltungsgesellschaft mbH, Wiesbaden	X				Х	
GEV GmbH, Wiesbaden	Х				X	
IV Beteiligungsgesellschaft für Immobilieninvestitionen						
mbH, Wiesbaden	Х				X	
Izalco Spain S.L., Madrid	Х				X	
Jomo S.p.r.l., Brussels	Х				Х	
La Sessola S.r.l., Rome	Х				Χ	
Main Triangel GmbH, Frankfurt/Main				Х	Χ	

<sup>&</sup>gt;

<sup>1)</sup> Shareholdings shown in accordance with section 313 (2) of the HGB. Aareal Bank Group prepares its financial statements in accordance with IFRS.

	Regulatory treatment					Consolidation in accordance with IFRS	
		nsolidation	Deduction	risk-weighted		equity	
	full	pro-rata	method	shareholdings	full	method	
Mercadea S.r.l., Rome	Х				Х		
Mirante S.r.I., Rome	X				Х		
PLP Holding GmbH, Wiesbaden	Х				Х		
Real Verwaltungsgesellschaft mbH, Wiesbaden				Х	Х		
Terrain-Aktiengesellschaft Herzogpark, Wiesbaden	X				Х		
ZMP Zentral Messepalast Entwicklungs-							
gesellschaft mbH, Wiesbaden	X				X		
DBB Inka				1)	Х		
Operating segment							
Consulting/Services							
Aareon AG, Mainz	Х				Х		
Aareon Deutschland GmbH, Mainz				Х	Х		
Aareon France S.A.S., Meudon La Foret				Х	Х		
Aareon UK Ltd., Coventry				Х	Х		
Aareon Wodis GmbH, Dortmund				Х	Х		
Aareal First Financial Solutions AG, Mainz	Х				Х		
Aareal IT Beteiligungen GmbH, Wiesbaden	Х				Х		
BauSecura Versicherungsmakler GmbH, Hamburg				Х	Х		
Deutsche Bau- und Grundstücks-Aktiengesellschaft, Berlin				Х	Х		
1st Touch Ltd., Southampton				X	Х		
SG Automatisering B.V., Emmen				Х	Х		

<sup>1)</sup> The fund reported under the AIRBA is treated using the simple risk weight method pursuant to section 78 (2) No. 2 of the SolvV

### **Undercapitalised entities**

At present, none of the banks or financial services providers within Aareal Bank Group are undercapitalised, which would require a deduction of the holding from the parent company's liable equity.

### Utilisation of the "waiver" regulation

The "waiver" regulation pursuant to section 2a (6) of the KWG allows banking groups to calculate regulatory capital on a consolidated basis only. The Group has opted for the simplified reporting scheme in accordance with sections 10 and 13a of the KWG since 30 September 2007.

Aareal Bank AG's participatory interests in its subsidiaries allow it to transfer capital from subordinated subsidiaries to Aareal Bank AG, if necessary. This can be achieved, for example, through distributions to Aareal Bank AG or by capital decreases at the subsidiaries. The bank can also request its subsidiaries to repay the liabilities.

Accordingly, there are no burdens (neither legal, nor materially factual) as per section 2a (6) sentence I no. I of the KWG to the immediate transfer of capital or repayment of liabilities by the subsidiaries to Aareal Bank AG.

As the parent institution of the Group, Aareal Bank AG operates a central risk management system for

the banking group which it is also a part of. This means that the prerequisites stated in section 2a (6) sentence 1 no. 2 of the KWG regarding the combined supervision of risk assessment, risk measurement and risk control procedures, are fulfilled.

Aareal Bank AG carries out event-driven reviews to ensure it continues to fulfil the prerequisites of section 2a (6) of the KWG.

### **Capital Adequacy**

Besides calculating existing regulatory capital on a regular basis, companies operating in the financial sector are also obliged to define the ratio between regulatory capital and specific risks defined for regulatory purposes.

The purpose of this calculation is to examine to what extent a bank or banking group can appropriately cushion potential defaults through existing regulatory capital.

### **Calculating relevant indicators**

Capital adequacy is determined by comparing qualifying regulatory capital with the total capital requirements for counterparty risk exposures, operational risks and market risk.

Overall, the ratio of qualifying regulatory capital and risk-weighted assets from counterparty, market and operational risks may not fall below 8 %. This ratio is reflected by the so-called total capital ratio. In contrast to the total capital ratio, the Tier I ratio is determined by comparing only Tier I capital with the risk-weighted assets from counterparty, market and operational risks.

### Total capital ratio and Tier 1 ratio

The performance of the total capital ratio is based on different influencing factors, particularly the increase in new business volume and risk management. The bank's risk management is designed to closely examine risks before accepting or granting

loans. The risk exposure is constantly reviewed in relation to its sustainability.

The following table provides an overview of the disclosed regulatory capital and capital requirements as at 31 December 2012.

Regulatory capital	2,774
Tier 1 capital	2,470
Tier 2 capital	478
Amounts to be deducted pursuant to	
section 10 (6a) nos. 1 to 3 of the KWG	-174
Tier 3 capital	-
Regulatory capital requirements	1,161
Counterparty risk	1,067
Market risk	8
Operational risk	86
Surplus	1,613
%	
Tier 1 ratio	16.42
Total capital ratio	19.11
Tier 1 ratio	

Additional information pertaining to the individual items of the regulatory capital requirements can be found in the following chapters.

### Internal capital management

Our overall risk strategy represents the framework for risk limitation. A deciding factor for risk limits is the bank's underlying risk-bearing capacity. The overall risk shall at no time exceed the risk-bearing capacity.

The assumptions underlying the risk-bearing capacity approach, plus the concrete procedure for creating and monitoring the aggregate risk cover, plus the general management of internal capital, are all described in the Annual Report.<sup>1)</sup>

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Risk-bearing capacity and risk limits" in the Risk Report of the Group Management Report.

### **Risk Management**

Risk management deals with identifying, assessing, limiting and managing risks. Therefore, risk management is an essential part of corporate governance.

in Banks (MaRisk), up to and including senior management level. Both the functional separation in the two business segments and the respective process requirements and risk reporting are described in detail in the Annual Report.<sup>2)</sup>

### Risk strategy

The framework for risk management of Aareal Bank Group is the business strategy as determined by the Management Board and endorsed by the Supervisory Board and described in the Annual Report.<sup>1)</sup>

Building on the business strategy, detailed strategies have been defined for managing risk types considered material (counterparty and credit risk, market price risk, liquidity risk and investment risk as well as operational risk), always taking into consideration risk-bearing capacity. Taken together, these strategies represent the Group's risk strategy. The strategies are designed to ensure a professional and conscious management of risks. Accordingly, these strategies include general policies, to ensure a uniform understanding of risks across all parts of the bank, and providing a cross-sectional, binding framework applicable to all departments. The bank has implemented adequate risk management and risk control processes to implement these strategies, and to safeguard the bank's risk-bearing capacity. During the financial year under review, risk strategies as well as the bank's business strategy were adapted to the changed environment, and the new strategies adopted by the Management Board and the Supervisory Board.

### Processes and organisational structure of risk management

Aareal Bank Group's organisational structures and workflows are consistently geared towards effective and professional risk management. Processes in the credit and trading businesses are designed to consistently respect the clear functional division of Sales and Credit Management units (in line with the Minimum Requirements for Risk Management

### Risk management and risk monitoring

Overall responsibility for risk management and risk monitoring remains with the Management Board and the Supervisory Board of Aareal Bank. The overview included in the Annual Report<sup>3)</sup> shows the responsibilities assigned to the respective organisational units regarding the risk types material to the bank.

### **Risk Types**

The following section illustrates the comments made above with regard to risk management in relation to the types of risk material to the Group.

### **Credit Risks**

Aareal Bank defines credit risk or counterparty risk as the risk of losses being incurred due to (i) a business partner defaulting on contractual obligations; (ii) collateral being impaired; or (iii) a risk arising upon realisation of collateral. Both credit business and trading activities may be subject to counterparty risk. Counterparty risk exposure from trading activities may refer to risk exposure visàvis counterparties or issuers. Country risk is also defined as a form of counterparty risk.

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Strength builds on stability".

<sup>&</sup>lt;sup>2)</sup> Aareal Bank Group 2012 Annual Report: chapters "Lending business" and "Trading activities" in the Risk Report of the Group Management Report.

<sup>&</sup>lt;sup>3</sup> Aareal Bank Group 2012 Annual Report: chapters "Risk management – scope of application and areas of responsibility" in the Risk Report of the Group Management Report.

### Credit risk strategy

Within the framework of the three-continent strategy pursued in Structured Property Financing, Aareal Bank Group aims to build a balanced business property finance portfolio, in terms of regions, products, types of property and client groups. Dependencies as well as risk concentrations are reduced through broad diversification.

The credit risk strategy sets the material aspects of Aareal Bank's credit risk management and policies. It is divided into the Group credit risk strategy and individual sub-strategies (lending policies), defining the type of new business the bank wishes to generate with respect to various markets and types of business.

The organisational structure and workflows tailored towards credit risk management as well as the implemented procedures used for measuring, managing and monitoring risk exposure are described in detail in the Annual Report.<sup>1)</sup> The Annual Report also includes descriptions of strategies and processes used to monitor the current effectiveness of the measures taken for risk protection and risk mitigation.

### Regulatory assessment

### Calculation approaches

Section 8 of the SolvV allows different approaches to be taken when calculating total risk in relation to counterparty risk.

We follow the advanced IRB Approach (AIRBA) to determine the total capital requirements for Property finance – our main business segment – within the "Corporates" asset class as well as for housing enterprises with savings facilities within the "Institutions" asset class. This was approved by the German Federal Financial Supervisory Authority

in February 2011, with retrospective effect as at 31 December 2010.

The Credit Risk Standard Approach (CRSA) continues to be used within the framework of the partial-use method (section 70 of the SolvV). The following CRSA asset classes are treated based on the partial use method:

- sovereign governments,
- · regional governments and similar entities,
- other public-sector entities,
- multilateral development banks,
- international organisations,
- corporates (only non-core business, legacy business),
- retail lending business (discontinued business, legacy business),
- items secured by property (only non-core business, legacy business), and
- past due exposures (only non-core business, legacy business).

The asset classes "Institutions" and "Covered bonds issued by credit institutions" remain in the CRSA for the time being.

Under the CRSA, parameters defined by the regulatory framework are used to determine risk-weighted assets (RWA). Only specific collateral defined by the regulatory framework may be used to mitigate credit risk.

### **External rating for CRSA items**

A key element of the economic and regulatory assessment is the borrower's credit rating. This rating is determined by rating agencies that are recognised by the regulatory authorities. These agencies' assessments and valuations facilitate a uniform classification of borrowers across all banks. The ratings of governments, banks and exchange-listed companies, as well as investment fund units and securitisations are generally assessed externally.

We have retained three agencies: Fitch Ratings, Moody's Investors Service, and Standard & Poor's,

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Credit risks" in the Risk Report of the Group Management Report.

to classify borrowers and guarantors in accordance with section 42 (1) of the SolvV. The ratings determined by these three agencies apply for all the aforementioned rating-related asset categories in relation to the Credit Risk Standard Approach. Assessments by export credit insurance agencies are not used.

Loans and advances rated by at least one rating agency are deemed as "rated" CRSA exposures pursuant to section 44 of the SolvV. The "unrated" items are rated in accordance with section 45 of the SolvV. In line with our business model, most of our exposures are in the "Corporates" asset class under the AIRBA. Legacy business from the noncore business remain included in the "Corporates" and "Items secured by property" asset classes, which are reported as unrated CRSA exposures with the prescribed standard risk weighting.

At present, we have neither transactions for which an issue rating has been migrated to receivables nor any for which a comparable rating is determined pursuant to section 45 (2) of the SolvV.

### Internal rating systems

The internal rating procedure used by the bank for borrowers in the large-sized property financing business consists of a two-stage rating process. A borrower's probability of default (PD) is determined in the first stage. The expected loss given the borrower's default (LGD) is determined in the second step.

Within the framework of this PD rating and LGD procedure, a rating is established for large-sized commercial lending business (our core business) with a total exposure of at least  $\in$  2.5 million and for the institutional housing industry with a total exposure of at least  $\in$  750,000.

The contractual positions relevant for reporting duties are maintained in the relevant Sales unit systems, while the assignment of IRBA items and borrowers to the IRBA asset classes "Corporates" and "Institutions" (only housing enterprises with savings facilities) is made fully automatically on

the basis of the characteristics of the transaction and the customer.

The internal rating procedure used by the bank to determine a customer's probability of default consists of two main components: a property rating and a corporate rating. The relative impact of the two components on the rating result is determined by the structure of the exposure concerned. The client's probability of default is determined based on specific financial indicators, together with qualitative aspects and expert knowledge. The result of the rating process is reflected in the classification of the borrower into one of the rating classes. The bank currently uses 15 rating classes within the rating procedure for large-sized commercial property financing, for borrowers that are not deemed to have defaulted pursuant to the SolvV criteria. Borrowers in default pursuant to the SolvV are allocated to a special rating class. Within the framework of the bank's external reporting, the borrower rating is reconciled to a master scale.

The Credit Management department is responsible for the determination of the borrower rating; this responsibility is regulated in the bank's credit manuals. The relevant authorised person makes a decision on the rating which ensures an independent rating allocation from a process view.

The second step involves the calculation of the expected loss given a borrower's default for the internally rated large-sized commercial property financings under the AIRBA approach.

The LGD is determined based on a bottom-up approach, where the components relevant for the LGD level and their driving factors – in the form of recovery rates, waivers of principal and interest as well as direct and indirect costs – are estimated.

The LGD determination is based on the definition of economic loss (section 126 of the SolvV). As the future development of a borrower cannot be anticipated in case of a borrower's default, the alternatives – recovery, restructuring and reageing – are included in the LGD calculation using weightings based on the respective probability. The LGD

is driven primarily by the expected proceeds from the realisation of collateral and from unsecured portions of loans and advances. The proceeds from property-related collateral are determined based on the recovery rate in the form of a haircut applied to a previously forecasted market value. For financings of domestic properties, recovery rates are taken from a pool of data used across the bank, whilst recovery rates for international properties are derived using an internal approach, given the low number of realisations. The market value projections for properties located in Germany are based on the projection indices of the Association of German Pfandbrief Banks (Verband deutscher Pfandbriefbanken, "vdp"). An internal projection model has been developed by the bank for properties abroad which is based on macroeconomic inputs.

In addition to the nature and extent of the collateralisation of a financing, the estimated exposure at the borrower's default (Exposure at Default,

EaD) is the second major parameter for the LGD calculation.

In the context of this estimate, the CCF currently used generally amounts to 100 %.

### **Distribution by IRBA exposure amounts**

Since collateralisation is crucially important for property loans and is directly reflected in the level of the loss given default percentage, the IRBA exposure amounts are presented on the basis of so-called expected loss classes (EL classes).

In case of the EL class "Default", all financings of borrowers are taken into account where the borrower has defaulted within the meaning of the default definition of the Solvency Regulation (section 125 of the SolvV).

The derivatives held by Aareal Bank Group and entered into with internally rated property

	Total ex arising fron loan com	n undrawn	- In the second	Exposure amounts Exposure of which: undrawn at default loan commitments		Averag	e LGD	Averaç	ge PD	Averaç	ge RW	
	Cor- porates	of which: SME	Cor- porates	of which: SME	Cor- porates	of which: SME	Cor- o	of which: SME	Cor- porates	of which: SME	Cor- porates	of which: SME
		€mn		€mn		€mn		%		%		%
IRBA asset class												
EL class 1	166	58	9,425	5,825	170	60	1.03	1.06	0.89	0.90	1.85	1.73
EL class 2	14	2	1,312	1,126	14	2	7.92	7.59	1.00	1.03	14.55	13.63
EL class 3	222	57	2,489	1,706	229	58	15.60	14.10	1.02	1.05	27.45	25.40
EL class 4	79	65	2,594	1,819	78	66	16.08	15.67	1.36	1.33	33.03	33.01
EL class 5	234	143	2,651	1,821	240	148	25.88	23.06	1.67	1.80	56.45	50.59
EL class 6	127	70	1,650	1,101	127	72	22.73	24.23	3.14	2.64	60.08	64.60
EL class 7	252	22	1,350	844	258	23	33.34	30.65	2.70	2.71	94.12	81.64
EL class 8	50	43	976	631	51	44	25.94	24.58	5.53	5.60	80.45	75.33
EL class 9	41	13	600	404	41	13	28.82	31.41	6.85	6.28	98.74	102.32
EL class 10	53	5	472	289	46	5	32.67	35.42	8.23	8.37	136.81	142.67
EL class 11	1	1	23	23	1	1	38.50	38.50	13.54	13.54	169.67	169.67
EL class 12	2	2	52	52	2	2	33.90	33.90	15.52	15.52	178.67	178.67
EL class 13	-	-	18	18	-	-	34.96	34.96	30.00	30.00	204.88	204.88
EL class 14	-	-	_	_	-	-	_	-	_	-	_	-
EL class 15	-	-	-	-	-	-	-	-	_	-	-	-
Default	148	117	1,228	906	-	-	27.28	29.65	100.00	100.00	184.45	163.95
Total	1,389	598	24,840	16,565	1,257	494	13.95	13.91	6.72	7.23	40.74	39.62

	Total exposure arising from undrawn loan commitments		e amounts of which: undrawn loan commitments	Average LGD	Average PD	Average RW
	Institutions	Institutions	Institutions	Institutions	Institutions	Institutions
	€mn	€mn	€mn	%	%	%
IRBA asset cla	ass					
EL class 1	-	9	-	0.97	0.63	1.48
EL class 2	_	-	-	-	_	_
EL class 3	-	-	-	-	-	-
EL class 4	4	4	4	47.82	0.43	68.97
EL class 5	7	7	7	56.17	0.63	90.73
EL class 6	5	5	5	59.21	0.95	108.73
EL class 7	-	-	-	-	-	-
EL class 8	-	-	-	-	-	-
EL class 9	-	-	-	-	-	-
EL class 10	-	-	-	-	_	_
EL class 11	-	-	-	-	-	-
EL class 12	-	-	-	-	-	-
EL class 13	-	-	-	-	-	-
EL class 14	-	_	-	-	-	-
EL class 15	-	-	-	-	-	-
Default	-	_	-	-	-	-
Total	16	25	16	35.39	0.66	58.42

customers, which are mainly used to hedge interest rate and currency risks, are not included in the presentation due to their insignificant share in EaD (less than 1.4 %).

### **Expected loss vs. loss actually incurred**

The following table compares the expected loss (EL) for the commercial property lending business, which was treated under the AIRBA as at 31 December 2011 and for which actual losses had been determined, with the losses actually incurred in 2012. Aareal Bank defines the loss actually incurred

as the sum total of additions and reversals of specific allowances for credit losses and provisions plus direct write-offs and less recoveries on loans and advances previously written off.

The comparability of the juxtaposed indicators warrants a thorough assessment as the methods differ. Within the framework of determining expected loss, the LGD calculation takes into account all losses incurred until final settlement, while the actually incurred loss, by definition, only includes the amounts recognised in one period.

		Actual loss					
	2012	2011	2010	31 Dec 2011	31 Dec 2011 31 Dec 2010		
€mn							
IRBA asset class							
Institutions	_	-	-	-	-	-	
Corporates	111	120	108	167	115	139	
Total	111	120	108	167	115	139	

### **Additional uses of internal estimates**

The internally estimated risk parameters are central factors for the bank's lending process and its risk management. The market-related credit risk strategies in the form of lending policies are based with regard to their specific requirements - on the rating and the parameters underlying the LGD. The basic prerequisite and foundation for the loan approval is a detailed risk evaluation of each lending exposure of a borrower. The risk evaluation includes the borrower's creditworthiness as well as the risks and collateral underlying the lending exposure. The resulting risk classification is subject to approval powers with regard to approval and prolongation of lending exposures. The extent of monitoring activities depends on the risk classification. The basis for granting a commitment is the preparation of a borrower rating.

The credit documentation includes the collateral influencing the LGD as well as the assessments of this collateral.

The relevant authorised person approves the credit application and the determination of the borrower rating.

The rating result is one of the many indicators within the framework of early risk identification to classify an exposure as on-watch, risk-prevention, restructuring or recovery exposure.

In addition, the risk parameters are a major element of our internal and external reporting. The bank's reporting comprises various portfolio analyses based on the rating procedures used in the bank. Accordingly, the MaRisk report (as the central risk report for credit risks) includes comprehensive information on the development of the credit portfolio, e.g. by rating classes and their changes. Compliance with rating updates and property monitoring is reported on a monthly basis.

The bank uses credit risk models above all to monitor concentration and diversification effects on portfolio level. Both expected and unexpected loss can be derived. The basis for determining the relevant values are the risk parameters PD, IGD and FaD.

During the estimating phase of the acquisition process, risk costs and capital requirements are determined using the risk parameters PD and LGD and are then included as parameters for risk-adjusted pricing. The individual financings are subjected to an economic assessment for the current profit centre calculation (accounting for individual transactions/final costing). This economic assessment takes into account the parameters PD and LGD via standard risk costs.

#### **Control mechanisms**

The relevant Credit Management unit is responsible for the correct and regular determination of the rating results as well as for the data quality within the IT and rating systems. The rating is prepared using the principle of dual control. The authorities for determining the rating are based on the authority regulations for lending and monitoring decisions.

The uniformity of the rating for a borrower or a guarantor is ensured through a number of measures. All rating users are trained to become familiar with the procedure, and there is also a documentation dealing with interpretation issues in the context of the rating preparation.

Manual adjustments may be made within the scope of situational assessment and overruling, and are documented subsequently in the rating system. The adjustments made within the scope of overruling require the approval of the central rating desk.

The internal rating procedure to determine a borrower-specific probability of default for large-sized property financing is validated based on the underlying data pool by CredaRate Solutions GmbH (CredaRate) once per year, in close cooperation with the banks participating in data pooling. The validation covers all measures required pursuant to the German Solvency Regulation. The further development of the rating procedure is also made under the umbrella of CredaRate, in consultation with the participating banks.

The procedures used by the bank for determining LGD and EaD are also validated on an annual basis. As these procedures represent bank-internal developments, validation is made by the bank itself. Exceptions to this are parameters used within the LGD calculation process (recovery rates and settlement periods for properties located in Germany). These parameters are determined by a data pool established under the umbrella of vdp. The validation of these parameters is carried out by vdp.

The loss given default percentage and the EaD are derived automatically in the system on the basis of the transaction and collateral data stored in the system where data is maintained. The provision of data is subject to strict quality standards for data entries of the system where data is maintained; these quality standards are set out in quality manuals. The necessary reviews with regard to information on collateral are the responsibility of the Credit Management unit.

The Internal Audit department, as a process-independent unit, reviews the adequacy of the internal rating systems on a regular basis, including compliance with the minimum requirements for using rating systems.

### Regulatory capital requirements

The capital requirements for a transaction's counterparty risk under the CRSA are essentially based on the following:

- I. the regulatory classification (balance sheet, off-balance sheet, or derivatives business);
- 2. the amount of the loan at the time of default (EaD)

and, under the AIRBA, additionally depends on

- 3. the probability of default as well as
- 4. the loss given default percentage.

The credit conversion factor for off-balance sheet transactions is predefined by the BaFin for the capital requirements under the CRSA. The

borrowers are subdivided into asset classes; the exposure amounts are risk-weighted, based on their external ratings.

In commercial property financing, the transaction volumes in Europe were largely stable compared to the previous year. However, the main focus in most of the markets which we operate in is on the first-class property segment. In turn, opportunities for attractive new business arose for Aareal Bank, which we particularly exploited during the second half of the year. Accordingly, the new business volume recorded in the Structured Property Financing segment at year-end ( $\in$  6.3 billion) was significantly higher than projected at the start of the year.

Overall, capital requirements from counterparty risks declined during the year by  $\in$  67 million to  $\in$  1,067 million, despite the increase in new business. Our risk-sensitive lending policy and the resulting quality of eligible collateral were the main drivers in this development.

As at 31 December 2012, no settlement or risks associated with outstanding delivery had to be taken into account when determining counterparty usage limits.

Based on the AIRBA and the CRSA calculation approach, the following regulatory capital requirements from counterparty risk exposures were determined as at 31 December 2012, by asset class:

### € mn

IRBA asset class	914
Institutions	1
Corporates	848
Investments	42
of which listed	0
of which sufficiently diversified, but unlisted	42
Securitisations	7
Other non-credit related assets	16

#### € mn

CRSA asset classes	153
Sovereign governments	-
Regional governments and similar entities	1
Other public-sector entities	1
Multilateral development banks	_
International organisations	_
Institutions	34
Covered bonds	35
Corporates	37
Retail lending business	1
Items secured by property	5
Investment fund units	1
Investments	23
Securitisations	12
Other exposures	_
Past due exposures	3

The simple risk weight method is exclusively used to determine the capital requirements of the equity investments reported under the AIRBA.

Items allocated to the IRBA asset class "Other non-credit related assets" are not subject to risks resulting from creditworthiness issues and are therefore not taken into consideration for the management of counterparty risks.

### Volume of loans and advances

The information to be disclosed in this chapter pursuant to section 327 (2) of the SolvV does not relate to the data reported to the banking regulators. Instead, the IFRS carrying amounts as reported in the consolidated statement of financial position are taken as the basis.

Collateral and specific valuation allowances are not taken into account in the reported volume of loans and advances. Thus, we follow the accounting in accordance with IFRS pursuant to which the allowance for credit losses is shown in a separate line item of the consolidated statement of financial position of Aareal Bank Group.

The data neither include items of the statement of financial position nor do they take into account all subsidiaries of Aareal Bank AG's scope of consolidation. This restriction only has minor effects on the informational value of the disclosed volume of loans and advances in the amount of € 47,322 million, as 98 % of the assets reported in the statement of financial position, including contingent liabilities and loan commitments, are covered.

We focus on the following items as regards the volume of loans and advances reported in the statement of financial position and the derivative volume

- Cash funds,
- Loans and advances to banks,
- Loans and advances to customers,
- Positive market values of derivative hedging instruments,
- · Trading assets,
- Non-trading assets as well as
- Income tax assets.

The disclosures regarding off-balance sheet transactions are based on the contingent liabilities and loan commitments of the subsidiaries covered, as described in the Annual Report.<sup>1)</sup>

With regard to the companies of Aareal Bank Group we consider material in this context, we focus on Aareal Bank AG and Aareal Capital Corporation.

Since the specific amounts at the reporting date differ only insignificantly from the average amounts, we have ignored the average amounts for the purposes of this report.

Aareal Bank Group 2012 Annual Report: chapter "Other notes", Note (90) in the notes to the consolidated financial statements.

### Breakdown by major geographical segments

The presented breakdown of the volume of loans and advances by major geographical markets is based on our three-continent strategy, which covers Europe, North America and Asia, as explained in

our Annual Report. The breakdown criterion used is the relevant country of domicile of the counterparty.

More than half of the loans and advances covered relate to Germany and Western Europe.

	On-balance	Off-balance		
	sheet	sheet	Derivatives	Total
€mn				
Germany	11,133	732	1,597	13,462
Western Europe	11,791	575	1,099	13,465
Northern Europe	3,131	406	93	3,630
Southern Europe	7,734	264	34	8,032
Eastern Europe	2,365	36	47	2,448
North America	4,747	114	64	4,925
Asia/Pacific	780	120	-	900
Other	450	3	7	460
Total	42,131	2,250	2,941	47,322

### Breakdown by borrower group

We monitor the borrower groups by assigning counterparties into five groups, using the industry code defined by Deutsche Bundesbank.

Commercial borrowers ("Corporates"), which account for a 61 % share, are our most important group. Public-sector entities and institutions

account for roughly 39 % of borrowers relative to the total volume of receivables.

Since Aareal Bank's lending business is focused on commercial property finance, we do not believe that a further breakdown of the "Corporates" borrower group would provide any additional information.

	On-Balance	Off-balance		
	sheet	sheet	Derivatives	Total
€mn				
Institutions	6,838	-	2,543	9,381
Public-sector entities	8,853	1	87	8,941
Corporates	26,115	2,224	312	28,651
Private individuals	87	13	-	100
Other	237	12	0	249
Total	42,131	2,250	2,941	47,322

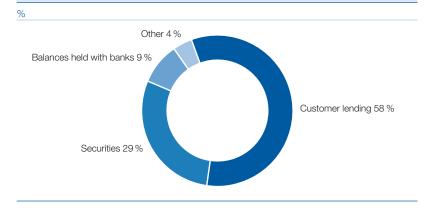
### Breakdown by remaining term to maturity

The remaining term to maturity is determined on the basis of the contractually agreed term of all on-balance sheet and derivative transactions. The classification of off-balance sheet transactions as "payable on demand" results from the fact that payment obligations may be incurred for Aareal Bank from the loan commitments and guarantees.

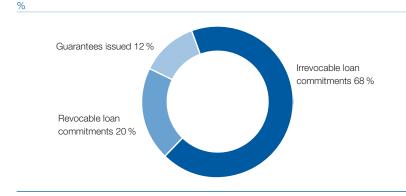
77 % of our loans and advances have a term to maturity of up to one year.

	On-balance	Off-balance		
	sheet	sheet	Derivatives	Total
€ mn				
Payable on demand	5,387	2,250	-	7,637
up to 3 months	1,636	-	36	1,672
more than 3 months/up to 1 year	4,071	_	99	4,170
more than 1 year/up to 5 years	20,170	-	1,122	21,292
more than 5 years	10,867	-	1,684	12,551
Total	42,131	2,250	2,941	47,322

### Breakdown of on-balance sheet business



### Breakdown of off-balance sheet business



### Breakdown of on-balance sheet and offbalance sheet loans and advances

The charts beside show that property loans and irrevocable loan commitments, with a share of 58 % and 68 %, respectively, account for the highest portion of on-balance sheet and off-balance sheet loans and advances.

### Allowance for credit losses

The best way to provide for risks is to carefully review such risks before granting a loan. We embrace this fundamental principle by adopting a multi-level review process, using (amongst others) our well-trained, experienced employees in the credit departments.

As a property finance specialist, we not only focus on the borrower's credit rating but also carry out an in-depth analysis of the value and profitability of the property pledged as collateral.

Despite all the due care taken, events occur occasionally that can lead to impairment or even default. Our loan management teams are obliged to follow certain rules for these receivables when the first signs emerge that a loan might become impaired.

Our specialised and high-volume business requires us to maintain close contact with clients. Apart from events that can be determined objectively, such as when a loan is in arrears, or when a borrower fails to meet disclosure duties, the first signs of potential problems comprise a series of soft factors.

The responsible loan manager is informed of such soft factors, for example, by analysing performance reports. If there is evidence of events that could hamper the continuity of payments, the exposure is placed on the internal watch list.

In addition, the "On-watch Committee" has global authority – regardless of the exposure size – to classify exposures as "normal" or "subject to intensified handling", and to decide on the measures to be taken as well as the composition of the Deal Team handling the exposure. The transfer of know-how between various markets is enhanced through the cross-divisional representation on the Committee.

The intensity of the attendant measures to be taken depends on the extent of the potential default, the internal assessment of the borrower/property, plus time-related and legal issues. All events are examined on a case-by-case basis.

### Definition of terms and allowance process

The concept of "impaired" loans is commonly used in a financial reporting context, albeit not in our credit organisation. We have therefore translated the requirements of section 327 (1) no. I of the SolvV to our internal processes. All loans that are more than nine days in arrears are declared to be in default.

Specific allowances for credit losses are recognised where expected future cash flows fall below the carrying amount of a loan receivable. This is the case when it is probable (due to observable criteria) that not all interest and principal payments can be made as contractually agreed. The estimated recoverable amount is determined on the basis of the present values of expected future cash flows from the asset (taking into account the market-

ability of collateral provided). If debt servicing can be made from the borrower's other assets on an ongoing basis, a cash flow deficit in relation to the financed project does not justify the recognition of allowances for credit losses. If the loan cannot be repaid upon maturity as contractually agreed, a reorganisation – including renewal – is possible when the cash flow from the project or the borrower's other assets enable the borrower to meet future interest and principal payments.

Property loans for which allowances have been recognised are referred to internally as non-performing loans. The loans remain in this category until problems have been fully remedied, or the loan has been settled. Uncollectable (residual) receivables are written off against specific allowances for credit losses recognised previously, or written off directly.

Portfolio-based valuation allowances are recognised for risks which have already materialised, but which cannot be allocated to individual loans and advances due to lack of knowledge. For this purpose, groups of financial assets with comparable default risk profiles are combined in portfolios and reviewed for impairment. The valuation allowances are calculated using a formula-based procedure based on the following Basel II parameters used in the advanced IRB Approach: expected loss given default (LGD) and probability of default (PD). The transition of the one-year probability of default, which represents the basis for the concept of expected loss pursuant to the SolvV, to the concept of incurred loss pursuant to IFRS is made using the LIP (Loss Identification Period) factor. The LIP factor is a correction factor to adjust the one-year probability of default to the estimated time period, from the date the loss is incurred up to the identification of the actual loss.

Provisions for loans are set aside for commitments to third parties if utilisation is probable and the amount of the commitment can be reasonably estimated. Provisions are measured on the basis of the best estimate of the expenditure required to settle the obligation, in accordance with IAS 37.36. If utilisation in the short term, i.e. within twelve

months, from the obligation is not expected, the provision will be recognised at present value.

In addition to the allowance process for property lending, the Annual Report<sup>1)</sup> includes a description of the impairment process for securities belonging to the IFRS categories "Available-for-Sale" (AfS), "Held to Maturity" (HtM) and "Loans and Receivables" (LaR).

### **Quantitative disclosures**

The breakdown of past due and impaired loans and advances and the related allowances by important regions, borrower groups and contractual maturities as required by section 327 (2) no. 5 of the SolvV is fully included in the Annual Report.<sup>2)</sup> The amounts stated therein relate to the consolidated financial statements in accordance with IFRS.

As at 31 December 2012, the property finance under management<sup>3)</sup> with a total volume of  $\in$  827 million was subject to specific valuation allowances, which amount to  $\in$  227 million. Portfolio-based valuation allowances on loans

and advances to customers amount to  $\in$  84 million as of the reporting date.

97.6 % of the borrowers are assigned to the Corporates asset class, and 2.3 % to the Private Individuals class. However, the retail business is no longer part of Aareal Bank Group's core business. Since Aareal Bank's lending business is focused on commercial property finance, we do not believe that a further breakdown of the "Corporates" borrower group would provide any additional information.

Allowances for country risks were not necessary in the financial year 2012. We also did not recognise any specific valuation allowances for derivatives, since these are recognised at fair value through profit or loss pursuant to IFRS.

### Development of allowances for credit losses and provisions

Allowances for credit losses and provisions in accordance with IFRS developed as follows during the course of the year:

	Specific valuation allowances	Portfolio impairment allowance	Provisions in the lending business
€mn			
1 January 2012	243	75	22
Additions	92	9	6
Charge-offs	85	-	9
Reversals	15	-	1
Unwinding	17	-	-
Currency adjustments	0	0	0
31 December 2012	218	84	18

<sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Basis of accounting", Note (5) in the notes to the consolidated financial statements.

<sup>&</sup>lt;sup>2)</sup> Aareal Bank Group 2012 Annual Report: chapter "Reporting on Financial Instruments", Notes (74) and (75) in the notes to the consolidated financial statements.

<sup>&</sup>lt;sup>3)</sup> The figure for property finance under management includes property loans managed on behalf of DEPFA Deutsche Pfandbriefbank AG.

### **Derivatives**

Derivatives are defined for regulatory purposes as unconditional forward transactions or option contracts that are structured as a purchase, exchange or other acquisition of an underlying instrument, and whose value is determined by the underlying instrument and whose value may change in future for at least one counterparty due to future settlement (section 19 (1a) of the KWG).

The bulk of Aareal Group's derivatives positions have been entered into in order to hedge interest rate and currency risk exposure, and for refinancing purposes.

### Internal capital allocation

Within the framework of the economic capital model for credit risks, derivatives are taken into account in the amount of their positive market value plus the regulatory add-on, determined depending on the type and term of the transaction. The netting agreements concluded by the bank to reduce counterparty risks within the trading business are taken into account in the calculation. This also applies to additional agreements on the furnishing of collateral.

### Internal limitation of risks from derivative transactions

To assess counterparty risk from derivative transactions, Operations prepares an internal rating for all counterparties on a regular or event-driven basis. The internal rating, as well as the external ratings from Fitch Ratings, Moody's and Standard & Poor's, together represents an important indicator for determining counterparty-specific limits for the derivatives business.

### Collateral and allowance for credit losses

The procedures for accepting collateral are described in the Group Annual Report.<sup>1)</sup> No allowance for credit losses was recognised for derivatives, since these are recognised at fair value through profit or loss pursuant to IFRS.

### Impact of a rating downgrade on collateral to be furnished

In general, the collateral agreements concluded provide for rating-independent allowance amounts as well as rating-independent minimum transfer amounts. In addition, the bank has entered into collateral agreements on an individual basis which provide for a reduction in the allowance and the minimum transfer amount under the collateral agreement in the event of a downgrade of the bank's external rating. This may lead to the bank having to provide additional collateral, regardless of the development of the default risk. However, the risk is immaterial due to the low volume and in relation to liquidity.

### Valuation approach

The equivalent value of derivatives and the related counterparty risk are determined using the mark-to-market method (sections 18 et seq. of the SolvV) for the purpose of regulatory reporting.

### **Regulatory capital requirements**

The aggregate positive replacement value for our derivatives contracts subject to reporting requirements stood at  $\in$  2,949 million at year-end 2012. This amount is reduced to  $\in$  853 million through netting agreements (see chapter "Credit risk mitigation") in the amount of  $\in$  1,481 million and the deduction of collateral provided in the amount of  $\in$  615 million.

The following overview (p. 24) shows the effects of netting and collateral eligible for inclusion on positive replacement values, broken down by type of contract relevant for the bank.

The counterparty risk for all contracts remaining after netting and collateral amounted to  $\in$  1,291 million as at 31 December 2012. The resulting capital requirement amounts to  $\in$  54 million.

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Credit risk mitigation" in the Risk Report of the Group Management Report.

	Before netting	Reduction through netting	Reduction through collateral	After netting
€mn				
Positive replacement				
value	2,949	1,481	615	853
Interest	2,883	-	-	_
Currency	66	-	-	_
Equities / index	-	-	-	-

At present, we neither use credit derivatives to hedge individual contracts, nor do we act as a broker or a buyer of credit derivatives. We sold credit default swaps in a nominal volume of around  $\in$  350 million in the market to hedge the items included in the asset class "Sovereign governments".

#### Credit risk mitigation

The bank's Credit Manual contains further details regarding collateral to be used within the bank. The regulatory inclusion of the collateral reflects our conservative hedging strategy. The collateral employed fulfils the extensive impairment checks and enforcement reviews that are part of the credit process.

For the purpose of the internal estimation of the loss ratio in the case of default of a borrower, only collateral that can be allocated to the following categories is taken into account:

- Property-related collateral,
- · warranties, and
- financial collateral.

The legal minimum requirements regarding collateral and the security interest are reviewed by the Credit Management units in cooperation with the Legal Department. The internal estimation of the loss ratio only uses collateral that is included in bank-internal approved lists. These security interests are always enforceable. A bank-internal process ensures that the legal enforceability of all SolvV relevant collateral is subjected to permanent legal monitoring in the jurisdictions relevant for us.

If this results in changes, corresponding measures are initiated.

Any collateral must be reviewed in the case of new business, loan extensions, material changes to the collateral structure as well as at certain time intervals and upon certain events. The review covers the legal minimum requirements and the value of the collateral.

In addition to the inclusion of real property liens, we developed a methodology in cooperation with external law firms. This methodology is used to assess other property-related security interests for international financings, including pledges of unlisted shares in a property company or special-purpose entity. On this basis, the rights are taken into consideration for the purpose of the internal loss ratio estimation.

In contrast to the AIRBA, only certain types of impersonal collateral, indemnities and guarantees as well as financial collateral may be used under the CRSA. Commercial property collateral is eligible for inclusion in accordance with the Credit Risk Standard Approach, albeit not for mitigating credit risk. Loans secured by a real property lien are included instead in a separate asset class with a preferable risk weight.

All collateral values in foreign currency are translated in euro on a daily basis using the official foreign currency rates.

Regulatory haircuts based on mismatches related to term/lifetime or currencies are applied during netting of collateral.

### **Property-related collateral**

As an international CRE lender, Aareal Bank focuses on property in the context of collateralisation. Real property liens – or any equivalent security interests in terms of quality depending on the location of the property are the main types of security interests used for the internal loss ratio estimations for property loans.

Market or fair values are set in accordance with the responsibilities for decision-making on lending, and form an integral part of the lending decision.

Valuation reports are used for property-related collateral. The provisions of section 20a (6) of the KWG are complied with during the valuation. The property's market or fair value is subjected to a defined monitoring and review process:

### **Step 1: Monitoring**

The property values are monitored using statistical methods. The annual monitoring for properties located in Germany is based on a bank-internal procedure as well as on the market fluctuations concept of the vdp/VÖB. Properties located abroad are monitored exclusively on the basis of a bank-internal procedure. In addition to regular monitoring, a review is initiated as soon as there are indications for substantial value fluctuations for the relevant types of property.

### Step 2: Review

The properties identified in Step I are analysed more closely. This review is made by an independent valuer or a loan manager with applicable expertise. In addition, all properties have to be reviewed every twelve months if the market value and the exposure reach a certain threshold. Event-driven reviews are carried out immediately.

### **Step 3: Revaluation**

In Step 3, the properties identified in Step 2 are generally revalued when the assumptions underlying the most recent valuation would lead to a reduction in value considering the current market situation.

### **Warranties**

Warranties include indemnities and guarantees. The guarantors include rated customers from the segments "Sovereign states", "Regional governments" and "Local authorities" as well as "Institutions" and "Corporates". Credit risk mitigation focuses on the creditworthiness of the guarantor. In the case of large-sized property lending, if a warranty is provided, the guarantor has to be rated using the applicable rating procedure when the lending decision is based (among other things) upon the creditworthiness of the guarantor. The rating process for guarantors is subject to the same requirements applicable to the borrower. Assigned life insurances are only included under the AIRBA and are treated - by analogy with assigned balances held at third-party institutions - like warranties.

In some instances, we apply the transitional regulation in accordance with section 339 (17) of the SolvV for the inclusion of guarantees under the CRSA. If the prerequisites for the treatment of letters of indemnity no longer apply, the collateral is no longer eligible for inclusion.

### Financial collateral

Pledged balances held at the bank are included as financial collateral. Financial collateral in the form of pledged securities play a minor role. Their current market values are included for credit risk mitigation purposes, adjusted for haircuts.

We use the comprehensive method for financial collateral under the CRSA.

Collateralising loans through balances saved under home loan and savings contracts and fund units is insignificant in our business model, and not used within the scope of CRSA or AIRBA.

### Collateral eligible for inclusion

Collateral in the amount € 19,459 million was applied within the scope of credit risk mitigation. This figure includes € 615 million of financial collateral included for derivatives transactions.

As Aareal Bank is an international property specialist, the real property liens used to mitigate credit risk under the AIRBA is the relevant parameter, with a share of almost 97 %. Financial collateral, warranties and other guarantees only represent a minor portion in the collateralisation volume.

Under the AIRBA, the asset classes "Corporates" and "Institutions" are collateralised by an overall volume amounting to  $\in$  17.4 billion.

The proceeds from the corresponding types used under the AIRBA for the purposes of the collateralisation effect are shown in the following table for the asset classes "Corporates" and "Institutions".

	Total of collat- eralised exposure amounts	Property	Other property-related collateral	Warranties	Other warranties	Financial collateral
€mn						
IRBA asset class	17,366	16,825	229	204	18	91
Corporates	17,357	16,816	229	204	18	91
Institutions	9	9	_	-	-	-

At 81 %, financial collateral held in the bank accounts for the bulk of collateral types used under the CRSA.

Eligible warranties comprise guarantees or indemnities provided by various guarantors and cash deposits with third parties.

The effect of such collateral in terms of credit risk mitigation on the assessment basis pursuant to section 49 of the SolvV is shown below, broken down by CRSA asset class.

In addition, the CRSA asset class "Items secured by property" includes real property liens at a volume of  $\in$  200 million.

	Total of collateralised exposure amounts	Financial collateral	Warranties
€mn			
CRSA asset class	2,093	1,702	391
Institutions	1,642	1,640	1
Corporates	-	-	-
Sovereign governments	379	-	379
Regional governments	10	=	10
Other public-sector entities	62	62	-

### **Risk concentrations**

The qualitative and quantitative processes to assess and control risk concentrations are described

in the Annual Report.<sup>2)</sup> Due to the large importance of property used as collateral, we refer to the graphic breakdown of the property finance volume by region and by property type.<sup>2)</sup>

<sup>1)</sup> The asset class only consists of housing enterprises with savings facilities.

<sup>&</sup>lt;sup>2)</sup> Aareal Bank Group 2012 Annual Report: chapter "Credit risks" (here: "Risk measurement and monitoring") in the Risk Report of the Group Management Report.

### Impact of collateral included under the CRSA

Identical types of collateral react differently depending on what transactions they can be offset against.

This is due to the composition of the CRSA exposure as defined by section 48 of the SolvV. This takes into consideration the CRSA assessment basis pursuant to section 49, and the CRSA conversion factor in accordance with section 50 of the SolvV.

The CRSA conversion factor ensures that lower regulatory capital requirements are calculated for loan commitments and other off-balance sheet transactions than for on-balance sheet receivables.

The table beside shows CRSA exposure amounts by risk weight, both before and after mitigating credit risk.

Cash deposits as financial collateral and warranties within the meaning of the SolvV can be distinguished in terms of how they mitigate credit risk:

- Cash deposits reduce the assessment basis to which the conversion factor is applied. The risk weight impacts the exposure amount.
- Warranties do not impact on the assessment basis, but on the risk weighting. A loan collateralised through a warranty is taken into account with the warranty amount to be included and the risk weight of the guarantor in the guarantor's asset class.

### **Netting agreements**

To reduce counterparty risk in Aareal Bank's trading business, the master agreements for financial CRSA exposure amount before credit risk mitigation

€ mn

Total risk weight

0 %

13,573

13,964

10 %

591

CRSA exposure amount after credit risk mitigation

CRSA exposure amount after credit risk mitigation

1 after credit risk mitigation

1 after credit risk mitigation

5 mitigation

18,357 13,964 10% 591 20 % 4,000 1,975 35 % 46 46 1,018 50 % 1,014 75 % 13 100 % 800 744 150 % 19 6

derivatives<sup>1)</sup> and master agreements for securities repurchase transactions (repos) used by the bank provide for various credit risk mitigation techniques, via mutual netting agreements.

The master agreements for financial derivatives used by the bank contain netting agreements at a single transaction level (so-called "payment netting"), and arrangements for the termination of individual transactions under a master agreement (so-called "close-out netting").2) In general, all master agreements are based on the principle of a common agreement, which means that in the case of a termination the individual claims are netted and that only such net amount can and may be claimed with regard to the defaulted counterparty. This claim must not be affected by any insolvency, i.e. it must be legally valid and enforceable. This, in turn, means that the jurisdictions concerned must recognise the concept of a common agreement which protects the net amount of the claim from imminent access by the insolvency administrator.

<sup>&</sup>lt;sup>1)</sup> The German Master Agreement on Financial Derivatives (Deutscher Rahmenvertrag für Finanztermingeschäfte – "DRV") also comprises, in the following, the master agreement issued by the International Swaps and Derivatives Association Inc. (ISDA) (the so-called ISDA Master Agreement). Both agreements are standardised agreements recommended by leading associations (among others by the Bundesverband deutscher Banken (Association of German Banks – "BdB")).

<sup>&</sup>lt;sup>2)</sup> A "Termination following a Termination Event" within the meaning of the ISDA Master Agreement is based on an event outside of the control of the counterparty (e.g. changes in tax laws), while the "termination following an Event of Default" is based on a violation against the agreement on the part of the counterparty, such as a payment default or insolvency.

Above all, the close-out netting is subject to (international) legal risks. The bank reviews these legal risks by evaluating the statements included in legal opinions commissioned by national and international associations and prepared by recognised law firms regarding the validity and enforceability of mutual netting agreements in the case of a counterparty's insolvency, based on criteria such as product type, jurisdiction of the registered office and branch office of the counterparty, individual contract supplements and other criteria. In doing so, the bank decides for each individual transaction whether or not netting is possible. The bank uses eligible bilateral netting arrangements within the meaning of section 206 of the SolvV for all transactions with financial institutions; in many cases there are additional collateral agreements which further reduce the relevant credit risk. In contrast, the bank does not use netting relevant for regulatory purposes with other counterparties (e.g. collateral transactions with borrowers).

For repo transactions, depending on the counterparty, payment or delivery netting is agreed upon; contract documentation for repo transactions also generally provides for close-out netting. However, the bank does not use the option permitted by regulation to reduce capital requirements for repo transactions.

### Securitisation

An institution can act as originator, sponsor or investor of a securitised transaction. The relevant role in the securitised transaction can have different consequences for regulatory purposes.

Acting as originator, an institution securitises a limited portion of its assets, which it places on the capital market as tranches that are structured by (credit) quality.

As the investor, an institution buys securitised assets from other banks. Given that the issuer can default, and interest and principal payments are therefore not guaranteed, this risk requires a regulatory calculation and must be backed by equity.

### Roles in the securitisation process

Aareal Bank Group is currently not acting as an originator of securitised transactions, but is involved solely as an investor on the market.

### **Investment principles**

In the past, we invested exclusively in mortgage-backed securities (MBS) and asset-backed securities (ABS) within the scope of traditional securitisations that have an excellent external rating. These securities are held as medium- to long-term investments within the framework of our liquidity strategy. In 2012, three securitisation exposures were sold while five exposures were repaid.

We did not invest directly or indirectly in the US sub-prime market. We also have no collateralised debt obligations (CDO) or US Residential Mortgage-Backed Securities (RMBS) on our books; it is these securities in particular that have resulted in significant write-downs for other banks. Furthermore, we hold no securities which are backed by monoline insurers.

The selection of ABS securities underlies strict criteria which were defined in a directive by Aareal Bank Group's Management Board. If a bond fulfils the criteria, a due diligence process is performed in order to determine whether the potential asset meets the overall quality standards of our ABS portfolio. This valuation process is based on an assessment of the collateral pool, a structure and documentation audit, a cash flow model for residential mortgage-backed securities (RMBS), as well as an assessment of the servicers/originators/ counterparties of the respective securitisation transaction. In addition, third-party assessments from external investment analysts, employees of rating agencies and other employees of Aareal Bank Group are taken into account. Assumptions used within the RMBS cash flow model are being reviewed constantly and adjusted if necessary in order to make sure they represent the current market environment.

A broad range of instruments and data sources is used to manage and monitor the ABS portfolio. One of the main tasks in supervising and controlling the portfolio is to gather current and precise information in a timely manner, focusing particularly on specific information on the securities concerned. The main sources for this type of information are transaction-specific trustee reports. Alert systems have been implemented, ready to provide news on the latest pool performance of individual transactions or rating updates. All ABS securities are being monitored on a regular basis (depending on the frequency of specific data publication; either on a monthly, quarterly or semi-annual basis), focusing on redemption payments as well as payment delays and defaults. The objective of the monitoring process is to register any deterioration in the performance of the underlying collateral pool or any rating update. Transactions are included in the watch list if their original rating was downgraded by a rating agency, or if the rating outlook

is negative (negative watch). In addition, all RMBS transactions that fail cash flow model testing are included in the watch list. All watch list items are reviewed formally for loss in value at the end of each quarter.

All of the securities are carried on the balance sheet, and are allocated to the "Loans and Receivables" measurement category. Please refer to the Annual Report for information on the valuation method used.<sup>1)</sup> Every ABS security currently carried on the balance sheet and reported for regulatory purposes has an external rating from one of the retained rating agencies (Fitch Ratings, Moody's Investors Service, or Standard & Poor's).

### Regulatory assessment

As at 31 December 2012, our portfolio of purchased securitised exposures exclusively held in the banking book is comprised as follows:

	Cl	RSA	AIRBA		
	Exposure amount	Regulatory capital requirement	Exposure amount	Regulatory capital requirement	
€mn					
CMBS	_	-	50	7	
RMBS	185	35	-	_	
Car/student loans	28	11	-	_	
Total	213	46	50	7	

Risk-weighted exposure amounts are treated as default risk exposures on the statement of financial position, and calculated primarily in line with the Credit Risk Standard Approach.

The CRSA exposure amounts pursuant to section 239 of the SolvV totalled € 213 million on 31 December 2012. Given that these solely comprise securities rated by a rating agency approved by the regulatory authorities, the risk weightings

for assessed CRSA securitisation exposures are calculated according to section 242 of the SolvV.

Only CMBS are covered under the AIRBA as the underlying portfolios without collateralisation would also have to be included under the AIRBA. The risk weights for the CMBS are determined based on the ratings based approach (section 257 of the SolvV).

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Reporting on financial instruments", Note (66) in the notes to the consolidated financial statements.

Total exposure is broken down by the current risk assessment as follows:

	CI	RSA	AIRBA	
	Exposure amount	Regulatory capital requirement	Exposure amount	Regulatory capital requirement
€mn				
20 % risk weighting	51	1	0	_
25 % risk weighting	-	-	16	0
35 % risk weighting	-	-	16	0
50 % risk weighting	67	3	-	_
100 % risk weighting	44	3	-	_
350 % risk weighting	16	4	-	_
425 % risk weighting	-	-	18	6
1,250 % risk weighting	35	35	-	-
Total	213	46	50	7

We currently hold no re-securitisation exposure. The re-securitisation exposure held in the previous year was fully repaid in spring 2012.

Regardless of the high-quality composition of our ABS portfolio, the regulatory capital requirements have increased compared with the previous year, while exposure amounts were reduced at the same time. This development is mainly the consequence of the downgrade of many sovereign states' ratings in 2012.

### **Investment Risks**

### Investment risk strategy

Aareal Bank Group acquires equity investments strictly for the purpose of positioning the Group as an international property financing specialist and provider of property-related services. While the standard banking risks mainly exist within Aareal Bank AG and the equity investments in banks, the other subsidiaries are frequently exposed to other risks. Due to their special character, these risks cannot be measured and managed using the same methods and processes. There, these risks are centralised in a separate risk category called "Investment risks" and included in the centralised

risk management system through an investment risk controlling concept.

In general, all types of investments contribute to investment risk. The main focus of investment risk controlling, however, is on operating non-bank shareholdings as these companies have different business models from that of Aareal Bank AG. The statistical methods and procedures applied in the banking business such as VaR models are generally not suitable to assess the risks of these companies. For this reason, we pursue a qualitative approach for investment risk control which attempts to estimate the risk content on the basis of the balance sheet and income statement analyses conducted within the scope of investment risk controlling. The investments covered are classified into different risk classes. Each risk class has specific risk weightings, which are used to translate the carrying amount of the investment into a risk equivalent value. Based on this risk equivalent value, Risk Controlling monitors compliance with the limits for investment risks.

Based on the type, scope, complexity and risk level of transactions, processes should be set up for the early identification of risk potential and for controlling and monitoring these risks in accordance with the Minimum Requirements for Risk Management (MaRisk) within the lending business.

This requirement is complied with through a riskadequate investment controlling system within the framework of implementing the investment strategy, where the different autonomy requirements of investments are accounted for.

The controlling philosophy of Aareal Bank Group defines to which extent the business activities of the investments are influenced, and who exercises this influence. The controlling philosophy also determines the structure for controlling equity investments. A distinction has to be made between a direct and indirect influence on the investments.

In case of a direct influence, information is requested proactively, and the Group headquarters are involved in material business decisions. In case of an indirect influence, the investments have more discretion (autonomy) as regards business decisions. The carrying amount underlying these companies, in aggregate, is insignificant when measured against the total carrying amount of all subsidiaries.

Various mixtures are possible between these two extremes. The higher the significance of an investment, the higher the importance which is attached to regular reporting. In this context, Investment Controlling above all fulfils an information and control function. In addition, specific support provided for individual investments may be one of the tasks within the framework of the management of the equity investments.

Moreover, risk control and risk monitoring is supplemented by various reviews which the department or the companies are subjected to.

Pursuant to the MaRisk, the equity investment management has to be reviewed in reasonable time intervals by Internal Audit. This also involves system reviews (organisational structures and workflows, risk management and controlling, internal control system), taking into consideration the principles for a risk-oriented review. In addition, the investments themselves are subjected to a review performed by the Group Audit department of Aareal Bank AG.

In accordance with MaRisk, the auditor has to get an overview of equity investment management and its organisation, the related risks as well as the internal control systems and procedures and has to assess the appropriateness and effectiveness of the processes and procedures. Furthermore, the subsidiaries and equity investments are also subjected to a review by an auditor.

Pursuant to MaRisk, risks from investments have to be included as part of the overall risk reporting of Aareal Bank AG. For this purpose, the investment risks are determined and assessed by the Finance Group Controlling unit. The Risk Controlling unit reports to the Management Board as regards investment risks within the framework of regular risk reporting, also on a quarterly basis.

In our business model, we make a distinction between the two segments, Structured Property Financing and Consulting/Services. Our equity investments reflect the medium to long-term strategic objectives of our business model.

### **Structured Property Financing**

- We enter into strategic investments to support our property financing activities, particularly abroad.
- Special-purpose entities within the scope of foreclosed assets are used to secure real property liens.

### **Consulting/Services**

- Strategic investments allow us to offer the institutional housing sector in Germany – as well as selected European countries – services and products for managing residential property portfolios and processing payment flows.
- Investments in companies that provide the Group and third parties with other property or IT services.

### Regulatory assessment

The statements below exclusively refer to investments that are included as risk-weighted assets in the report pursuant to sections 10, 10a of the KWG.

For regulatory purposes, all equity investments held prior to 1 January 2008 are excluded from the application of the advanced IRB approach pursuant to section 338 (4) of the SolvV (grandfathering rules or protection of continuance), and are taken into account pursuant to the Credit Risk Standard Approach within the meaning of section 37 of the SolvV on the basis of their carrying amounts with a 100 % risk weighting. The simple risk weight method (section 98 of the SolvV) is applied for all equity investments treated under the AIRBA.

### Measurement and accounting policies

Aareal Bank AG includes the majority of the companies concerned in its IFRS consolidated financial statements (full consolidation) since it controls the financial and operating policies of these companies as the parent entity of the Group.

Companies over which Aareal Bank AG may exercise a significant influence, but has no control of (associates), are measured using the equity method.

Investments that are not consolidated under IFRS are allocated within Aareal Bank Group to the "Available for Sale" (AfS) measurement category, and are recognised under non-trading assets in the statement of financial position.

Further information on measurement and accounting principles is provided in our Annual Report.<sup>1)</sup>

### **Valuations**

The following table shows aggregate investments in relation to their strategic objective, excluding investments consolidated for regulatory purposes. The following overview compares the carrying amounts with fair values. Since it is not necessary from an accounting perspective to determine the carrying amounts and the fair values for the fully-consolidated companies, the carrying amount and the fair value of the majority of these companies are derived from their equity capital for disclosure purposes.

Goodwill is considered as a shareholding in a non-Group company and is not taken into account in the overview.

	Carrying amount	Fair value
€mn		
Structured		
Property Financing	289	289
of which listed	0	0
Consulting/Services	115	115

Since the prerequisites set out in section 98 Nos. I and 3 of the SolvV are met, the simple risk weights for all equity investments treated under the AIRBA are 190 % and 370 %, respectively. On the basis of these risk weights, IRBA exposure amount is  $\in$  180 million.

### Result from equity instruments

During the year under review, we sold or wound up four companies. This resulted in gains on disposal of  $\in$  0.4 million.

Other investments held comprise unrealised revaluation gains totalling  $\in$  0.4 million, calculated in accordance with the IFRS. These do not impact on Tier 1 capital or Tier 2 capital.

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report; chapter "General accounting policies" and "Specific accounting policies" in the notes to the consolidated financial statements.

### **Index certificates**

The explanations in this chapter so far have related to our classic shareholdings where one company of Aareal Bank Group invests into another company using capital contributions, shares and similar types of investments.

The index certificates held by us are subject to protection of continuance and are excluded from the application of the AIRBA. We take into account index certificates within the CRSA asset class "Equity investments" for the presentation of counterparty risks resulting from the underlying instrument.

Index certificates are classified under the measurement category "At fair value through profit or loss" in the consolidated financial statements. Indicative prices from price service agencies are used as fair values.

As at 31 December 2012, index certificates with a fair value of  $\in$  3.3 million were recognised in the consolidated statement of financial position.

### **Market Price Risks**

Market price risk is broadly defined as the threat of losses due to changes in market parameters. Aareal Bank's market price risk exposure predominantly comprises interest rate risks, whilst currency risks are largely eliminated through hedges. Hence, the primary market price risk exposures are related to the risk parameters interest rates, equity prices, and exchange rates.

Risk Controlling uses the latest methods and tools for the measurement and analysis of market risks. Up-to-date reporting to management on the Group's risk profile provides decisive input for all short, medium and long-term investment decisions. Value-at-risk (VaR) has established itself as the method for measuring general market price risk. This concept, as well as stress testing and sensitivity analysis used as further methods to measure market risks, is described in detail in the Annual Report.<sup>1)</sup>

Risk management, especially with regard to market and interest rate risks of the banking book, is performed within the Treasury department and supported by the Risk Controlling unit through risk reports and risk assessments. Based on the daily market risk report, all changes of the present value in all currencies are analysed on a daily basis; if necessary, risk-reducing measures are taken. In addition, the general interest rate and market risk situation is discussed during the weekly meetings in the Transaction Committee. The Transaction Committee comprises the Management Board member responsible for Treasury, the Head of Treasury as well as the department heads of Treasury. The Transaction Committee makes decisions as regards the general approach with respect to the management of market and interest rate risks.

In the area of market price risks, we monitor and control concentration risks, particularly with respect to the relevant risk factors (interest rate risks, currency risks, etc.), products and individual companies of Aareal Bank Group.

### Market risk strategy

Our exposure to the capital market is based on a responsible and sustained strategy. Identified risks are offset, for example, through hedging agreements.

Interest rate positions from the current lending and refinancing business, which are intended to be hedged, are closed out using interest rate derivatives. Generally, we use one-to-one hedges to meet IFRS hedge accounting criteria. Macro hedges, where IFRS hedge accounting cannot be used, are an exception to this.

In line with our strategy, we ensure to maintain a largely neutral position in each currency. The aggregate foreign currency position is therefore

<sup>&</sup>lt;sup>1)</sup> Aareal Bank Group 2012 Annual Report: chapter "Market price risks" in the Risk Report of the Group Management Report.

well below the threshold of 2 % of regulatory capital stipulated in section 294 (3) of the SolvV on a regular basis. The reporting requirement arises, among other things, due to the fact that the aggregate of asset and liability items in all foreign currencies exceeds capital when translated into euros.

The lending and refinancing business in foreign currencies is managed using money market transactions and FX swaps in the respective currency. The currency positions from accumulated lending and refinancing margins are reviewed regularly and closed out on a timely basis. Basic risks from differing fixing dates are largely avoided for each currency by selecting suitable roll dates.

We do not invest in precious metals, other commodities and raw materials. Similarly, there are currently no amounts to be included for net equity or equity index positions. We calculate the regulatory capital requirements for foreign currency risk based on the rights and obligations as well as investments in foreign currencies.

### Regulatory assessment

We do not use an internal model for the regulatory assessment of market risk, but employ standard regulatory procedures instead.

The option according to section 300 (2) of the SolvV, and the duration method pursuant to section 302 of the SolvV, are used to calculate the general price risk.

We do not apply any lump-sum weighting amounts for investment fund units in accordance with section 307 (1) sentences 1 and 2 of the SolvV.

The following overview shows the weighting amounts for the different market risk positions in accordance with section 2 (3) sentence 2 of the SolvV:

€mn	
Market risk positions	8
Foreign currency	8
Commodities	_
Related to interest rates and equity prices	_
Other	_

### Interest rate risk in the banking book

Whilst the net interest position is calculated to determine regulatory capital requirements for market risk, the calculation of interest rate risk in the banking book does not impact on the capital representation for regulatory purposes.

Interest rate risk is broadly defined as the threat of losses due to changes in market parameters. From an economic perspective, interest rate risk represents a key variable for observing market price risk.

## Measurement method and basic assumptions

Aareal Bank uses the VaR concept to measure interest rate risks in the banking book. The VaR for market price risks quantifies the exposure as a negative divergence from the current aggregate value of the bank's financial transactions.

A variance-covariance approach (delta-normal method) is used throughout the Group to determine the VaR indicator on a daily basis. Statistical parameters used in the VaR model are calculated directly from 250-day historical data maintained within the bank. The loss potential is determined applying a 95 % confidence interval and a 250-day holding period.

By its very nature, VaR calculations are based on assumptions regarding the future development of the business, and the related cash flows. Key assumptions used include current account balances which are factored into calculations for a period of two years, using the average residual amount of deposits observed in the past. Loans are taken into

account using their fixed-interest period (for fixed-rate exposures), or using their expected maturity (variable-rate exposures). Aareal Bank's equity is not taken into account as a risk-mitigating item. This tends to overstate VaR, demonstrating the conservative approach adopted in our risk measurement processes – together with considering only contractual maturities.

Based on the daily market risk report, all changes of the present value in all currencies are analysed; if necessary, risk-reducing measures are taken. In addition, the general interest rate situation is discussed during the weekly meetings in the Transaction Committee. The Transaction Committee makes decisions as regards the general approach with respect to the management of interest rate risks.

### Impact of an interest rate shock on profit or loss

The underlying interest rate shock scenarios stipulated by the banking regulators for external reporting purposes (including parallel shifts by 200 basis points, under the exclusion of negative nominal interest rates as shift results) resulted in a present-value change of € -329 million and € +146 million, respectively, for all currencies as at 28 December 2012.<sup>1)</sup> Of the currencies reviewed in the following table, the euro is the most important individual currency for us, with a € -281 / € +194 million change in present value.

	Interest rate shock		Present value change	
	+		Decrease	Increase
	in bp	in bp	€ mn	€mn
EUR	200.0	200.0	-281.4	194.5
USD	200.0	200.0	-19.7	-19.7
JPY	200.0	200.0	-9.9	-9.9
Other	200.0	200.0	-18.5	-18.5
Total			-329.5	146.4

The ratio of the sum of all currencies relative to Aareal Bank AG's regulatory capital (in accordance with section 10a of the KWG) for these interest rate shock scenarios is 11.5 % as at the reporting date. As in the previous years, this figure is well below the maximum limit of 20 %.

### **Operational Risks**

Operational risk is defined for regulatory purposes as the risk of losses resulting from inadequate or failed internal processes or systems, from human error, or from external events. This definition also includes legal risks. In contrast, strategic, reputational and systematic risks are not included.

Ultimately, in contrast to other risk types, operational risks always represent the disruption of the

production process. If the components of the production process change, the situation as regards operational risks within the company changes as well.

Risk Controlling is responsible for the central coordination of all aspects related to controlling operational risks, including the authority to select methods for identifying and monitoring of risks and loss events. This also includes risk reporting.

<sup>1)</sup> The calculation was carried out for Aareal Bank Group.

### Strategy for the treatment of operational risks

The strategy pursued by the bank, which is based on specialised and individualised businesses, results in less standardised and mechanised processes and workflows when compared with institutions that focus on standardised businesses. The consequence of this for Aareal Bank is that the operational risk is more strongly characterised by the categories People/Employees and Processes, and less strongly by the categories Systems/Technology and External Events.

The insights described herein result in a conscious and rigorous risk strategy in connection with the treatment of operational risks. Within the framework of this risk strategy, a decision is made with regard to avoiding (incl. relevant risk mitigation strategies), accepting/entering into or transferring/hedging risk positions. Deciding factors for the related decisions are both the economic reasonableness of the decisions and the bank's risk appetite. The aim of all these efforts is to generate a balanced risk profile on the basis of a regularly applied risk analysis.

Against the background of this risk environment, we generally avoid a concentration of operational risk exposure. This is achieved, among other things, via adequate long-term measures as well as through the consistent implementation of a precisely defined set of controlling instruments for the identification and monitoring of operational risks and resulting loss events. These instruments are tailored to the bank and its specific risk profile.

### Instruments used to control operational risks

Operational risks and the resulting loss events are systematically identified, assessed, monitored and addressed, if necessary, using controlling measures within Aareal Bank under the framework of a regular cycle. Risk identification is made via the instruments Self-Assessment (early risk identification), risk inventories (risk identification and monitoring), as well as via maintaining and monitoring a loss database.

#### Stress tests

Suitable and plausible stress tests are conducted at Aareal Bank in the context of operational risks. These are hypothetical scenarios and sensitivity analyses on the risk inventories. The results of the stress tests are reported regularly to the Management Board and serve as an indicator for potential developments within the risk type "Operational risks" that could jeopardise the continued existence of the Group.

### **Backtesting**

Annual backtesting is performed for the risks as part of risk identification and risk monitoring. This involves determining the relation of loss events expected from individual risks and the reported incidents of the corresponding loss events. Based on the results from backtesting, adjustments are made to the controlling instruments used to manage operational risks.

### Regulatory assessment

As a rule, the capital charge for the Group's operational risks is calculated according to the so-called "standardised approach" pursuant to sections 272 et seq. of the SolvV.

As an international property specialist, we limit our operations to trading, corporate clients, retail clients, plus payments and settlement businesses provided within the scope of the standard approach.<sup>1)</sup>

The results that are taken into consideration are based on the segment reporting at the end of the financial year and the quarterly results in accordance with IFRS. The details as at 31 December 2012 are therefore based on Q4/2009 up to and including Q3/2012.

<sup>&</sup>lt;sup>1)</sup> Due to the fact that the SolvV does not provide for a separate adequate business area for the operating segment "Consulting/ Services", the relevant income of that segment is weighted using the highest beta factor (18 %, corresponding to the beta factor for the trading business, amongst other things).

Section 273 (4) of the SolvV defines regulatory risk weights (so-called "beta factors") for the individual business lines. We use these defined weightings rather than exercising the option to apply proprietary beta factors.

The "Corporates" business segment accounts for more than 85 % of gross income.

As segment reporting is not in line with the breakdown of business lines pursuant to Basel II or the Solvency Regulation, the individual items of the segment report are re-allocated on the basis of factually logical arguments. Statistical figures are partially used as further supporting data (such as relation of private vs. commercial loans).

On average, the grouped and quantified positions of the last three years that are weighted by the respective beta factor result in regulatory capital requirements totalling  $\in$  86 million for operational risks.

### **Liquidity Risks**

Liquidity risk describes the risk that it might not be possible to meet current and future payment obligations in full or in good time.

The aim of liquidity risk management, which is the responsibility of the Treasury department, is to hold, at any time, liquid funds to be able to meet future payment obligations. The risk management and monitoring processes have been designed to cover refinancing and market liquidity risks in addition to liquidity risk in the narrower sense.

### Liquidity risk strategy

In general, Aareal Bank has a low risk tolerance, ensuring the ability to generate a considerable amount of liquidity in the short term, even in a tight market environment or a crisis scenario, and to prevent liquidity squeezes. For this purpose, we hold a large amount of liquid and high-quality securities.

Within the framework of the refinancing strategy<sup>1)</sup>, various money and capital market instruments are used to achieve a broadly-diversified range of funding vehicles. We can rely mainly on three sources: the German Pfandbrief, uncovered funding and deposits by institutional investors, and institutional housing sector clients.

### Instruments of liquidity controlling and management

Liquidity management (intraday and in the short and medium term) is assigned to Treasury and conducted based on the concepts of liquidity balance sheets and cash flow analyses, which are constantly developed. To analyse both the maturity structure and the quality of the individual money market and capital market products, the cash flows from the various refinancing sources are divided into different liquidity classes which are incorporated differently into the assessment of liquidity risk. The various properties, such as rollover probability, collateralisation, or ability to liquidate, are thus accounted for, thereby allowing the possible liquidity risks to be selectively quantified. The overall liquidity situation is broken down into several maturity ranges, taking into account possible stress scenarios. We generally consider the full withdrawal of clients' current account balances as being the most significant scenario. Even in this stress scenario, liquidity is sufficient to cover the expected liquidity needs under stress conditions.

Managing and monitoring risk concentrations in the area of liquidity risks focuses on liquidity providers (composition of the liquidity reserve), the instruments used to raise liquidity as well as on any concentrations of liquidity needs which may arise over time.

<sup>&</sup>lt;sup>1)</sup> For more information on refinancing, please refer to chapter "Financial position" in the Group Management Report of the "Aareal Bank Group 2012 Annual Report".

Risks are communicated by means of daily reporting to Treasury and to the members of the Management Board responsible for Treasury and monitoring. As part of monthly reporting, the entire Management Board is also briefed on the situation as regards liquidity risks. In addition, we notify further units if required.

### **Imprint**

### Contents:

Aareal Bank AG, Investor Relations, Finance – Regulatory Reporting **Design / Layout:** S/COMPANY · Die Markenagentur GmbH, Fulda, Germany

This report is also available in German language.



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