

# »» Management Report and Financial Statements 2016



# Key figures of KfW

## Overall activities of KfW

	<b>2016</b>	<b>2015</b>	<b>2014</b>
	<b>EUR in millions</b>	<b>EUR in millions</b>	<b>EUR in millions</b>
<b>Financial statements</b>			
Volume of business	577,887	551,333	536,338
Total assets	500,684	493,205	479,224
Bonds issued	422,268	412,308	402,256
Subordinated liabilities	200	300	2,247
Own funds	23,772	22,482	19,801
Net interest income before promotional activity	1,983	2,356	2,293
Net commission income before promotional activity	196	190	263
Administrative expenses before promotional activity	931	971	932
Promotional activity (expense)	230	345	364
Profit for the year	1,290	1,331	883
Cost/income ratio before promotional activity	43	38	36
Tier 1 capital ratio <sup>1)</sup>	22.3	18.3	14.1
Total capital ratio <sup>1)</sup>	22.3	18.4	15.1
Employees	4,872	4,698	4,479

<sup>1)</sup> The regulatory total capital ratio and the tier 1 ratio are calculated for internal purposes. The figures relate to the whole KfW Group, data are based on the IAS/IFRS consolidated financial statements.

The figures in tables were calculated exactly and added up. Figures may not add up to totals because of rounding. Actual zero amounts and amounts rounded to zero are presented as EUR 0 million.

## »» Responsible Banking

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»» Management report

# Economic report

## General economic environment

**Global economic growth** in 2016 stagnated close to prior-year levels, although with contrasting performances by different economic areas. Growth slowed down in industrialised nations, particularly in the United States (US). Consumer spending proved robust in the industrialised nations, and a favourable interest rate environment continued. Meanwhile, private and public-sector investment was weak. While decreasing energy and commodity prices stimulated growth in many industrialised countries in 2015, this effect was much less pronounced in 2016. After several years of declining growth that continued into 2015, developing countries and emerging economies saw economic activity pick up somewhat in 2016. However, also within this group of countries, trends varied. In China, growth continued to cool gradually, while crisis-hit Brazil and Russia remained stuck in recession. By contrast, a number of other emerging economies and many poorer developing countries recorded solid growth. Global trade again saw only a weak increase in 2016, which was primarily attributable to the industrialised countries.

Economic recovery continued at a moderate pace in the member states of the **European Economic and Monetary Union (EMU)**. Overall, the economic output in EMU member states rose by 1.7 % year-on-year in 2016. This increase was in line with KfW's expectations. The European economy thus held up well in the face of major political uncertainty following the Brexit vote in June and concerns about parts of the banking sector. The low oil price, a favourable exchange rate and spending to help refugees all provided a tailwind, as did the continued expansionary monetary policy, which further reduced financing costs. Consumer spending remained the main pillar of growth and continued to benefit from the rising employment rate. Government consumption and gross fixed capital formation also contributed to positive growth. However, investment activity continued to show structural weakness. Foreign trade growth halved in line with the slowing of global trade flows. However, as imports and exports were similarly affected by the slowdown, net exports (exports minus imports) only had a negligible dampening effect on growth.

**Germany** grew by a strong 1.9% in 2016 according to initial estimates by the German Federal Statistical Office and thus at a similar pace as the 1.7% growth recorded in 2015. A year ago, KfW predicted economic growth for 2016 to be on a par with that of the previous year and therefore accurately anticipated the actual development of gross domestic product. Domestic demand remained strong. Consumption was by far the key driver, having profited from the continuous increase in employment and

a noticeable increase in real wages. Private investment in housing construction has been growing since 2010 and accelerated in 2016. Private investments in equipment were in slightly positive territory, while investments in commercial buildings decreased again over the year as a whole. Corporate investments exhibited strong growth particularly at the beginning of 2016. A considerable slowdown followed during the remainder of the year. This was probably primarily attributable to the unexpected Brexit vote and the protectionist plans expressed by the new US president during the election campaign, which unsettled export-oriented German companies and caused them to postpone their investment decisions. Amid moderate export growth, net exports slightly dampened economic growth as strong domestic demand caused imports to rise somewhat more than exports.

In 2016, the **financial markets** continued to be dominated by very expansionary monetary policy around the world. At the start of the year, growing fears about global growth and the continued decline of the oil price put further downward pressure on prices and led the European Central Bank (ECB) to ramp up its expansionary monetary measures, once again. Global growth fears subsided over the remainder of 2016. From mid-year, however, political events – including the British electorate's vote to leave the European Union (EU) and the outcome of the US presidential election – caused significant movement on the financial markets. Until the summer, financial market participants showed a greater preference for low-risk asset classes. A marked return in investor optimism followed only in the second half of the year, a trend accelerated by the victory of the Republican candidate in the US presidential election. The expectations of extensive fiscal stimulus made riskier asset classes considerably more attractive for investors while a noticeable correction began on the bond markets.

In response to the extremely low inflation rates, and even a temporary slide into deflation, the European Central Bank in March 2016 decided to expand its securities purchasing programme from EUR 60 billion to EUR 80 billion a month, while at the same time expanding its investment range to include investment grade corporate bonds. It also cut the deposit rate again, from -0.30% to -0.40%. This environment caused money market rates in the euro area, which were already negative across the board, to fall further. Ten-year German government bond yields also declined again, reaching negative territory for the first time in mid-June and hitting a new all-time low of -0.19% in early July in the aftermath of the Brexit vote. In the second half of the year, however, yields on ten-year German

government bonds trended upwards, again. The main factor driving yields was the US presidential election. In addition, the ECB decided at its December meeting that although it would extend its securities purchase programme until the end of 2017, the monthly purchase volume would be reduced to EUR 60 billion from April 2017 onwards. Yields on ten-year German government bonds in 2016 were down by an average of just over 40 basis points compared to the previous year. Money market rates in the United States rose significantly, particularly in the second half of 2016. This was encouraged by the brightening economic picture, expectations of rising inflation, the election of the new US President and, last but not least, expectations of the US Federal Reserve's next interest rate increase. The key interest rate was raised for the second time in this tightening cycle in December. The yields on ten-year US government bonds declined considerably in the first half of the year. It was only later, primarily in the weeks following the US presidential election, that the trend reversed markedly. The annual average for 2016 was around 30 basis points below that of the previous year. In both

### Strategic objectives

KfW Group has a set of strategic objectives in place that define KfW's targeted medium-term positioning. This framework encompasses selected top-level objectives at the overall bank level and serves as a central, binding reference for the strategic orientation of all business sectors, with a five-year horizon.

The **primary objective of all of KfW's market areas is promotion** – the heart of KfW's business activities – abiding by the principles of subsidiarity and sustainability. KfW addresses the primary objective of promotion largely by focusing its promotional activities on the socially and economically important megatrends of “climate change and the environment”, “globalisation and technological progress”, and “demographic change”.

In relation to the “climate change and the environment” megatrend, KfW finances measures to support renewable energies, improve energy efficiency, safeguard biodiversity and prevent and/or reduce environmental pollution. To address the special importance of this megatrend, KfW has set an environmental commitment ratio of around 35% of total promotional business volume. In the context of the “globalisation and technological progress” megatrend, KfW contributes to strengthening the international competitiveness of German companies by granting loans in the following areas, among others: research and innovation, projects to secure Germany's supply of raw materials, and infrastructure and transport. With respect to the “demo-

graphic change” megatrend, KfW's objective is to address the consequences that result from a declining and aging population, including the following focus areas: age-appropriate infrastructure, vocational and further training, family policy and childcare as well as corporate succession. KfW's commitment in domestic business to meeting the challenges presented by the refugee issue is also reflected in this megatrend. KfW also focuses on “non-trend-based promotional issues” that play an important role for KfW but that are not related to any of the three megatrends, such as combating poverty in developing countries.

In 2016, the EUR/USD exchange rate moved in a range from just under 1.04 to 1.15. The euro initially appreciated against the US dollar in the first few months of the year, reaching its peak for the year at 1.15 at the beginning of May. It subsequently depreciated, falling to slightly below 1.04 in late December 2016. On average for 2016, the EUR/USD exchange rate remained almost unchanged from the previous year at just under 1.11.

In addition to focusing on the issues described above, the primary objective in the bank's strategic framework also extends to covering KfW's most important customer groups and regions as well as to ensuring promotional quality. For KfW, this means a commitment to maintain the high level of quality of its promotional products that it has achieved in recent years and sufficient coverage of KfW's key regions and customer groups. Given the special importance of SMEs, KfW aims to have around 45% of its domestic promotional business volume utilised for this target group.

The stated priorities set for the primary objective are complemented by a set of **secondary objectives or strict ancillary conditions** that reflect profitability and efficiency, as well as risk-bearing capacity and liquidity aspects. KfW acts in accordance

with the principle of subsidiarity and plans nominal growth of 2% to 3% p.a. as measured by the group's total commitment volume. Moreover, KfW's success depends upon continuing to

### Internal management system

KfW has a closely interlinked strategy and planning process. Conceived as a group-wide strategy process, group business sector planning is KfW Group's central planning and management tool. Group business sector planning consists of two consecutive sub-processes performed every year: strategic planning and operational planning. Part of the overall strategy and planning process is an intense exchange with the Risk Controlling department.

The group-wide strategic objectives set by the Executive Board form the basis for strategic planning. This system of objectives serves KfW Group as a clear roadmap, indicating the direction in which KfW would like to develop over the next five years. The strategic objectives are reviewed annually and updated to reflect changing requirements and fill in any gaps. Efforts are made, however, to maintain a high degree of consistency to ensure that there are no fundamental changes made to strategic impetus in the course of the annual review. Strategic medium-term courses of action are developed by the business sectors within this strategic framework. Assumptions regarding the future development of determining factors are made on the basis of assessments of risks and opportunities. This analysis takes into account both external factors (including market development, regulatory requirements, the competitive situation, customer behaviour) and internal factors and resources (including human and capital resources, promotional activity, primary cost planning, tied-up capital) and targeted earnings levels. The central departments (e.g. information technology, human resources and central services) play important roles in achieving the strategic objectives. By involving these departments, their own strategies are aligned with the strategic objectives. Cost planning and full-time equivalent (staff) planning are conducted in parallel to business sector strategic planning for all business sectors for the entire planning period, applying a top-down approach. The underlying assumptions are reviewed annually via a rolling planning process. The Executive Board defines business sector objectives for all sectors in the form of guidelines (with regard to operations, risk and budget) for the entire planning period on the basis of the group-wide strategic assessment.

In operations planning, the business sectors plan their new business, risks and earnings, and all departments of the bank plan their budgets based on the guidelines issued by the Executive Board, taking into account any changes in external or internal factors. These plans are checked for consistency with the group's and business sectors' strategic planning. The plans are also assessed for future risk-bearing capacity. The Executive Board either approves the resultant operating budget or has plans fine-tuned in a revision round. The external assumptions underlying the plans are also checked at this stage.

pursue the path of professionalism in the modernisation process upon which it has embarked.

The key conclusions from the planning process are incorporated into the business and risk strategies. The management has overall responsibility for formulating and adopting both strategies. The business strategy comprises the group's strategic objectives for its main business activities as well as important internal and external factors, which are included in the strategy process. It also contains the business sectors' contribution to the strategic objectives and the measures for achieving each objective. Moreover, the business strategy combines the operating budget at the group and business sector levels. The Executive Board sets KfW Group's risk policies in its risk strategy, which is consistent with the business strategy. KfW Group has defined strategic risk objectives for factors including risk-bearing capacity and liquidity. The main risk management approaches and risk tolerance are also incorporated into the risk strategy as a basis for operational risk management. Any changes to the business strategy are subject to consultation with the Risk Controlling department in order to ensure consistency between the business and risk strategy. The Executive Board draws up the operating budget for the entire planning period, including any future capital requirement as well as the business and risk strategy. The budget is then presented to the supervisory body (Board of Supervisory Directors) for approval, along with the business and risk strategy for discussion. After the Board of Supervisory Directors has dealt with the business and risk strategy, it is appropriately communicated to the staff.

When the group business sector planning is approved, this establishes the group's qualitative and quantitative objectives. The Executive Board reviews achievement of these objectives as part of controlling on both a regular and an ad hoc basis during the current financial year. The assumptions concerning external and internal factors made when determining the business strategy are also subject to regular checks. The development of relevant control variables, their attainment, and the cause of any failure in this respect are analysed as part of strategic controlling. An integrated forecasting process which was further developed in 2016 serves at mid-year as a comprehensive basis for interim quantitative management input on group variables of strategic importance (new business, risks, and earnings in respect of funding opportunities), while functioning as a well-founded guide to achieving planned objectives. Backtesting of central planning parameters was also expanded in 2016 with the aim of validating planning methods and parameters. Ad hoc issues of strategic relevance are also addressed in consultation with the group's departments. Recommendations for action concerning potential strategy adjustments or optimising the use of resources are made to the Executive Board by means of the strategic performance report. The results of the analysis are included in further strategy discussions and strategic planning processes. The

achievement of objectives is regularly monitored by the Board of Supervisory Directors based on reports submitted to under the KfW Bylaws. The commentary in these reports outlines analyses of causes and any potential plans for action. Comprehensive and detailed reports are prepared on a monthly or quarterly basis as part of operational controlling. These comprehensive detailed analyses at group, business sector and/or product group level comprise earnings, cost and full-time equivalent (staff) developments and are reported to specific departments. Additionally, complete analyses of significant relevance to overall group performance are also presented directly to the Executive

## Development of KfW

KfW continued to experience very high demand for its financing products in 2016. **Promotional business volume** increased considerably from EUR 67.0 billion in the previous year to a total volume of EUR 71.1 billion. With a commitment volume of EUR 55.1 billion compared to EUR 50.5 billion in 2015, domestic promotional business spurred on growth of the German economy. The increase was largely due to strong demand for housing construction loans and robust demand for commercial financing. Commitments in international business remain stable at EUR 14.8 billion, slightly below the previous year's level of EUR 15.4 billion. It was an excellent year for financing and promotion of development work at EUR 7.3 billion in comparison with EUR 6.7 billion in the previous year. Export and project finance normalised again at EUR 7.5 billion following the previous year's EUR 8.8 billion, which was an exceptional year.

KfW's **earnings position** continued its stable development despite the volatile market environment in financial year 2016, although it closed below the prior-year level. Net interest income before promotional activity was lower than in 2015, a year characterised by non-recurring effects. Low administrative expenses and positive effects from risk provisions for lending business contributed to the year's pleasing profit. The cost/income ratio (before promotional activity) rose to 42.7% (previous year: 38.1%) despite lower administrative expenses due to a decline in net interest income. KfW sustainably strengthened its capital basis due to its good earnings position, with a profit for the year of EUR 1,290 million.

**Total assets** rose from EUR 493.2 billion to EUR 500.7 billion, with business volume increasing from EUR 551.3 billion to EUR 577.9 billion.

Business performance in 2016 was largely characterised by the following developments:

### A. Continued high demand for KfW products

KfW's promotional business experienced very high demand again in financial year 2016. Promotional commitment volume increased by EUR 4.1 billion from the previous year's EUR 67.0 billion to EUR 71.1 billion in 2016. This was primarily due to the high demand for promotion of environmental and climate pro-

tection projects, which represent the largest proportion of total promotional volume, making KfW one of the largest finance providers in the area of environmental and climate protection in Germany and around the world. Demand in Germany increased by EUR 4.6 billion from EUR 50.5 billion to EUR 55.1 billion. The volume of new business in the Mittelstandsbank (SME Bank) business sector amounted to EUR 21.4 billion, EUR 1.0 billion above the prior-year figure of EUR 20.4 billion. The **climate change and the environment** megatrend recorded strong growth with a volume of EUR 10.7 billion (2015: EUR 9.3 billion). This was largely driven by the significantly improved **KfW Energy Efficiency Programme**, which generated as much as EUR 5.2 billion in its first year after relaunch, compared to EUR 3.8 billion the previous year. The key promotional area **start-ups and general corporate finance** held steady year on year with a volume of EUR 10.1 billion (2015: EUR 10.3 billion). **Innovation financing** commitments were down slightly on the previous year's level at EUR 0.6 billion (2015: EUR 0.8 billion). This received a considerable boost in 2016 thanks to successful implementation of the new equity financing strategy. Following the successful launch of the **ERP Venture Capital Fund Investments programme**, the programme is being expanded to include **venture debt funds** in order to provide even better support to fast-growing technology companies. The **coparion VC fund** established by KfW and the BMWi in 2016 has also been very well received by the market. New business volume for the business sector Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions) amounted to EUR 33.7 billion compared to EUR 30.1 billion in 2015. Growth was very high in the **housing** promotional area in particular, with a volume totalling EUR 20.8 billion (2015: EUR 16.5 billion), thanks to a major boost from the **Energy-efficient Construction and Refurbishment** programme, which increased by EUR 4.9 billion to EUR 15.5 billion (2015: EUR 10.6 billion). **Infrastructure** commitments amounted to EUR 4.1 billion compared to EUR 5.0 billion in 2015, with the key factor, as in the previous year, being the special loan facility for refugee accommodation of just under EUR 0.5 billion. The **Education and Social Development** promotional area recorded total business volume of EUR 2.3 billion, just short of the previous year's EUR 2.6 billion but still at a good level.

The commitment volume for **International financing** of EUR 14.8 billion remained at a normal level, slightly below the prior-year figure of EUR 15.4 billion. The greatest demand came from the Maritime Industries segment (EUR 1.6 billion), unchanged from 2015, and from Power, Renewables and Water (EUR 1.3 billion; 2015: EUR 1.1 billion). Business area KfW Development Bank increased new commitments substantially; around EUR 7.3 billion in financing was provided to developing countries and emerging economies over the past year on behalf of the German Federal Government (2015: EUR 6.7 billion), 66% of which was destined for climate and environmental protection projects (2015: 60%). Nearly one third of all new commitments went to development projects in Africa.

### B. Operating result remains strong

The operating result before valuation and before promotional activity for financial year 2016 stood at EUR 1,450 million and thus below the previous year's level of EUR 1,767 million, which was largely the result of non-recurring effects in net interest income. The interest margins in the lending business and KfW's very good funding opportunities on the financial and money markets were contributing factors to the stable interest income. Lower administrative expenses due to changes in legislation on discounting pension obligations had positive effects. Both Commission income and Net other operating income remained at the previous year's level and made positive contributions to the operating result.

### Development net assets, financial position and results of operations

KfW saw both its total assets and its volume of business increase in 2016.

### Volume of receivables

The volume of receivables (loans and advances to banks and customers, including irrevocable loan commitments, loans

### C. Stable results from loan loss provisioning and valuation of assets

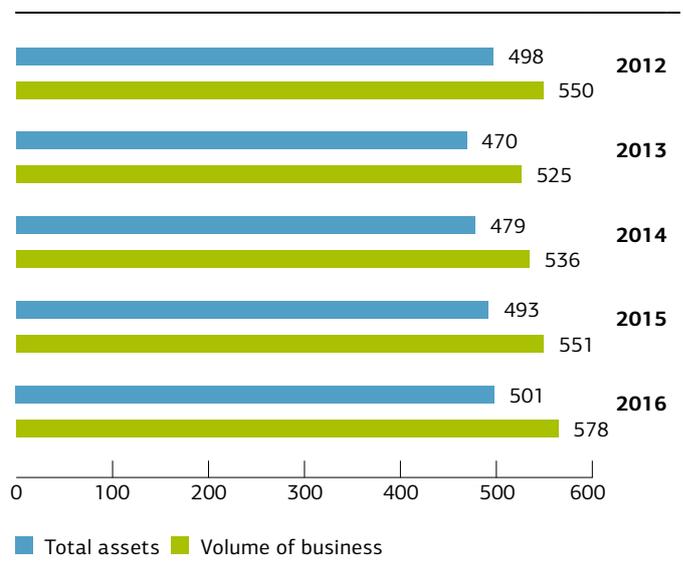
As in the previous year, KfW recorded a net gain from loan loss provisions amounting to EUR 89 million (2015: EUR 4 million). This gain was largely thanks to low risk provisioning in the high-volume domestic business. Depreciation, amortisation and loan impairment charges were significantly lower than the non-recurring income from loan recoveries. A slight net loss of EUR 28 million (2015: net income of EUR 1 million) was recorded from the valuation of equity investments. Impairment of equity investments primarily in the domestic promotional business totalled EUR 38 million and was partially offset by gains from the disposal of equity investments in the amount of EUR 14 million. Although financial markets were under the influence of political uncertainties in Europe and the USA, the securities portfolio made a positive contribution to earnings of EUR 14 million.

### D. Promotional activity lower than expected

KfW's domestic promotional activity, which has a negative impact on KfW Group's earnings position, decreased again to EUR 230 million in 2016 (previous year: EUR 345 million), which was significantly below expectations.

The key components of the promotional activity are reductions of interest rates, which reached a volume of EUR 193 million (previous year: EUR 304 million). This decline was primarily due to the lower demand for subsidised promotional loans (EUR 11.9 billion; 2015: EUR 13.2 billion) and the decreased scope for reductions in the low interest rate environment.

### Total assets and volume of business EUR in billions



held in trust and guarantees) rose from EUR 483.3 billion to EUR 502.0 billion.

The increase is primarily due to the development of irrevocable loan commitments, which increased by EUR 20.3 billion to EUR 76.1 billion. This was because of BAföG loan commitments to the German Federal Government of EUR 12.5 billion as part of restructuring undertaken in previous years, as well as a greater commitment volume in Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions).

Increased promotion of developing countries and emerging economies with a rise in loans of EUR 3.0 billion was also a contributing factor to this development.

## Funding

In the year under review, KfW funded its business predominantly by issuing bonds in the financial market. It raised funds totalling EUR 72.8 billion in 2016 (2015: EUR 62.6 billion) and issued more than 200 bonds in 15 currencies.

Bonds issued increased by EUR 10.0 billion year-on-year and totalled EUR 422.3 billion as of 31 December 2016. Fluctuation in foreign exchange rates, particularly in that of the US dollar and the British pound, had an impact on portfolio development, as did new issues and maturities.

Bonds issued accounted for 92.8% of borrowed funds, unchanged from the previous year. They therefore remain KfW's most important source of funding. As in 2015, the US dollar remained KfW's key currency with a share of 47%, followed by the euro at 36% and the British pound at 9%, the last's volume hitting a multi-year high despite the Brexit decision. The new green bond market also experienced considerable momentum in 2016. Since KfW entered the green bond market in 2014, it has become one of the segment's largest issuers, with ten

Loans held in trust, which primarily comprised loans to promote developing countries financed by budget funds provided by the Federal Republic of Germany, decreased slightly from EUR 13.1 billion to EUR 12.7 billion.

Guarantees declined by 52% to EUR 1.1 billion, largely as a result of the decline in KfW's securitisation activities, which constitute the main component of contingent liabilities.

issues and expanding to a total of five currencies and a total volume of EUR 9.2 billion.

The share of funds from banks and customers (excluding federal budget funds) remains unchanged from the previous year at 7% of borrowed funds. This includes cash collateral received primarily to reduce counterparty risk from the derivatives business in the amount of EUR 17.6 billion (2015: EUR 21.6 billion). The amount provided by the ERP Special Fund declined primarily as a result of the scheduled repayment of liabilities from the transfer of the ERP Special Fund.

Subordinated liabilities include a subordinated loan totalling EUR 0.2 billion (2015: EUR 0.3 billion) granted by the ERP Special Fund as part of the restructuring of the 2007 ERP economic promotion programme. The ERP Special Fund and KfW agreed in financial year 2016 to waive repayment of EUR 0.1 billion. The period during which capital is tied up for the remaining tranche in the amount of EUR 0.2 billion ends on 31 December 2027.

	31.12.2016 EUR in millions	31.12.2015 EUR in millions	Change EUR in millions	Change in %
Federal Republic of Germany				
– ERP Special Fund	480	568	–88	–15
– Federal budget	2,500	2,155	345	16
	<b>2,980</b>	<b>2,723</b>	<b>257</b>	<b>9</b>
Other lenders	7,787	5,993	1,794	30
<b>Liabilities to customers</b>	<b>10,767</b>	<b>8,716</b>	<b>2,051</b>	<b>24</b>
<b>Liabilities to banks</b>	<b>22,002</b>	<b>27,322</b>	<b>–5,320</b>	<b>–19</b>
Bonds issued	63,336	79,856	–16,520	–21
Bearer securities (incl. Commercial Paper)	355,460	328,635	26,825	8
Accrued interest	3,472	3,817	–345	–9
<b>Bonds and notes</b>	<b>422,268</b>	<b>412,308</b>	<b>9,960</b>	<b>2</b>
<b>Subordinated liabilities</b>	<b>200</b>	<b>300</b>	<b>–100</b>	<b>–33</b>
<b>Total</b>	<b>455,237</b>	<b>448,646</b>	<b>6,591</b>	<b>1</b>

## Own funds

The fund for general banking risks remained unchanged from the previous year at EUR 0.6 billion. The entire profit of EUR 1,290 million was allocated to retained earnings.

KfW's own funds thus amounted to EUR 23.8 billion as of 31 December 2016, 5.7% up on the previous year. This increase was due exclusively to the profit allocated to retained earnings.

	31.12.2016	31.12.2015	Change
	EUR in millions	EUR in millions	EUR in millions
KfW's subscribed capital	3,750	3,750	0
Uncalled contributions outstanding	-450	-450	0
Capital reserves	8,447	8,447	0
<i>Promotional reserves of the ERP Special Fund</i>	7,150	7,150	0
Reserves from the ERP Special Fund	1,191	1,191	0
Retained earnings			
a) Statutory reserve under Article 10 (2) KfW Law	1,875	1,875	0
b) Special reserve under Article 10 (3) KfW Law	8,312	7,022	1,290
c) Statutory reserve under Section 17 (4) D-Mark Balance Sheet Act <sup>1)</sup>	48	48	0
Fund for general bank risks under Section 340g HGB	600	600	0
<b>Total</b>	<b>23,772</b>	<b>22,482</b>	<b>1,290</b>

<sup>1)</sup> To be adjusted by the special loss account shown on the assets side in accordance with Section 17 (4) of the D-Mark Balance Sheet Act (EUR 26 million)

Both the regulatory total capital ratio and the tier 1 capital ratio were 22.3% (previous year: 18.4% and 18.3%, respectively). Ratios are determined based on IAS figures for the group.

### Changes in other significant items in the statement of financial position

Total bonds and other fixed-income securities increased slightly by EUR 0.4 billion to EUR 38.5 billion (2015: EUR 38.1 billion). By contrast, holdings of repurchased own issues amounting to EUR 9.1 billion dropped from EUR 9.7 billion the previous year. This was equivalent to 2% of bonds issued. At a total amount of EUR 29.4 billion, holdings of securities of other issuers, which make up 76% of the total holdings of all bonds and other fixed-income securities, slightly exceeded the previous year's level of EUR 28.4 billion by EUR 1.0 billion. Of the securities from other issuers, 81% is eligible as collateral for funding operations with the European Central Bank ("ECB"). In addition to the Treasury securities portfolios, KfW holds asset backed securities ("ABS") with a carrying amount of EUR 4.9 billion, (previous year: EUR 4.2 billion), related to its securitisation and SME finance activities. Potential risks are sufficiently addressed by appropriate risk provisioning. KfW not only issues green bonds but has also been expanding its own green bond portfolio since 2015. This currently amounts to around EUR 0.6 billion and focuses on promotional areas in renewable energy and energy efficiency.

The value of shares in affiliated companies amounted to EUR 3.0 billion and fell slightly year on year by EUR 0.3 billion.

The Other assets item includes, in particular, the currency adjustment from foreign currency derivatives in the amount of EUR 15.0 billion as well as the receivable of EUR 0.6 billion

from the Federal Agency for Special Tasks associated with Unification (Bundesanstalt für vereinigungsbedingte Sonderaufgaben - "BvS"), due to the transfer of the rights and obligations of the State Insurance Company of the GDR in liquidation ("SinA") to KfW as of 1 January 2008. However, BvS remains the beneficial owner of the SinA obligations. This receivable is offset by actuarial provisions in the same amount.

The primary component of Deferred charges are the differences between the repayment amount and the lower issuing amount in the context of borrowed funds (discounts and placing commissions) and accrued upfront payments for derivative financial instruments. The item Deferred income includes in particular discounts from certificated liabilities and accrued upfront payments for derivative financial instruments deferred over the loan life.

Provisions remain unchanged from the previous year's total of EUR 2.2 billion. The total amount includes provisions for pensions and similar obligations (EUR 1.1 billion) and other provisions (EUR 1.1 billion). Other provisions include in particular the actuarial provisions relating to SinA, the provision for variable compensation components, the provision for future interest charges related to the transfer of the ERP Special Fund, the provisions for credit risks and provisions relating to the present value approach applied to interest rate reductions.

## Earnings position

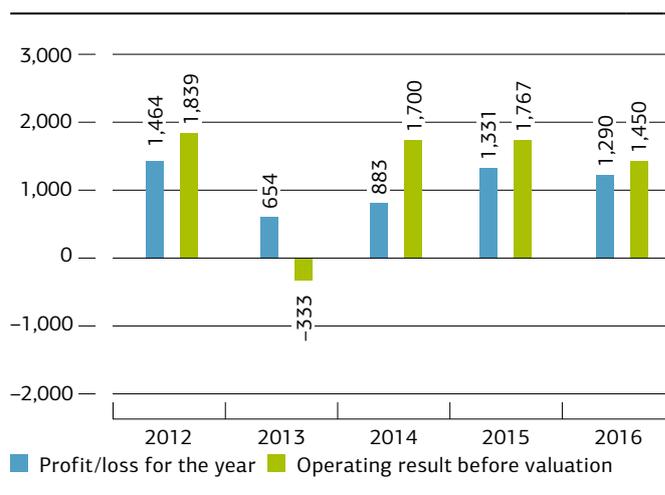
KfW's operating result before valuation and promotional activity was EUR 1,450 million, which was considerably lower (EUR 316 million) than the previous year's figure of EUR 1,767 million. At EUR 1,983 million, net interest income (before promotional activity) was lower than the previous year (EUR 2,356 million) as a result of the continuing low interest rate environment, which limits the potential for profit from maturity transformation. Nevertheless, it remained the main source of income. Interest risk control transactions to limit or reduce derivative exposure amounting to EUR 223 million also had a negative effect on interest income.

Net commission income (before promotional activity) of EUR 196 million was marginally above (EUR 6 million) the previous year's level of EUR 190 million. This increase was primarily due to lower expenses arising from KfW IPEX-Bank GmbH's agency agreement to manage the Export and project finance trust activities, which resulted in 2015 being an exceptional year.

Administrative expenses (before promotional activity) declined by EUR 40 million to EUR 931 million. This was due to lower personnel expenses resulting from the changes in legislation on discounting pension obligations. KfW used a ten-year average interest rate in the financial statements as of 31 December 2016 instead of the seven-year average interest rate used in 2015. No additions to pension obligations with a negative impact on Administrative expenses were necessary in 2016, due to the increased discount rate (2015: 3.89%; 2016: 4.01%). Expenses for wages and salaries rose in contrast, due to collective wage increases and a larger number of employees. Non-personnel expenses increased moderately in financial year 2016 as a result of large investments in the modernisation of KfW. These investments were primarily for the implementation of supervisory requirements and various major projects to modernise the IT environment. This extensive project portfolio is also expected to lead to a rise in Non-personnel expenses in the future. Higher depreciation and amortisation of property, plant and equipment and intangible assets also negatively impacted the result.

Net other operating income was marked by a repayment waiver for the ERP subordinated loan, in the amount of EUR 100 million, to cover future funding expenses from the ERP Venture Capital Fund Investments programme.

## Operating result before valuation and before promotional activity<sup>1)</sup> and profit/loss for the year EUR in millions



<sup>1)</sup> As from financial year 2013

The loss of EUR 14 million (previous year: +EUR 30 million) on the valuation of equity investments is largely due to their impairment, which is partially compensated for by income realised from their disposal. Gains from the sale of securities made a positive contribution to the result. There are negative differences to market values of EUR 53 million (previous year: EUR 17 million) for securities in fixed assets not valued at the lower of cost or fair value.

As in the previous year, loan loss provisioning had a positive effect, contributing EUR 89 million (previous year: EUR 4 million) to earnings. Net additions to specific valuation allowances, particularly from education financing, were offset by income from successful loan recoveries. There was a decrease in specific valuation allowances and specific provisions for lending business from EUR 620 million to EUR 460 million. Non-performing loans in the amount of EUR 247 million were written off in financial year 2016 (previous year: EUR 181 million). Expected losses were sufficiently covered by specific and general valuation allowances.

KfW's domestic promotional activity, which has a negative impact on the group's earnings position, amounted to EUR 230 million in 2016, following EUR 345 million in 2015, and was considerably below the prior-year level and projections. The key component of KfW's promotional activity comprises interest rate reductions of EUR 193 million, granted during the first fixed interest rate period in addition to passing on its own favourable funding conditions.

Financial year 2016 closed with a EUR 1,290 million profit for the period (previous year: EUR 1,331 million), which was fully allocated to retained earnings.

# Sustainability report

This sustainability report largely corresponds in structure, scope and content to the group sustainability report published in the group management report. Information on new commitment

volume relates to the group. A sustainability report is not prepared for the single-entity financial statements.

## Sustainability as a strategic guiding principle

KfW Group has a set of strategic objectives in place that define KfW's targeted medium-term positioning. This framework encompasses selected top-level objectives at the overall bank echelon and serves as a central, binding reference for the strategic orientation of all business sectors, with a five-year horizon. The primary objective of KfW is promotion, abiding by the principles of subsidiarity and sustainability. KfW addresses the primary objective of promotion largely by focusing its promotional activities on the socially and economically important megatrends of "climate change and the environment", "globalisation and technical progress", and "demographic change". KfW's promotional activities in these megatrend areas need to be quantifiable in line with the sustainability principle.

In relation to the "climate change and the environment" megatrend, KfW finances measures to support renewable energy, improve energy efficiency, safeguard biodiversity and prevent and/or reduce environmental pollution. To address the special importance of this megatrend, KfW set an environmental commitment ratio

of around 35 % of total new commitment volume – and this target was actually exceeded in 2016, at 44 % (EUR 35.3 billion). In the context of the "globalisation and technological progress" megatrend (EUR 14.5 billion), KfW helps to make German companies more competitive internationally by granting loans in areas including research and innovation, projects to secure Germany's supply of raw materials, and infrastructure and transport. With respect to the "demographic change" megatrend (EUR 10 billion), KfW's objective is to address the consequences that result from a declining and aging population, including the following focal areas: age-appropriate infrastructure, vocational and further training, family policy and childcare as well as corporate succession. KfW's commitment to meeting the challenges presented by the refugee issue is reflected in this megatrend as well. KfW also focuses on "non-trend-based promotional issues" (EUR 21.2 billion) that play an important role for KfW but that are not related to any of the three megatrends, such as combating poverty in developing countries.

## KfW Group sustainability ratings

Sustainability ratings serve to assess companies overall in terms of their sustainability performance, which is rated on the basis of environmental, social and governance aspects. KfW regularly ranks among the top banks in international sector benchmarks by three renowned sustainability rating agencies (as of 31 December 2016). Sustainalytics awarded KfW 85 out of a maximum of 100 possible points, thus ranking it second

out of 396 banks analysed worldwide. Oekom research gave the bank a further "prime" rating in the group of financial institutions with the highest ratings worldwide: KfW earned a C+ rating on a scale of D- to A+. Imug awarded KfW a BBB on a scale of AAA to D, ranking it second among all international promotional banks analysed.

## KfW's sustainability reporting

The Institute for Ecological Economy Research (*Institut für ökologische Wirtschaftsforschung – "IÖW"*) and the employers' association "future verantwortung unternehmen" have been carrying out a German ranking of sustainability and CSR reporting since 1994. KfW was ranked third out of 79 in the "large companies" segment in 2016. KfW's sustainability report fulfilled the comprehensive social, environmental, management and communication-oriented criteria to a high 72 %, achieving 510 points from a total of 700 points. The content of the KfW report entitled

"Responsibility that has an impact", which details how KfW's promotional activities work and how their impact is assessed, impressed the jury.

A "Facts and Figures Update" focusing on the issues of refugees, complaints management, KfW's responsibility to its employees and in-house environmental protection, and including relevant figures was published again in 2016 as an interim report to KfW's sustainability reports.

### Sustainable commitment in the green bond market

With its many years of experience and excellent capital market reputation, KfW provides impetus in the area of green bonds, as both an issuer and investor. As the issuer of “Green Bonds – made by KfW”, it offers bonds that link investment in renewable energy projects with KfW’s top-notch credit rating. A volume of EUR 2.8 billion of Green Bonds – made by KfW was issued in four different currencies in 2016. With an outstanding volume of around EUR 9.2 billion (as of 31 December 2016), KfW is one of the largest issuers in this rapidly-expanding market segment. The bank published its first report on the environmental impact of its green bonds in 2016. Global Capital recognised KfW last year for transparency in pre-deal information and both Global Capital and CMDportal gave awards for its green bond issues.

Under mandate by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (“BMUB”),

### Domestic financing contributes to sustainability

Boosting energy efficiency and using renewable energy in buildings are key to combating climate change. KfW posted a record commitment volume of EUR 19 billion in 2016 in collaboration with the Federal Ministry for Economic Affairs and Energy (“BMWi”) for investment in the refurbishment and construction of energy-efficient residential and non-residential buildings. The construction work of private builders, commercial enterprises and municipalities promoted in 2016 will enable a reduction over the next ten years alone of some 12 million tonnes of carbon dioxide, which is harmful to the climate. Particularly high energy requirements of a minimum KfW Efficiency House 55 standard apply to all new residential buildings constructed since April 2016. Even though the new requirements did not cover the first few months of 2016, of the 160,000 new homes built with promotional funding last year, almost 140,000 were fitted to KfW Efficiency House 55 standard or better.

Almost one in two burglars gives up after a few minutes if the break-in attempt is hampered by physical security systems. On behalf of the BMUB, KfW addressed the high interest among tenants and home-owners in greater protection against break-ins through an increase in promotional funding for investments in burglar proofing in 2016. More than 40,000 promotional grants were given for burglar-proofing measures in 2016, thereby

KfW helps to fund climate and environmental protection projects via a green bond portfolio. Green bond investments of a total volume of some EUR 300 million were made to this end in 2016, with a regional focus on Europe (approx. 95%) in the promotional areas of energy efficiency (approx. 30%) and renewable energy (approx. 20%). The portfolio is to be expanded to EUR 1 billion; around EUR 580 million was held as of the end of 2016.

KfW also advocates further development of market quality through its membership of the Executive Committee of the Green Bond Principles, which publishes this set of voluntary process guidelines developed by market participants themselves. KfW received the “Best sustainable investor” award from portfolio institutionell in 2016 for developing its green bond portfolio and its efforts to further develop sustainable investments.

protecting over 50,000 homes against break-ins via a variety of means. The majority of measures entailed installation of burglar-resistant doors to homes and retrofit window security systems. This has been possible via KfW’s new grant portal since November 2016. People with single and semi-detached homes and owner-occupied flats, as well as tenants, submit their application for promotion via the grant portal and receive their promotion commitment within moments.

As part of the KfW Energy Transition Action Plan, KfW collaborated with the Federal Government from 2012 to 2016 to offer around EUR 103 billion in its domestic promotional business for energy transition projects in Germany. EUR 23 billion was committed to renewable energy and EUR 80 billion to energy efficiency. The energy transition has entered the next stage, whose key issues include increasing energy efficiency, the heating transition, and greater integration of energy generation, storage and consumption, as well as digitalisation – also for developing KfW’s financing offering. In this context, the “KfW waste heat energy efficiency programme”, which uses federal budget funds to generate further impetus to save energy and reduce CO<sub>2</sub>, was launched in May 2016. As of November 2016, the “Renewable Energies – Standard” programme also supports the integration of renewable energy into the power system.

## International financing and initiatives

KfW signed a framework agreement with the Green Climate Fund (GCF) at the end of 2016. The GCF is a key instrument of the UN Climate Change Conference in Paris ("COP21") which grants accredited institutions funding for projects in developing countries. GCF funding for one KfW project in Bangladesh has already been committed and preparations are under way on other projects of KfW and partners.

Under mandate by the Federal Ministry for Economic Cooperation and Development ("BMZ") and the EU, KfW Development Bank created a risk hedging fund for geothermal projects in Latin America in 2016. Up to 15 geothermal projects with a total capacity of 350 megawatts and a total investment volume of over EUR 1 billion are to be implemented via the Geothermal Development Facility (GDF). Also under BMZ mandate, KfW Development Bank launched the InsuResilience Challenge Fund as part of the G7 Climate Risk Insurance Initiative (InsuResilience) 2016 to promote climate risk insurance. It promotes development of innovative insurance concepts, with the aim of increasing the offering of insurance in developing countries and emerging economies in order to better protect poor people against extreme weather risks.

## Responsibility to employees

As a future-oriented company, KfW Group believes it is responsible for offering a differentiated personnel policy that promotes equal opportunities just as it promotes work-life balance, facilitates increasingly flexible working hours and operates preventative health management. The group continuously strives to achieve its aim of retaining motivated and satisfied employees via a variety of measures.

The new KfW Equal Opportunities Plan entered into effect as of 1 January 2016. The plan is closely linked with KfW's Gender Balance concept. These initiatives aim to increase the proportion of women in management and higher professional positions, incorporate equal opportunities into the KfW culture and live by the example of best practices, as well as further reconcile career and personal obligations to care for children and family members. In addition to the offering of advisory services and training courses, an additional "parent-child office" was set up in Frankfurt in 2016 – following those in Bonn and Berlin.

KfW Development Bank created the "Blue Action Fund" in collaboration with the BMZ in 2016 in an effort to improve international marine conservation. The fund is set up as a non-profit foundation dedicated to international marine protection by, for example, better monitoring marine conservation areas.

KfW IPEX-Bank – responsible for the Export and project finance business area within KfW Group – is supporting the expansion of renewable energy in South America by financing the state-of-the-art Peralta wind farm in Uruguay. Together with another commercial bank, it provided a total of around USD 160 million for the project. The fifty new wind turbines are already connected to the power grid, supplying around 150,000 households with green energy. The farm was constructed by German wind energy company ENERCON, which concluded a 20-year power purchase agreement with state energy provider UTE. Uruguay is pursuing ambitious energy provision targets, aiming to generate 38% of total domestic power production with wind energy by 2017. KfW IPEX-Bank is making an important contribution to meeting the growing demand for wind technology, which not only benefits energy producers and customers but above all the environment.

KfW has employed and supported people with severe disabilities for many years now. In the interests of inclusion, the aim is to create an environment in which people with severe disabilities are just as natural a part of the KfW community and processes as all other employees. And KfW's commitment has paid off; severely disabled employees constituted around 5.5% of staff in 2016.

And, in living up to the responsibility it has towards its employees, KfW also continued to build on its operational health management initiative in 2016. This included measures such as analysing employees' work-related stress, medical check-ups at all management levels, flu immunisations, company sport clubs and health training.

KfW improved further in well-known employer rankings conducted by market research companies Trendence and Universum in 2016 – thereby bucking the overall trend in the financial services industry. This is clear testimony to the growing public awareness of KfW's appeal as an employer.

### In-house environmental protection developments

KfW has been completely restructuring the central heating and cooling systems at the Frankfurt location since the end of 2016 in reaction to the changing consumption structures within the building complex. The measure is aimed at establishing a centralised, flexible and energy-efficient energy supply to the location that is sustainable in the long term. The use of large-scale heat pumps and combined heat and power systems to supply heating is planned, along with a highly-efficient turbocore chiller for cooling. These measures will likely reduce carbon emissions by around 1,500 t/a.

The internal "fleet environmental protection model" was implemented at the beginning of 2016 for KfW management with

the aim of sustainably reducing the carbon emissions of the managers' company cars. The model has already started to pay off. Average CO<sub>2</sub> emissions for participating company car users were reduced by almost 15%, while 10% of employees eligible for company cars opted for a "BahnCard100" unlimited train travel card instead. Fourteen of the fleet vehicles are electric or hybrid.

KfW Group's considerable reduction in greenhouse gas emissions from business travel, electricity and heating in 2015 of around 16% (2015: 13,628 t CO<sub>2</sub>e, 2014: 16,257 t CO<sub>2</sub>e) is largely based on the significant decline in national and international air travel of almost 22% (2015: 7,394 t CO<sub>2</sub>e, 2014: 9,446 t CO<sub>2</sub>e).

# Risk report

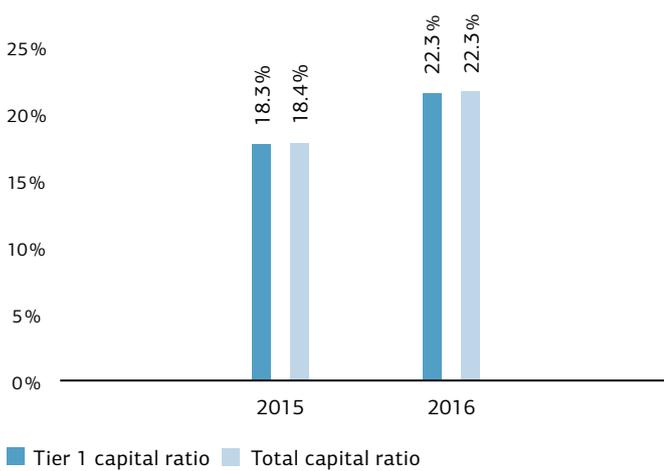
This risk report corresponds in structure, scope and content to the group risk report published in the group management report.

As risk management and risk controlling are focused on KfW Group, a risk report is not prepared at single institution level.

## Overview of key indicators

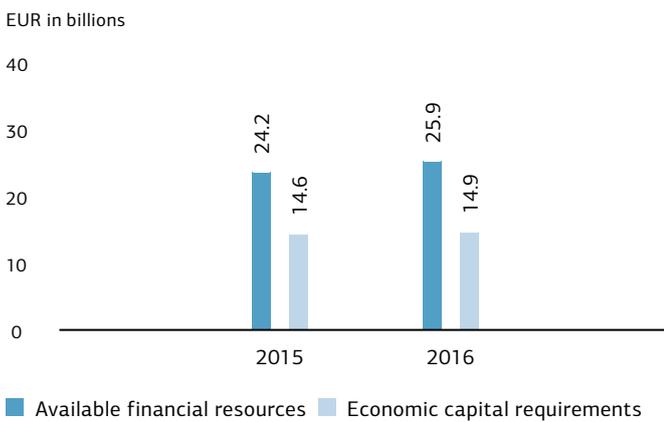
Risks are reported in accordance with KfW Group's internal risk management. The key risk indicators are pre-sented below:

### Regulatory equity ratios: Significant improvement



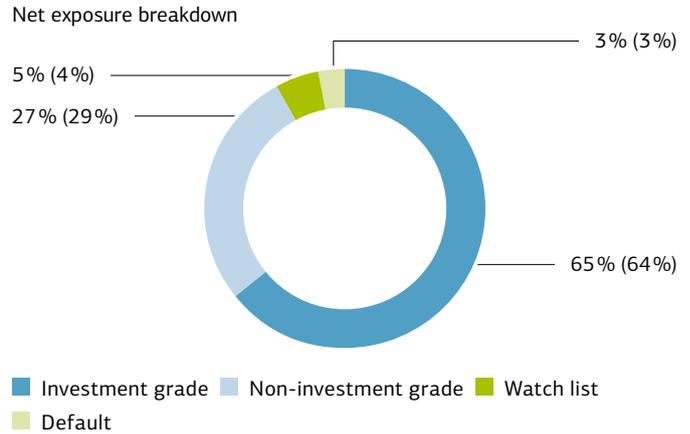
Besides the annual profit, the main force driving the improvement in regulatory equity ratios (based on the analogous application of the internal ratings-based approach (IRBA)) is the lower capital requirement in the derivatives portfolio.

### Risk-bearing capacity: Sound capital adequacy



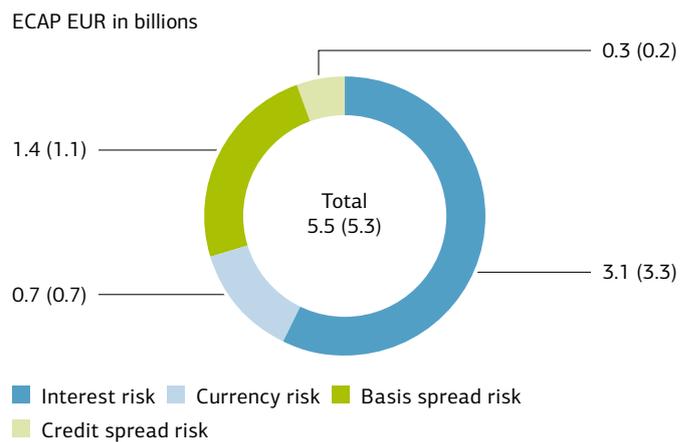
The excess coverage was considerably increased in 2016. Risk-bearing capacity at a solvency level of 99.99% for scenarios is adequate.

### Credit risk: Good credit quality structure maintained 2016 (2015)



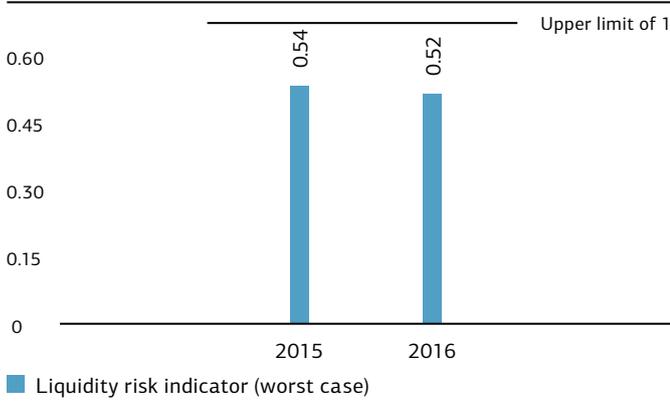
The share of investment grade net exposure comprised 65% of the total net exposure. Risk provisions (specific and portfolio valuation allowances, loan loss provisions) declined slightly in 2016 to EUR 1.7 billion (31 Dec. 2015: EUR 1.8 billion).

### Market price risks: Slight increase in capital requirement 2016 (2015)



The increase in market price risks is primarily due to higher capital requirement for basis spread, currency and credit spread risks. It was offset by lower interest risk in the banking book.

### Liquidity risk: Situation remains comfortable



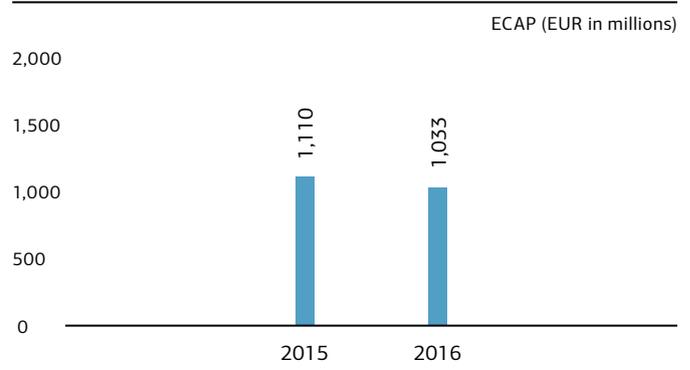
The liquidity risk indicators remained considerably below the internal limit throughout 2016.

### Current developments

Following the fourth consecutive year of moderate global economic growth of just over three percent in 2016, the world economy faces greater uncertainties in 2017. Those uncertainties include, in particular, the economic agenda of the United States (US) under President Trump and its impact. Many financial market participants expect expansionary fiscal policy and consequently noticeable growth impetus in the US, which are, however, associated with the risk of increasing US sovereign debt, a significant rise in the interest rate and a highly volatile US dollar. Nonetheless, the short-term economic prospects in the US remain better than in other industrialised countries. While the euro area economies steered into calmer waters than in previous years, this development is overshadowed by potential policy shifts (parliamentary and presidential elections in the European Union's core countries: the Netherlands, France and Germany, and likely Italy as well), uncertainty about the future of the European Union (EU) and structural problems. The United Kingdom's (UK) recent strong economic momentum will likely wane given the prospects of Brexit, with the growth outlook for Japan expected to remain low.

Emerging economies retained a growth level approximating that of the weak previous year, albeit with considerable regional differences. The Asian economy driven by India, China and many smaller economies remained relatively robust, while particularly Latin American and Sub-Saharan African countries disappointed. All in all, the prospects for developing countries in 2017 remain muted. The recent stabilising energy prices are likely to have a positive effect on the macroeconomic indicators of certain countries, some of which are still in recession. However, the rise in interest rates in the US in connection with the strong US dollar

### Operational risk: Slight decrease in capital requirement



The capital requirement remained largely stable throughout the year. The slight decrease was due to the refinement of methods used in the calculation model.

could result in renewed capital outflows and an increase in foreign currency debt in these countries.

China's economic transition represents a further major threat to the global economy, in general: if crisis developments slow Chinese growth more than expected, there could be serious global repercussions. Last but not least, geopolitical tension is also likely to continue rising this year. The combination of existing conflict situations with unconventional US foreign, trade and security policy or even extremely protectionist measures poses an almost unpredictable risk of potential setback. These trends are under constant observation and assessment at KfW Group. The downward adjustments to the country risk assessment in 2016 mainly concerned countries that are highly vulnerable to external shocks (exporters of commodities, above all) and those with significantly increased political risks. Moreover, new business in some of these countries was also restricted.

The European banking sector also saw considerable uncertainty in 2016. Although the beginning of the financial crisis dates back several years, many bank balance sheets have yet to be cleaned up. Investors' focus has moved back to the extremely large derivatives positions of some global systemically important banks. Overall, declining investor confidence in the banking sector put heavy pressure on banks' share prices, particularly at the beginning of the year. By the end of 2016, practically no systemically important European bank was valued with a price-to-book ratio of more than 100%. The unexpected Brexit vote fuelled additional fears. The consequences for the UK banking sector depend heavily on the forthcoming negotiations with the EU and will not be foreseeable until the medium term.

The German banking sector also faced numerous problems in 2016. High legal risk costs, comprehensive restructuring measures and the serious shipping crisis, which has persisted for close to a decade, have caused financial distress for several major banks. Interest risk has also been on the rise as a consequence of the low interest environment – particularly for savings banks and cooperative banks, which have engaged in increasingly excessive maturity transformation to maintain or stabilise their interest margin. Overall, the sector's low profitability remains the greatest weakness. The European Banking Authority (EBA) stress test, which simulated a new financial and economic crisis, revealed that Italian, Irish, Austrian and some German banks fared badly. The Italian banking sector crisis continued in 2016, with solutions to the problems making slow progress. Both the targeted reduction in holdings of non-performing loans, such as through securitisations, and consolidation in the Italian banking sector are moving at a sluggish pace. The danger of a spillover to banks in other southern European countries (e.g. Portugal or Spain) persists. The environment has not improved in major emerging economies; for instance banks in Brazil and Russia remain under pressure. Turkish banks, too, are suffering from downgrades by external rating agencies and eroding investor confidence in view of the political changes in their country.

The sustained low interest rate environment will continue to exert pressure on German banking sector profitability in 2017. The currently high margin pressure, new competitors (such as FinTech (financial services and technology) companies) and increasing regulatory requirements will force banks to cut more costs and could accelerate the consolidation process.

EU banks significantly boosted their capitalisation levels, although banks in southern European countries report a below-average tier 1 capital ratio, meaning that strengthening capital will still be very important for them in 2017. A number of banks, particularly those from the Nordic countries, Germany, the Netherlands and Switzerland, could be confronted with increasing capital requirements due to the ongoing implementation of Basel III requirements and, above all, the new requirements affecting the calculation of risk assets (Basel IV).

The uncertainty factors in the European banking market remain significant in 2017. In addition to the unsolved banking crisis in Italy, political risks from the election results in the Netherlands, France and Germany, along with the EU's Brexit negotiations (commencing in 2017) could also place a burden on banks. The outlook for the US banking market is positive for 2017 given that banks' profitability is set to improve following further rate hikes by the US Federal Reserve and continued credit growth. The banking markets in developing countries and emerging economies may experience the downside of the climbing interest rates in the United States and a potential further appreciation of the US dollar. This affects countries dependent on foreign refinancing, such as Turkey, but also those in which banks have granted the majority of their loans in US dollars, including some Commonwealth of Independent States (CIS) and Latin American

countries. KfW Group closely analyses the developments on the international banking markets. Risk-mitigating measures for various markets in the Sub-Saharan African and Latin American regions in particular were stepped up in 2016.

Positive overall performance is expected for the German and European corporate sector in 2017 in light of stable domestic demand and increasing exports. However, there is heightened uncertainty worldwide due to the developments mentioned above. In particular, globally active export-led companies face another challenging year. The offshore oil industry and commercial shipping continue to grapple with excess supply, meaning that market participants have to make cost adjustments to cope with the market environment. Overall, KfW Group expects moderate deterioration in the credit quality of the portfolio as a whole with the possibility of specific valuation allowances. The sub-portfolios concerned are being monitored closely.

The group's portfolio recorded stable performance overall. All recognisable risks are measured using conservative standards and are taken into account in KfW Group's new business management through the systematic implementation of risk guidelines. The regularly performed calculations of risk-bearing capacity show that KfW Group can bear the risks assumed in the context of its mandate – even based on conservative stress scenarios. In financial year 2016, as in previous years, KfW Group systematically refined the processes and instruments in its Risk Management and Controlling department, taking into account current banking regulations. This particularly affected developing and implementing limits on shadow banks. Regulatory risks are analysed and measured on an ad hoc basis (e.g. in connection with the finalisation of capital requirements in accordance with Basel III) and in the context of scenario observations. The Market Price Risk Committee resolved to establish the Market Price Risk Working Group to support the committee.

As a result of an amendment to the KfW Law in 2013 and the issuance of the "Regulation concerning key banking supervision standards under the German Banking Act to be declared applicable by analogy to KfW and supervision of compliance to these standards to be assigned to the German Federal Financial Supervisory Authority" (the "KfW Regulation"), the German legislature enacted an expanded application of the KWG to KfW. KfW has since been obliged to apply key bank regulatory standards (KWG and Capital Requirements Regulation, "CRR") by analogy. The German Federal Financial Supervisory Authority and the German Central Bank (Bundesbank) are responsible for supervising compliance with the relevant applicable bank regulatory standards. The KfW Regulation provides for their entry into force in stages. The corporate governance rules have been binding since mid-2014; the other provisions since the start of 2016. Since autumn 2015, KfW has been undergoing the approval process for application of the advanced IRBA. Until the planned initial IRBA (partial) approval as of 30 June 2017, KfW is applying the credit risk standardised approach (CRSA) to regulatory reporting; internal management and capital market

communication have continued to apply the current IRBA by analogy for reasons of consistency. Once KfW has obtained regulatory approval for the IRBA, capital market communication, internal management and reporting will apply the approved IRB

### Basic principles and objectives of risk management

KfW Group has a statutory promotional mandate, which provides the basis for its special position and institutional structure. Sustainable promotion is KfW Group's overarching purpose. In order to utilise available resources to best carry out KfW Group's promotional mandate, it is vital to measure and control incurred risks. As part of its risk management, KfW Group takes risks only to the extent that they appear manageable in the context of its current and anticipated earnings position and the development of the risks. KfW Group's risk/return management takes into account the special characteristics of a promotional bank, with adherence to supervisory requirements constituting a fundamental prerequisite to the group's business activities.

### Organisation of risk management and monitoring

#### Risk management bodies and responsibilities

As part of its overall responsibility, KfW's Executive Board determines the group's risk policies. The Board of Supervisory Directors is informed at least quarterly of KfW Group's risk situation. The Presidial and Nomination Committee is responsible for dealing with legal and administrative matters as well as fundamental business and corporate policy issues. Moreover, in certain urgent cases, the committee has the authority to adopt resolutions in lieu of the Board of Supervisory Directors. The Chairman of the Board of Supervisory Directors decides whether an issue is urgent. The Risk and Credit Committee is primarily responsible for advising the Board of Supervisory Directors about the group's current and future overall risk tolerance and strategy and supports it in monitoring implementation of the latter. It decides on loan approvals (including loans to members of management), operational level equity investments, funding and swap transactions where committee authorisation is required by the KfW Bylaws. The Audit Committee monitors, above all, the accounting process and the effectiveness of the risk management system and internal monitoring procedures and offers recommendations to the Board of Supervisory Directors concerning its approval of the consolidated financial statements. The Remuneration Committee monitors whether the structure of the remuneration

approach. The IRBA approval process is currently scheduled to be fully completed as of 1 January 2020.

KfW Group's risk culture forms the basis for efficient risk management; this culture is largely characterised by the promotional bank business model with no primary intention of generating profit and no trading book. In addition to the code of conduct, the risk culture is also marked by open communication, clear responsibilities and an appropriate incentive structure. In order to solidify risk management and controlling know-how within its organisation, KfW Group offers its employees training that includes a modular programme on risk topics. The training programme enables management and non-management staff throughout KfW Group to acquire basic knowledge or to deepen their specialised knowledge.

system for the Executive Board and employees is appropriate. In accordance with applicable bank regulatory provisions, the Remuneration Committee is also responsible for monitoring whether the structure of the remuneration system for the heads of the Risk Controlling and Compliance functions and for any employees who have a significant impact on the group's overall risk profile is appropriate.

Risk management within KfW Group is exercised by closely inter-linked decision-making bodies. At the top of the system is the Executive Board, which takes the key decisions on risk policy. There are three risk committees below the level of the Executive Board (Credit Risk Committee, Market Price Risk Committee and Operational Risk Committee) which prepare decisions for the Executive Board and also take their own decisions within their remits. The committees also perform KfW Group management functions; thus, representatives from the subsidiaries KfW IPEX-Bank and DEG are also included. Additional working groups do the preliminary work for these committees. The middle and back office departments (*Marktfolge*) and Risk Controlling generally have a veto right in the committees; if a committee fails to reach a unanimous decision, the issue may be escalated to the Executive Board level.



### Credit Risk Committee

The Credit Risk Committee is chaired by the Chief Risk Officer and meets once a week. The committee's other voting members are the Director of Credit Risk Management, attending members of the Executive Board and KfW IPEX-Bank's Chief Risk Officer (CRO). The Credit Risk Committee is supported by various working groups. The Country Rating Working Group serves as the central unit for assessing country risk. The Collateral Working Group ensures a uniform approach to all essential aspects of collateral acceptance and valuation as well as the collateral management processes. The Rating Systems Working Group is responsible for all essential aspects of credit risk measurement instruments. The Corporate Sector Risk Working Group analyses sector and product-related credit risks in the corporate segment. The weekly Credit Risk Committee meetings in particular involve decisions on loans and credit lines. KfW IPEX-Bank's and DEG's commitments are also presented to the Credit Risk Committee. Additional meetings, held on a quarterly basis, also include the Director of Risk Controlling and the Director of Legal Affairs as well as representatives of the business sectors and DEG. Internal Auditing and Compliance have guest status. Reports about the development of regulatory requirements, e.g. the German Minimum Requirements for Risk Management (*Mindestanforderungen an das Risikomanagement* – "MaRisk") and KWG, their impact and the progress of implementation projects in KfW Group, are made at this quarterly meeting. The committee also approves major changes to existing risk principles and credit risk methods as well as new principles and methods and procedural rules for the working groups performing the groundwork. The committee also monitors KfW Group's loan portfolio, including country and sector risks.

### Market Price Risk Committee

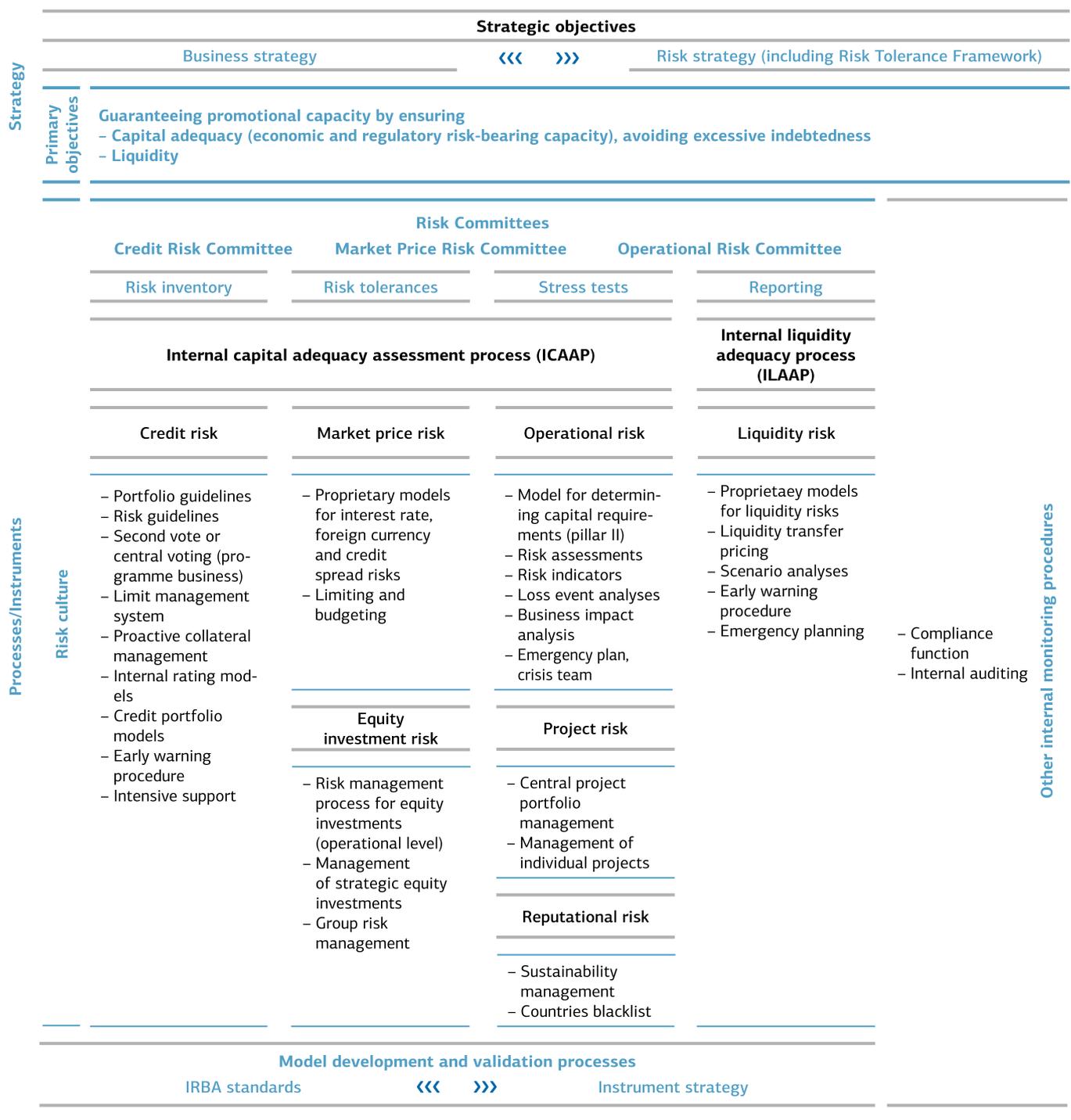
The Market Price Risk Committee is chaired by the Chief Risk Officer and meets once a month. The committee's other members include the Executive Board members responsible for capital markets business and finance as well as the directors of Financial Markets, Risk Controlling, Accounting, Transaction Management, Group Development and Economics. Internal Auditing and Compliance have guest status. The Chief Risk Officers of KfW IPEX-Bank and DEG attend the meetings on a quarterly basis and as necessary. The Market Price Risk Committee discusses KfW Group's market price risk position and assesses the market price risk strategy on a monthly basis. The committee also monitors KfW Group's liquidity risk position and decides on all questions relating to the principles and methods for the

management of market price, liquidity risks and funding as well as transfer pricing and the valuation model for commercial transactions. The committee prepares the final decision of the Executive Board regarding the interest risk strategy. The Market Price Risk Committee is supported by the Surveillance Committee, which discusses the valuation of securities and market developments and impairments of securities, and the Hedge Committee, which deals primarily with the earnings effects of IFRS hedge accounting and its further development. In addition to accepting validation reports and changes to models, the Market Price Risk Working Group also develops and decides – or prepares decisions by the Market Price Risk Committee – on other methodological issues relating to market price and liquidity risks as well as measurement issues.

### Operational Risk Committee

The Operational Risk Committee meets once a quarter and supports the Executive Board in the areas of operational risk and business continuity management. It comprises senior vice presidents (or represented by first vice presidents). It is chaired by the Director of Risk Controlling. KfW IPEX-Bank and DEG are represented in the committee. Internal Auditing has guest status. The committee's tasks are to adopt resolutions and to approve risk principles, methods and instruments. In addition, the committee is responsible for managing operational risk (OpRisk) and taking decisions regarding cross-functional group-wide measures. The committee also discusses any major or potential operational risk loss events and evaluates any group-wide action required. In the area of business continuity management (BCM) the committee establishes crisis-prevention and emergency-planning measures using the results of the annual business impact analysis. Monitoring is based on reports about planned or implemented emergency and crisis team tests and significant disruptions to business. All resolutions and recommendations by the Operational Risk Committee are presented to the Executive Board.

Additionally, the subsidiaries and organisational entities of KfW Group exercise their own control functions within the group-wide risk management system. In these entities, group-wide projects and working groups ensure a coordinated approach, for example, in the rollout of rating instruments to subsidiaries or in the management and valuation of collateral. The responsibility for developing and structuring risk management and risk control activities is located outside the market areas and lies in particular with the Risk Controlling department.



To ensure capital adequacy and liquidity in line with KfW Group’s defined risk tolerance, Risk Controlling formulates and regularly reviews the **risk strategy** of KfW Group, taking into account its significant subsidiaries.

The orientation of KfW Group’s risk strategy is in line with its business strategy and takes into account the regulatory requirements relating to KfW Group’s business model. The risk strategy translates the group’s long-term and strategic risk objectives into operational risk management requirements. This involves defining risk management objectives for core business activities

and measures for achieving targets as well as setting risk tolerance limits for managing KfW Group’s material risks. To implement the risk strategy, a variety of instruments to control KfW Group’s major risks are used, including risk management instruments for individual counterparties and portfolios.

In order to determine its material risks, KfW Group conducts a **risk inventory** at least once a year. The risk inventory identifies and defines types of risks relevant to KfW Group in a structured process and then subjects these risks to an evaluation of materiality. The materiality of a risk type depends primarily on the potential

danger for KfW Group's net assets, earnings and liquidity. The key outcome of the risk inventory is an overall risk profile, which provides an overview of KfW Group's material and immaterial risk types. The 2016 inventory identified that KfW Group faces the following material risks: credit, market price, liquidity, operational, equity investment, project and reputational risks. **Risk concentrations** within a risk type or across various risk types are taken into account in the risk inventory.

Risk reporting is in line with regulatory requirements (MaRisk). The Executive Board is informed about KfW Group's risk situation on a monthly basis. A risk report is issued quarterly to KfW Group's supervisory bodies. The respective bodies are informed on an ad hoc basis as required. The risk indicators and information systems used by the Risk Management and Controlling department are reviewed on an ongoing basis.

#### INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS

KfW Group's internal capital adequacy assessment process is characterised by the fact that compliance with regulatory and economic requirements regarding risk-bearing capacity are equally important overarching objectives for KfW Group. Accordingly, all risk monitoring and management measures must ensure compliance with both an economic solvency target and minimum requirements for the regulatory capital ratios. This approach combines economically practicable capital management with the obligation to comply with regulatory capital requirements. KfW Group takes a uniform definition of capital as the basis for the close integration of these two perspectives: regulatory capital in line with Articles 25–91 of Regulation (EU) No. 575/2013 (CRR) is used as available financial resources for both views.

A further core feature of the capital adequacy assessment process is the proactive focus resulting from an additional forward-looking component. This focus evaluates the absorption potential of KfW Group's reserves – and thus also its ability to act – in the event of certain economic and stress scenarios. A traffic light system, established in this context with thresholds for regulatory and economic risk-bearing capacity, signals the required action in the event of critical developments as part of operational and strategic management.

KfW Group's risk-bearing capacity concept serves first and foremost to protect debt capital providers from losses and therefore adopts a liquidation approach in its basic form. However, the addition of a forward-looking component, which also guarantees compliance with regulatory capital requirements, expands the concept to include a going-concern view. KfW Group's risk-bearing concept thus includes elements of both basic types of risk-bearing capacity approaches.

The targets for ensuring risk-bearing capacity are addressed via budgets based on risk-weighted assets at the level of each business sector/departments. The allocated budgets are available

The methods and instruments for KfW group-wide risk analysis and controls are regularly validated and enhanced through further development. The focus is on models to measure, control and price both credit and market price risks. Validation and further development activities also take account of regulatory requirements.

The risk management approach is set out in KfW Group's risk manual. The risk manual stipulates the framework for the application of uniform procedures and rules and regulations to identify, measure, control and monitor risk. The rules and regulations laid out in the risk manual are binding for the entire KfW Group, accessible to all employees and continually updated. KfW group-wide regulations are supplemented by rules specific to each business sector. See the following sections for details on other elements of KfW Group's risk management approach.

to the business sectors/departments for backing old and new business for the various types of risk. Capital allocation is conducted as part of KfW Group's annual business sector planning. In addition to the requirements induced by business sector planning, this process also takes into account the risk objectives and the bank's risk tolerance. Budget compliance is checked on a monthly basis and action is taken, if necessary. Moreover, economic capital budgets are set for different types of risk, functioning as their central controlling and limiting variable, and monitored quarterly.

To avoid excessive debt, the leverage ratio is integrated into the capital adequacy assessment process as a further control variable. Similarly to risk-bearing capacity metrics, the leverage ratio is taken into account in additional forward-looking projections, and compliance with defined traffic light limits checked on at least a quarterly basis.

In addition to KfW Group's risk-bearing capacity concept, the capital planning process monitors the medium-term development of capital adequacy. Reliance on scenario-based extrapolations of regulatory and economic risk-bearing capacity as well as the leverage ratio over a multi-year observation horizon enables the capital planning process to identify potential capital bottlenecks early on in order to derive recommendations for action that strengthen capital or reduce risk, as necessary. The process takes into account changes in strategic objectives, business activity and the economic environment. In addition to a base case, regulatory and economic risk-bearing capacity and the leverage ratio are also taken into account in a stress case. Capital planning is performed as part of the overall KfW group-wide planning and strategy process.

The risk-bearing capacity concept is subject to annual review of its limits and restrictions. The results are taken into account accordingly in the assessment of risk-bearing capacity.

## Regulatory risk-bearing capacity

### Key regulatory figures (based on analogous application of advanced IRBA)

	31 Dec. 2016	31 Dec. 2015
	EUR in millions	EUR in millions
Total risk exposure in accordance with Art. 92 CRR	116,108	131,773
– Credit risk	108,723	123,956
– Market price risk	1,298	1,266
– Operational risk	6,087	6,551
Regulatory capital (available financial resources)	25,890	24,210
– Tier 1 capital	25,890	24,090
– Tier 2 capital	0	120
Tier 1 capital ratio	22.3%	18.3%
Total capital ratio	22.3%	18.4%

The group has been subject to the KWG or CRR regulatory capital requirements since 1 January 2016. KfW Group reports according to CRSA to the banking supervisory authorities until it has obtained supervisory approval of the advanced IRBA, for which an application is pending. For internal control purposes, however, as in previous years, it also continues to calculate capital ratios voluntarily based on the main legal requirements of the advanced IRBA.

KfW Group's total capital ratio (based on analogous application of the advanced IRBA) improved significantly in 2016. As of year-end 2016, the total capital ratio taking into account consolidated comprehensive income was 22.3% (31 December 2015: 18.4%). This upward trend was driven mainly by the annual profit, which resulted in a sizable increase in available financial resources, and the reduction of the total amount at risk. This reduction was largely due to the CRSA taking financial securities into account as well as decreases in the fair value of derivatives. Both effects were reflected in the credit valuation adjustment (CVA) charge in addition to counterparty default risk.

#### Economic risk-bearing capacity

To assess its economic risk-bearing capacity, KfW Group compares its economic capital requirement for potential losses from material quantifiable risks to its available financial resources. KfW Group bases its calculation of the economic capital requirement on a solvency target of 99.99% and a time frame of one year. The aggregation of the economic capital requirement across various types of risks is made through addition without taking account of diversification effects.

The most significant risk type for KfW Group is **credit risk**. Credit risk is the risk of losses if business partners fail to meet their payment obligations to KfW Group at all, in due time or in full (default) or if their credit ratings deteriorate (migration). Credit risk includes settlement risk involved in settling derivative transactions. The economic capital requirement for credit risk is quantified by the Risk Controlling department, largely with the help of statistical models. For counterparty risk, the

loss potential is computed using a loan portfolio model and the risk measure of "credit value-at-risk". The difference between credit value-at-risk and expected loss is referred to as the economic capital requirement. Migration risk is taken into account in the forward-looking component of the calculation of risk-bearing capacity on the basis of scenarios. For settlement risks, the regulatory capital requirement is applied in calculating risk-bearing capacity if there are any open settlement exposures at the end of the month.

The group determines a current capital requirement for the separate line item required in macro hedge accounting. The separate line item is required to be presented on the asset side of the IFRS statement of financial position to show the cumulative adjustments to the carrying amount of the hedged item. The capital resources are provided using individual credit risk parameters of the hedged transactions and are thus allocated accordingly at individual exposure level.

The economic capital requirement for **market price risk** is calculated on the basis of the value-at-risk concept. Pillar II's economic analysis takes account of interest risk in the banking book, foreign currency risk, credit spread risk for securities, and basis spread risk. The possible loss of present value or price is determined for each type of market price risk using a value-at-risk based on statistical models. Moreover, a stop loss buffer is maintained for interest and foreign currency risks. Ultimately, the economic capital requirement is defined as the sum of value-at-risk and an additional stop loss buffer.

The capital requirement for **operational risk** is calculated using an internal statistical model, which was designed based on regulatory requirements for advanced measurement approaches. It takes a risk-sensitive approach to internal and external event data and risk scenarios. The capital requirement is calculated using diversification effects at the business sector level. Moreover, the measurement of the quality of operational risk management within the group generates premiums and discounts that are then applied to the capital requirement.

Project risks are also taken into account in the risk-bearing capacity concept. Both quantified individual risks from major projects and general assumptions about potential losses in the project portfolio are included in risk measurement.

KfW Group also includes **hidden burdens** (*stille Lasten*) for securities held as fixed assets, which are held directly as an economic capital requirement without including offsetting hidden reserves (*stille Reserven*).

Using this method, the economic risk-bearing capacity as of 31 December 2016 satisfied a solvency level of 99.99%. The excess coverage of the available financial resources beyond the total capital requirement as of 31 December 2016 of EUR 10,971 million increased significantly compared to 31 December 2015 (EUR 9,653 million). This increase is largely due to the inclusion of the 2016 annual profit in the calculation of the available financial resources. The increased capital requirement for credit risk is primarily due to the refinement of methods used in the loan portfolio model as well as a higher concentration risks as a result of a merger in the German banking market. The increased capital requirement for market price risks is mainly due to higher basis spread risks. The capital requirement for operational risks and hidden burdens fell slightly, while that for project risks rose.

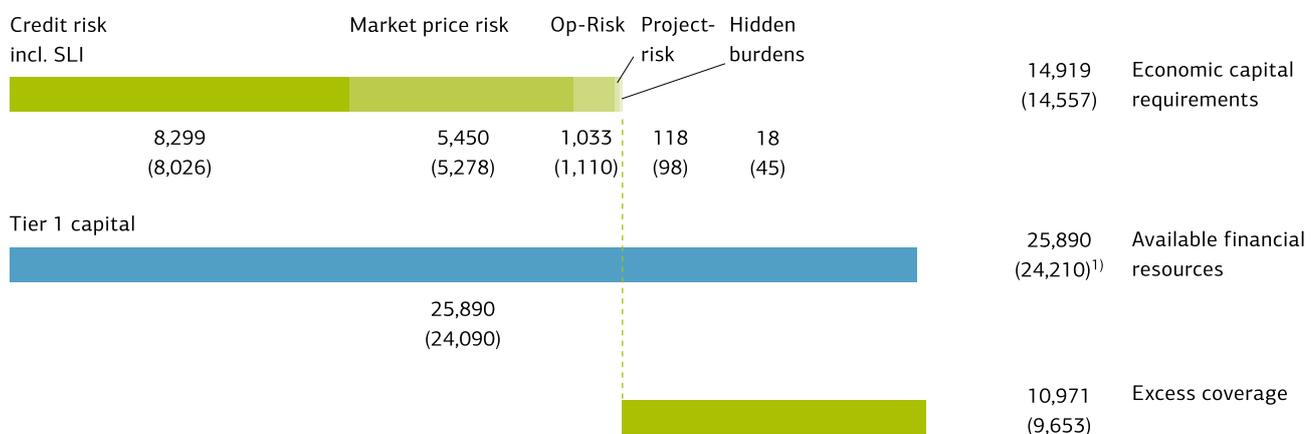
KfW Group manages **liquidity risk** by regularly monitoring the appropriate internal key figures and the utilisation threshold in accordance with Article 4 of the KfW Law. Internal calculations relating to the liquidity situation are based on projections of liquidity needs and total liquidity resources, which are both subjected to stress scenarios of differing severity. No capital backing is currently provided as part of calculating risk-bearing capacity.

**Reputational risks** are evaluated and managed on a qualitative basis. No capital backing is currently provided as part of calculating risk-bearing capacity.

KfW Group's risk measurement is based on state-of-the-art models used in banking practice. However, each model represents a simplification of a complex reality and builds on the assumption that risk parameters observed in the past can be considered representative of the future. Not all possible inputs and their complex interactions can be identified and modelled for the risk development of a portfolio. This is one reason why KfW Group carries out stress tests with both the credit risk models and the market price risk models. KfW Group also continually works to refine its risk models and processes.

## Economic risk-bearing capacity as of 31 December 2016

EUR in millions



In brackets: figures as of 31 December 2015

<sup>1)</sup> As of 31 December 2015 KfW's tier 2 capital stood at EUR 120 million.

### Stress and scenario calculations

To ensure a stronger early indicator function and proactive focus in its risk-bearing capacity concept, KfW Group monitors, on a quarterly basis, a forecast scenario (baseline scenario), a downturn scenario (slight economic slowdown) and a stress scenario (deep recession) as well as their respective effects on economic and regulatory risk-bearing capacity. This forward-looking perspective illustrates KfW Group's resilience and ability to act in the event of these scenarios and, accordingly, delivers

direct input to management. A forecast and stress scenario are also calculated for the leverage ratio.

The forecast scenario provides a preview of risk-bearing capacity at the relevant year-end and includes the projected business performance, expected comprehensive income, and other effects influencing risk-bearing capacity, such as foreseeable changes in the capital structure and methodological developments. The current forecast for 31 December 2017 shows almost constant

excess coverage of available financial resources over the economic capital requirement compared with 31 December 2016 as well as a slight drop in the total capital ratio in the IRBA compared with 31 December 2016.

In the downturn and stress scenarios, effects on earnings and changes in capital requirements are simulated for a twelve-month period assuming negative economic development scenarios of varying severity. The effects of a severe global recession emanating from the euro area are depicted in the stress scenario. In both scenarios, KfW Group currently assumes an overall increase in credit risk (counterparty and migration risks). In these scenarios, the EUR and USD interest rates as well as the EUR-USD exchange rate are forecast to develop in line with the economic situation. At the same time, it is assumed that increasing market uncertainties will lead to increased volatility in interest rates, currencies and credit spreads, as a result of which the economic capital requirement for the corresponding types of risk will rise. Losses from securities prices as well as

from operational and project risk further reduce available financial resources in the stress scenario.

Overall, risk-bearing capacity at a solvency level of 99.99% for all three scenarios and the leverage ratio in the forecast and stress scenarios are at an adequate level.

Further stress tests are carried out in addition to the economic scenarios to examine the resilience of KfW Group's economic and regulatory risk-bearing capacity. Current potential macro-economic dangers form the basis for the varying scenario stress tests. In 2016, they focused on Brexit scenarios, a sustained low oil price, consolidation pressure in the banking sector and the crisis in Turkey. The concentration and inverse stress tests show how concentration risks and other potential dangers materialising in unfavourable combinations could jeopardise KfW Group's business model. In 2016, they also simulated the potential impact of the planned regulatory changes under Basel III on the group's capital ratios.

### Types of risk

#### COUNTERPARTY DEFAULT RISK

KfW Group faces counterparty risks<sup>1)</sup> in the context of its promotional mandate. In the domestic promotional lending business, the majority of ultimate borrower default risks are borne by the on-lending institutions. Due to the business model, this results in a large proportion of bank risks in the portfolio. Other main risks result from promotional activities in the area of start-up

finance for SMEs and equity investments. Particularly in these segments of domestic promotion, KfW Group bears the risk stemming from ultimate borrowers. In addition, KfW Group faces risks in the business sectors Export and project finance as well as Promotion of developing countries and emerging economies.

Debtor level	Sovereigns	Banks	Enterprises	Other
Rating procedure (Probability of default)	- Country rating	- Bank rating	- Corporate rating - SME rating	- Retail - Structured products - Start-up rating - Investment fund rating - Special financing - Self-employment rating
Business level	<b>Exposure at default</b>			
Portfolio level	<b>Loss given default</b>			
	<b>Loan portfolio model</b>			

Validation and further development processes

Counterparty default risk is measured by estimating the probability of default (PD), the exposure at default (EAD) and the loss given default (LGD). The product of the three aforementioned variables is the loss that can be expected, statistically,

on average over many years. The expected loss is taken into account when determining risk-bearing capacity by deducting it from the available financial resources in accordance with the supervisory requirements of Article 158 of the CRR.

<sup>1)</sup> Counterparty default risk is defined as the risk of financial loss that can occur if the borrower or counterparty fails to meet contractual payment obligations. Counterparty default risk also includes country risk, comprising transfer, conversion and political risks.

KfW Group uses internal rating procedures for the measurement of the probability of default for banks, countries, corporations, small and medium-sized enterprises, start-ups, the self-employed, investment funds and private equity investors. These procedures are based on scorecards<sup>2)</sup> and follow a consistent uniform model. Simulation and cash flow-based rating procedures are used for significant parts of special financing and structured products, some of which were licensed by an external provider. For structured products, tranche ratings are determined on the basis of the default pattern of the asset pool and the waterfall structure of the transactions. The rating procedures aim to predict the probability of default on a one-year basis. As a rule, the middle and back office departments are responsible for preparing ratings for risk-bearing business. Ratings are updated regularly, at least once per year.

The probability of default is mapped on a uniform master scale for the entire KfW Group, allowing comparison of ratings from different rating procedures and business sectors. The master scale consists of 20 distinct classes which are divided into four groups: investment grade, non-investment grade, watch list and default. The range of default probabilities and the average default probability are defined for each class of the master scale. There are operating procedures specifying the responsibilities, competencies and control mechanisms associated with each rating procedure. External ratings are mapped to KfW Group's master scale to ensure the comparability of internal ratings with ratings of external rating agencies. Periodic validation and continued development of the internal rating procedures ensure a rapid response to changes in overall conditions.

Exposure at default and valuation of collateral have significant influence on the severity of loss. Collateral has a risk-mitigating effect in calculating loss given default. In valuing acceptable collateral, the expected net revenue from collateral realisation in the case of loss, including haircuts, is determined. For tangible collateral, the haircuts are attributable, among other things, to devaluation resulting from depreciation, in addition to fluctuations in market prices and the costs of realisation. Depending on the availability of data, the various valuation procedures for individual types of collateral are based on internal and external historical data and on expert estimates. A risk principle for loan collateral regulates uniform management, valuation and recognition of collateral across KfW Group. In addition to net revenue from collateral realisation, the recovery rate for uncollateralised exposure amounts is also an important component in determining loss given default (LGD). All valuation parameters are regularly subject to validation.

KfW Group has limit management systems, risk guidelines and various portfolio guidelines to limit risks from new business. This set of risk management instruments forms the basis for the second vote on lending transactions, serves as an orientation guide for loan approvals and has the function of ensuring the appropriate quality and risk structure of KfW Group's portfolio. The special nature of KfW Group's promotional business is taken into account in the process. At KfW, Group Risk Management has the second vote on a single exposure level. KfW IPEX-Bank and DEG each have their own second vote independent of the front office. The relevant business decision-making processes are structured with a view to risk. Lending transactions currently require a second vote depending on the type, scope (material risk content and effect on the overall risk position) and complexity of the transaction. The qualification levels for approval of new business depend on rating, total commitments to the group of connected borrowers and product type. Approval is also required by the Board of Supervisory Directors' Risk and Credit Committee for pre-defined, individual transaction volumes (according to rating and product type).

The portfolio guidelines distinguish between different types of counterparties and product variants and define the conditions under which business transactions may generally be conducted. In addition, risk guidelines for countries, sectors and products are defined in order to react to existing or potential negative developments with specific requirements for lending. The limit management systems ultimately track both risk concentrations (concentration limits) and credit rating dependent individual counterparty risk (counterparty limits). Concentration limits serve to restrict risk concentrations in the loan portfolio and thus to prevent major individual losses. Counterparty limits serve to fine tune the counterparty-specific management of credit default risk.

Existing higher-risk exposures are divided into a watch list and a list for non-performing loans. The watch list serves to identify potential problem loans early and, if necessary, to make preparations for handling these loans. It regularly reviews and documents the economic situation, the particular borrower's market environment and the collateral provided, and formulates proposals for remedial action – particularly proposals for risk-limiting measures. Non-performing loans and to a great extent watch-list loan commitments<sup>3)</sup> are handed over to restructuring units. This transfer of responsibility enables the involvement of specialists from an early stage to ensure professional management of problematic loans. The objective of this system is to achieve recovery of a loan through restructuring, reorganisation and workout arrangements. If the business partner is deemed incapable or unworthy of restructuring, the priority becomes

<sup>2)</sup> A scorecard is a mathematical and statistical model and/or an expert knowledge-based model. The individual risk factors considered relevant for credit rating are converted into a score depending on their value and weighted for aggregation.

<sup>3)</sup> The assumption of responsibility for watch-list cases at KfW IPEX-Bank is decided on a case-by-case basis by Risk Management in consultation with the unit responsible for restructuring.

optimum realisation of the asset and the related collateral. The Restructuring division is responsible for non-performing loans and for providing intensive support to banks and higher volume loans with a risk amount greater than EUR 1 million in the KfW portfolio. The portfolio credit management department is responsible for supporting retail business. KfW IPEX-Bank and DEG's non-performing loans and commitments requiring intensive support are managed directly by each subsidiary. If more than one KfW Group company is involved, Restructuring will coordinate centrally. Internal interface regulations are in place in the relevant business sectors to ensure clear control of responsibilities and allocation. Restructuring also cooperates closely with the market areas and the central Legal Affairs department.

In the event of a crisis in the banking sector, the Risk Management department has to be able to act immediately both in-house and externally. A financial institution crisis plan is also in place for this purpose. It primarily provides for the establishment of a working group headed by the Credit Risk Management department, immediate loss analysis and implementation of the necessary next steps.

### Risk provisions for lending business

KfW Group takes appropriate measures to address all identifiable default risks in its lending business by making risk provisions for loans. These risks include the political risk resulting from financing transactions outside Germany. For loans with an imminent risk of default (i.e. non-performing loans), KfW Group recognises individual impairment charges or provisions for undisbursed portions. These events are identified on the basis of criteria that meet both CRR and IFRS requirements. Criteria include the identification of considerable financial difficulties on the part of the debtor, payment arrears, concessions made to the debtor owing to its financial situation (for example, in the context of restructuring measures), conspicuous measures

undertaken by the debtor to increase its liquidity, and a substantial deterioration in the value of collateral received. Individual impairment charges are determined by means of an impairment procedure. The calculation of individual impairment charges in the non-retail business incorporates an individual assessment of the borrower's ability to make payments in the future. The calculation takes into account the scope and value of the collateral as well as the political risk. A simplified impairment procedure is performed for small and standardised loans (retail business) on the basis of homogeneous sub-portfolios.

Risk provisions for latent risks (i.e. portfolio impairment) are derived from the valuation of loan receivables in the context of annual rating procedures and collateral valuations. Portfolio impairment charges are recorded for both economic and political risks based on the expected loss model described above, which is adjusted for IFRS purposes. Risk provisions for irrevocable loan commitments and financial guarantees are set up using the same method of calculation.

### Maximum risk of default

According to IFRS 7.36, the maximum exposure to credit risk for KfW Group arising from financial instruments is the total loss of the respective risk positions. Contingent liabilities and irrevocable loan commitments are also taken into account. Carrying amounts are reduced by the risk provisions made.

Payment arrears on the balance sheet date were reported only in Loans and advances to banks and customers, and Securities and investments. Individual impairment charges were also reported under Contingent liabilities and Irrevocable loan commitments.

## Maximum risk of default

EUR in millions

	Loans and advances to banks		Loans and advances to customers		Value adjustments from macro fair value hedge accounting	
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015
Carrying amount as equivalent for maximum risk of default	275,752	276,880	135,265	133,135	13,917	14,420
Risk provisions for lending business	171	169	1,439	1,573	0	0
Carrying amount neither past due nor impaired	275,482	276,715	132,900	131,349	13,917	14,420
Collateral provided	167,033	159,127	53,409	54,367	0	0

	Derivatives used for hedge accounting; other derivatives		Securities and investments; investments accounted for using the equity method		Contingent liabilities; irrevocable loan commitments	
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015
Carrying amount as equivalent for maximum risk of default	34,808	43,655	33,061	31,925	85,489	67,349
Risk provisions for lending business	0	0	4	6	44	62
Carrying amount neither past due nor impaired	34,808	43,655	32,883	31,719	85,438	67,250
<i>Collateral provided</i>	17,355	20,651	294	329	0	0

### Financial instruments past due and not individually impaired

EUR in millions

	Loans and advances to banks		Loans and advances to customers		Securities and investments; investments accounted for using the equity method	
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015
Carrying amount less than 90 days past due	207	52	1,143	318	0	1
Carrying amount 90 days and more past due	19	48	269	324	1	0
<b>Total</b>	<b>225</b>	<b>100</b>	<b>1,412</b>	<b>641</b>	<b>1</b>	<b>1</b>
<i>Collateral provided</i>	149	58	716	203	0	0

### Individually impaired financial instruments

EUR in millions

	Loans and advances to banks		Loans and advances to customers		Securities and investments; investments accounted for using the equity method		Contingent liabilities; irrevocable loan commitments	
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015
Carrying amount	45	65	952	1,145	177	205	51	100
<i>Individual impairments, provisions</i>	40	38	1,024	1,159	0	0	9	19
<i>Collateral provided</i>	1	5	438	666	2	3	0	0

As of 31 December 2016, EUR 1.2 billion (net after deduction of risk provisions, year-end 2015: EUR 1.5 billion) was classified as individually impaired out of EUR 578 billion (year-end 2015: EUR 567 billion) in financial instruments outstanding. Potential losses are conservatively estimated, and individual impairment losses of EUR 1.1 billion (year-end 2015: EUR 1.2 billion) were recognised.<sup>4)</sup>

In addition to provisions for immediate risks of default, KfW Group made provisions for latent risks of default (economic and political risks). As of 31 December 2016, risk provisions for transactions not individually impaired totalled EUR 0.6 billion (year-end 2015: EUR 0.6 billion). The collateralisation of loans in KfW Group's portfolio primarily relates to the on-lending business and the promotional business guaranteed by the

<sup>4)</sup> The transaction of approximately EUR 15 billion mandated by the Federal Government as part of the support measures for Greece is completely hedged by a federal guarantee and is therefore not presented in the portfolio of individually impaired financial instruments.

Federal Republic or individual federal states (*Länder*).<sup>5)</sup> By far the largest portion of collateral is attributable to assigned ultimate-borrower receivables from the on-lending business. Tangible collateral, e. g. ships and aeroplanes, plays only a minor role in relation to the total amount of collateral.

The high exposure with regard to derivatives with positive fair values has to be seen in the context of the netting agreements with counterparties. These netting agreements also include derivatives with negative fair values and considerably reduce the counterparty risk.

There was an increase in loans and advances which were less than 90 days past due and not individually impaired in the year under review. These were largely arrears of one day. Most were settled on the following working day as the due date fell on a Saturday.

### Regions

As of 31 December 2016, 67 % of KfW Group's loan portfolio in terms of economic capital requirements was attributable to the euro area (year-end 2015: 55%). The increase was primarily due to the refinement of methods (reparameterisation of correlations, improved method of calculation/breakdown of individual ECAP contributions), which resulted in a rise in the economic capital requirement, particularly in Germany. Moreover, concentration risks increased due to the merger of two principal business partners. Outside Germany, the refinement of methods led to a reduction of the economic capital requirements despite new business particularly in the business sectors Export and project finance and Promotion of developing countries and emerging economies.

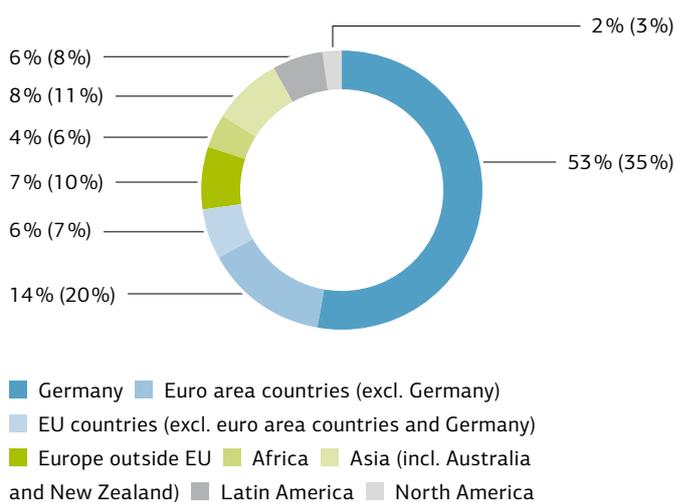
KfW Group did not take possession of any significant assets previously held as tangible collateral in 2016. Deferred payments in the performing portfolio in 2016 were primarily in the Export and project finance business sector. This deferred payment volume is not significant based on total lending volume.

### Portfolio structure

The contribution of individual positions to the risk associated with KfW Group's loan portfolio<sup>6)</sup> is assessed based on an internal portfolio model. Concentrations of individual borrowers or groups of borrowers give rise to a risk of major losses that could jeopardise KfW Group's existence. On the basis of the economic capital concept, Risk Controlling department measures risk concentrations by individual borrower, sector and country. Risk concentrations are primarily reflected in the economic capital requirement, ensuring that high risk volumes and unfavourable probabilities of default are taken into account, along with undesirable risk correlations. The results form the main basis for managing the loan portfolio.

### Economic capital requirements by region

31 Dec. 2016 (31 Dec. 2015)



<sup>5)</sup> The collateral is presented as recognised for purposes of internal management of economic risks. Participation effects are taken into account in order to avoid reporting double collateralisation. In addition, the prior-year figures were restated, as hedged exposure also takes hedges for political risk exposure into account as of 2016 (previously only economic risk exposure).

<sup>6)</sup> The loan portfolio includes loans as well as securities and investments in performing business. The non-performing portfolio is only included in the presentation of credit quality.

## Sectors

The significant share of overall capital required for credit risks attributable to the financial sector is due to KfW Group's promotional mandate. By far the greatest portion of KfW Group's domestic promotional business consists of loans on-lent through commercial banks. The financial sector's economic capital requirement increased overall due to higher concentration risks relating to the aforementioned merger, new business primarily in good rating classes and the methodology developments previously described. For merged banks, the capital requirement has risen particularly for those with large volumes of on-lending business, due to the new ECAP breakdown algorithm. The refinement of methods, in particular, led to a reduction of the capital requirement for all other sector clusters.

## Credit quality

As credit quality is a major factor influencing economic capital requirements, it is appropriate in analysing the credit quality structure to examine the distribution of net exposure<sup>7)</sup> by credit quality category. Overall, the proportion of investment grade exposure to total net exposure rose slightly, largely due to new business in good rating classes. A greater share of watch list positions (mainly in the business sector Export and project finance) resulted in a slight increase in the average probability of default in KfW Group's loan portfolio compared to 2015. KfW Group's loan portfolio continued to possess a good credit quality structure.

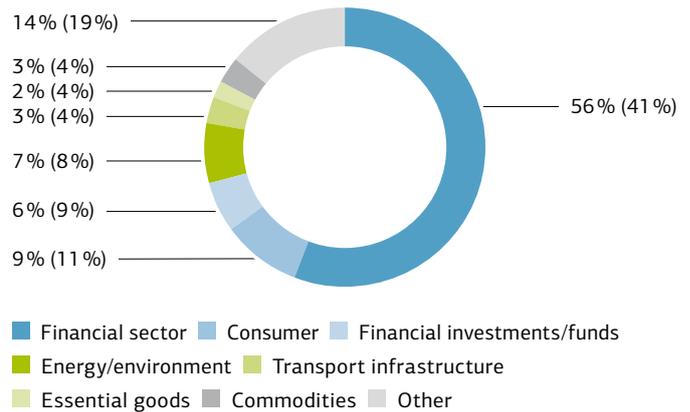
## Structured products in KfW Group's portfolio

### Asset-backed securities (ABS)

ABSs had a par value of around EUR 4.9 billion as of 31 December 2016. Accounting for the mark-to-market valuation of the securities reported at fair value and impairments, the portfolio also had a book value (including pro rata interest) of around EUR 4.9 billion. The following tables show the composition of the ABS portfolio by asset class, rating and geographic distribution of the underlying assets in the securitisation portfolios.

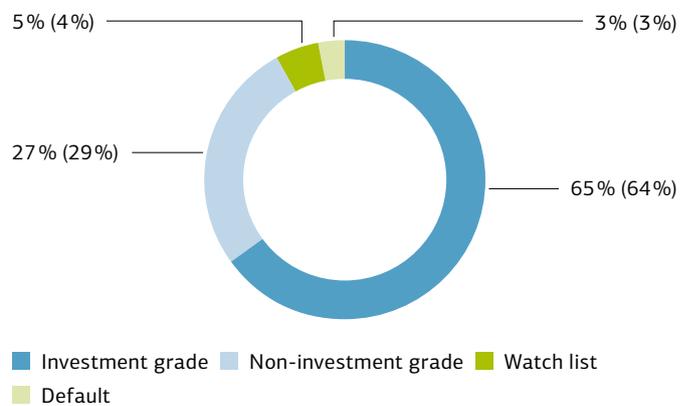
## Economic capital requirements by sector

31 Dec. 2016 (31 Dec. 2015)



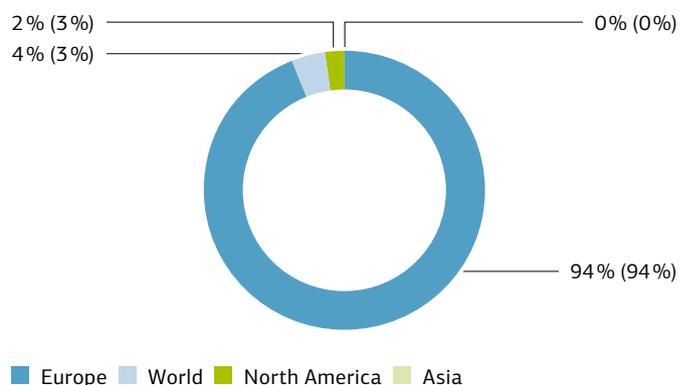
## Credit quality by net exposure

31 Dec. 2016 (31 Dec. 2015)



## Geographic breakdown of the underlying asset pool (based on par value)

31 Dec. 2016 (31 Dec. 2015)



<sup>7)</sup> Net exposure is the economic loss that potentially occurs in the event of an economic or political default event.

## Exposure based on par values

	CLO	RMBS	CMBS	CDO	ABS & other	Total 31 Dec. 2016	Total 31 Dec. 2015
	EUR in millions	EUR in millions					
Investment Grade	57	880	9	5	3,841	4,792	4,098
Non-Investment Grade	0	38	3	15	0	56	53
Watch list	0	0	0	0	0	0	16
Default	58	0	0	0	0	58	75
	<b>115</b>	<b>918</b>	<b>12</b>	<b>20</b>	<b>3,841</b>	<b>4,906</b>	<b>4,242</b>

The portfolio volume as of 31 December 2016 increased year-on-year (par value EUR +0.7 billion). Comparison of the portfolios' rating structure shows a reduction in both watch list and default positions. The volume of investment grade holdings rose by EUR 0.7 billion. The regional focus on Europe remains unchanged

as can be seen in the geographic breakdown of the underlying asset pool compared with 31 December 2015. Overall, European securitisations, including German securitisations, performed well. The cumulative default rates for European securitisations remained low.

### MARKET PRICE RISK

KfW Group measures and manages market price risk on a present-value basis. The key drivers of market price risk in this context are:

- the interest rate structure (interest risk) particularly for the EUR and USD currency areas,
- exchange rates (currency risk),
- basis spreads (basis spread risk) and
- issuer-related spreads for securities (credit spread risk).

In total, market price risk within the group required a total of EUR 5.5 billion in economic capital as of 31 December 2016. This is EUR 172 million more than as of 31 December 2015. KfW Group market price risk is broken down as follows:

### Total economic capital for market price risk

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
Interest risk	3,066	3,356
Currency risk	744	681
Basis spread risk	1,350	1,057
Credit spread risk	290	183
<b>Market price risk</b>	<b>5,450</b>	<b>5,278</b>

### Interest risk

KfW Group assumes limited interest risk in order to take advantage of long-term opportunities for returns. All relevant data from the preparation of fixed interest statements are considered in the determination of interest risk. On the basis of this data, KfW Group regularly performs value-at-risk calculations using a variance/covariance approach to assess its interest risk position. The management concept for interest risk is part of a long-term management philosophy. A substantial stop loss buffer is

maintained in order to mitigate short-term fluctuations in present value caused by interest rates. In addition to this buffer, value at risk is computed at a solvency level of 99.99% and for a period of two months in order to calculate risk-bearing capacity. The choice of this period is based on a conservative estimate of the maximum timeframe to close the entire interest risk position under adverse interest rate scenarios. Continuous monitoring of the risk position and the available management options ensures that the allocated capital is also sufficient to

cover the risk for a one-year period in accordance with the uniformly applied solvency level of 99.99%. Periodic stress tests supplement this calculation to examine possible losses under extreme market conditions. Apart from this prescribed shift, the tests include scenarios such as tilts of the yield curve and an extension of the holding period. The capital requirement for interest risk had fallen by EUR 291 million as of 31 December 2016. The reduction compared to the previous year's figure is primarily a result of a reparameterisation of the model.

### Currency risk

Foreign currency loans are largely funded in the same currency or secured by appropriate foreign currency hedging instruments. DEG's foreign currency equity investments and to a small extent KfW Development Bank's promotional instruments are only funded in the same currency when possible and practical. Foreign currency earnings generated from the lending business throughout the year are sold promptly. As with interest risk, the economic capital requirement for liquid currency positions is calculated analogously to interest risk using a variance/covariance approach as the sum of a stop loss buffer and a two-month value-at-risk at a solvency level of 99.99%. A twelve-month value-at-risk is used for all currencies with limited trading and hedging opportunities. The Market Price Risk Committee classifies each currency as liquid or illiquid at least once a year. The currency portfolio predominantly comprises liquid positions. Stress tests are regularly conducted in order to estimate possible losses in the event of extreme market conditions. The capital requirement for currency risk had risen by EUR 62 million as of 31 December 2016. The increase is due to the appreciation of the USD (EUR/USD as of 31 December 2015: 1.09 and 31 December 2016: 1.05), building

### LIQUIDITY RISK

Liquidity risk is the risk of not being able to make payments in a timely manner when due. A distinction is made between

- institutional liquidity risk (the risk of not being able to meet payment obligations),
- refinancing risk (the risk that the required funds are only available at costs higher than the interest rate in line with the risks involved), and
- market liquidity risk (the risk of being unable to unwind specific exposures without significantly lowering market prices because of inadequate market depth or market disruptions).

The primary objective of liquidity management is to ensure that KfW Group is capable of meeting its payment obligations at all times. KfW is available as a contractual partner for all commercial

up a position (increasing lending volume and funding in USD) and the increase in the stop loss buffer.

### Basis spread risk

Basis spread risk largely comprises tenor and foreign exchange basis spread risk. The economic capital requirement for this risk is calculated with a variance/covariance approach at a solvency level of 99.99% and with a holding period of twelve months. The capital requirement for basis spread risk as of 31 December 2016 stood at EUR 1,350 million, representing a year-on-year increase of EUR 293 million. This rise resulted primarily from greater contributions from the USD book, largely due to significantly higher volatilities.

### Credit spread risk

Risk measurement is carried out for the securities portfolio. The economic capital requirement is calculated using the historical simulation method on the basis of a credit spread time series comprising the previous three years (750 trading days). Value at risk is initially ascertained from credit spread changes for a holding period of one day at a confidence level of 95%, and then scaled to a period of one year and a solvency level of 99.99%. The risk measurement for ABS is based on ABS indices due to the low liquidity of these securities. The economic capital requirement for credit spread risk as of 31 December 2016 was EUR 290 million. Credit spread risk rose by EUR 107 million year-on-year. The increased risk is due, above all, to the introduction of a correction factor, as backtesting identified an underestimated risk via the Value-at-Risk model. The model will be overhauled in 2017.

transactions of its subsidiaries, particularly for their funding. For this reason the liquidity requirements of the subsidiaries are included both in KfW Group's funding plans and in the liquidity maintenance strategy.

Liquidity risk is measured on the basis of economic scenario analyses and the utilisation threshold under the KfW Law. In addition, liquidity gaps are limited based on business already concluded and available liquidity potential.

A significant component for liquidity risk assessment comprises the contractual payment obligations (principal and interest) of KfW Group arising from financial instruments, which are shown in below by maturity range:

**Contractual payment obligations arising from financial instruments by maturity range**  
as of 31 December 2016<sup>1)</sup>

	Up to 1 month	More than 1 and up to 3 months	More than 3 months and up to 1 year	More than 1 and up to 5 years	More than 5 years	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Liabilities to banks and customers	18,481	2,944	603	3,221	8,828	34,076
Certificated liabilities	30,398	36,185	50,879	235,095	91,766	444,323
Net liabilities arising from derivative financial instruments	-1,276	-2,503	-3,012	-13,632	-10,633	-31,057
<i>thereof Liabilities arising from derivative financial instruments</i>	14,921	19,589	28,398	137,634	50,427	250,969
Subordinated liabilities	0	0	4	23	235	262
<b>Liabilities arising from on-balance sheet financial instruments</b>	<b>47,603</b>	<b>36,626</b>	<b>48,473</b>	<b>224,707</b>	<b>90,195</b>	<b>447,604</b>
Contingent liabilities	3,955	0	0	0	0	3,955
Irrevocable loan commitments	81,534	0	0	0	0	81,534
<b>Liabilities arising from off-balance sheet financial instruments</b>	<b>85,489</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85,489</b>
<b>Liabilities arising from financial instruments</b>	<b>133,092</b>	<b>36,626</b>	<b>48,473</b>	<b>224,707</b>	<b>90,195</b>	<b>533,093</b>

<sup>1)</sup> Net liabilities under derivative financial instruments comprise payment obligations which are offset against the corresponding payment claims from derivative contracts; the gross liabilities are reported as Liabilities arising from derivative financial instruments. Irrevocable loan commitments and Contingent liabilities are generally allocated to the first maturity range.

The increase in payment obligations in the first maturity range was due primarily to the rise in Irrevocable loan commitments, of which EUR 18.7 billion resulted from the increase in domestic financing.

**Contractual payment obligations arising from financial instruments by maturity range**  
as of 31 December 2015<sup>1)</sup>

	Up to 1 month	More than 1 and up to 3 months	More than 3 months and up to 1 year	More than 1 and up to 5 years	More than 5 years	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Liabilities to banks and customers	21,281	1,625	1,097	3,205	10,842	38,050
Certificated liabilities	24,634	30,837	60,363	225,338	97,156	438,328
Net liabilities arising from derivative financial instruments	-780	-1,298	-5,640	-15,273	-13,244	-36,236
<i>thereof Liabilities arising from derivative financial instruments</i>	20,522	20,327	40,608	128,039	62,049	271,546
Subordinated liabilities	0	0	5	25	345	376
<b>Liabilities arising from on-balance sheet financial instruments</b>	<b>45,134</b>	<b>31,164</b>	<b>55,825</b>	<b>213,295</b>	<b>95,099</b>	<b>440,518</b>
Contingent liabilities	5,186	0	0	0	0	5,186
Irrevocable loan commitments	62,163	0	0	0	0	62,163
<b>Liabilities arising from off-balance sheet financial instruments</b>	<b>67,349</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67,349</b>
<b>Liabilities arising from financial instruments</b>	<b>112,483</b>	<b>31,164</b>	<b>55,825</b>	<b>213,295</b>	<b>95,099</b>	<b>507,867</b>

<sup>1)</sup> Net liabilities under derivative financial instruments comprise payment obligations which are offset against the corresponding payment claims from derivative contracts; the gross liabilities are reported as Liabilities arising from derivative financial instruments. Irrevocable loan commitments and Contingent liabilities are generally allocated to the first maturity range.

Internal measurement of liquidity risk is based on scenario calculations. This approach first analyses the expected inflow and total outflow of payments for the next twelve months based on business already concluded. This basis cash flow is then supplemented by planned and estimated payments (e.g. borrowings from the capital market, expected liquidity-related loan defaults or planned new business). The result provides an overview of the liquidity required by KfW Group over the next twelve months. The liquidity required is calculated for different scenarios. In this respect, market-wide and institution-specific risk factors are stressed and an evaluation is made of the impact on KfW Group's liquidity.

Parallel to the above approach, KfW Group also determines the available liquidity potential, which largely consists of KfW's collateral account with the European Central Bank, repurchase agreement assets, the liquidity portfolio and the volume of commercial paper that is regularly placeable on the market. The available liquidity potential is subjected to stress analysis in the same way as the other cash flow components. The ratio of cumulative required liquidity to the cumulative available liquidity potential is calculated for each scenario. This figure may not exceed the value of 1 in any scenario for any period. The prescribed horizon in the normal case scenario is twelve months, in the stress case six months, and in the two worst case scenarios, three months. The scenario assumptions are validated on an annual basis.

The key figures are calculated and reported to the Market Price Risk Committee on a monthly basis. The following table shows the key risk indicators for the scenarios as of 31 December 2016:

#### KfW liquidity risk indicators as of 31 December 2016

	<b>Indicator</b>
Normal case	0.09
Stress case	0.24
Worst case (institution-specific)	0.30
Worst case	0.52

The internal liquidity risk indicators remained below the upper limit of 1 throughout 2016.

#### OPERATIONAL RISK AND BUSINESS CONTINUITY MANAGEMENT (OPERATING RISK)

KfW Group uses operating risk as the umbrella term for operational risk and risks arising from business interruption.

KfW Group's organisational structure provides for a two-tier system comprising decentralised and centralised units liaising with the Operational Risk Committee. Operating risk management is decentralised within the business sectors and the subsidiaries, and is performed by the respective directors or managing directors, who are supported by the respective sector coordinators of the Operational Risk and Business Continuity Management. The operating risk management team organises the monitoring

#### Current funding environment

Developments on the international capital markets in 2016 were characterised by the unexpected outcomes of two major political events: the UK vote to remain in or leave the European Union and the US presidential election. For example, following the US election, interest rates in the euro area and the US rose significantly. Throughout the year, the capital markets were also influenced by the continued very active central bank policy on the part of the European Central Bank as well as the US Federal Reserve. While the ECB's monetary policy continued its expansionary course, the US Federal Reserve, in contrast, undertook a further rate hike at the end of the year, thereby taking another step towards a more contractionary monetary policy.

KfW successfully completed its funding activities in this volatile market environment thanks to its flexible attitude to currencies, instruments and structures. It raised a total volume of EUR 72.8 billion on the international capital markets (2015: EUR 62.6 billion) in 15 different currencies and 206 individual transactions in financial year 2016. The euro and the US dollar remained the two most important currencies for long-term funding. The share of bonds denominated in US dollars rose to a record high of 47% in 2016 (2015: 45%); those denominated in euros amounted to 36% (2015: 37%).

The development of KfW's funding activities in the money market segment was equally positive in 2016. The programme volume of the Euro Commercial Paper (ECP) programme designed for investors around the world was increased from EUR 50 billion to EUR 60 billion in November 2016. As planned, the volume issued in the euro commercial paper programme was considerably higher in 2016 than in the previous year. The outstanding volume here amounted to EUR 37.8 billion at the end of 2016 (year-end 2015: EUR 31.8 billion). The issue volume in the US Commercial Paper (USCP) programme was also higher year-on-year in 2016. The USCP, with a programme volume of USD 10 billion, is specially designed for the US market. KfW uses this programme to cover a large portion of its need for short-term funds in US dollars. The outstanding volume amounted to USD 8.7 billion at the end of 2016 (year-end 2015: USD 8.1 billion).

and communication of operating risks in Risk Controlling (central OpRisk Controlling) and Compliance (central Business Continuity Management). It develops the methods and instruments for identifying and assessing operating risk and monitors their uniform application.

The aim of management and control of operational risk and business continuity management is the proactive identification and averting of potential losses for KfW Group, i.e. to make emergencies and crises manageable and to secure KfW Group's structural ability to remain in operation despite the loss of key resources.

In accordance with Article 3, sentence 52 of the CRR, KfW Group defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. The following types of operational risk are also defined: behavioural risk, system and information and communication technology risk, model risk, legal risk (including compliance risk) and outsourcing risk.

Legal risk (including compliance risk) is the risk of loss that arises from violation of or non-compliance with requirements that could result in legal disputes or other measures to avoid legal disputes. Requirements include laws, regulations, prescribed practice, internal policies and procedures, ethical standards and rules of conduct. Compliance risk is the risk of legal or regulatory sanctions or financial losses that arises from non-compliance with laws, rules, regulations or market standards. KfW Group addresses legal risk via its organisationally independent central Legal Affairs department, in particular by involving it early in the process and by ensuring that the department cooperates closely with external legal advisers in Germany and abroad. Moreover, the group addresses risks that arise from changes in laws via its regulatory compliance function and the processes the function has established.

Model risk is the potential loss that an institution may suffer as the result of decisions taken largely based on the results of internal models that prove erroneous upon development, implementation or application.

Losses are recorded in KfW Group in an OpRisk events database. After each quarter, a detailed report is made in the relevant departments of the loss events recorded and any measures introduced as a result. The Executive Board, the Board of Supervisory Directors and the Operational Risk Committee are briefed monthly or quarterly as part of internal risk reporting. Ad hoc reports are also made if a loss exceeds a certain level.

In addition, operational risk is systematically recorded in risk assessments that are carried out group-wide. Such assessments also examine new activities in the New Products Process (NPP) as well as changes in operational processes for potential operational risks. Within the risk assessments, operational risk is measured on the basis of internal data or expert esti-

mates which are backed by a distribution assumption for loss frequency and amount. The potential losses revealed in the risk assessments carried out are reported to the directors and heads of department and the Executive Board once the data have been collected. Throughout the year, each business area checks the implementation of its risk indicators for the purpose of monitoring whether the potential losses established in the risk assessment are above a fixed threshold value. As part of the risk assessment, the business areas check the implementation of additional risk-mitigating measures (e.g. checks as part of the internal control system, or "ICS").

In total, operational risk within the group required a total of EUR 1,033 million in economic capital as of 31 December 2016. This is EUR 77 million less than as of 31 December 2015, which is due to refinements to the methods used in the calculation model.

Business continuity management is implemented if a business interruption occurs due to internal or external events. This is an integrated management process which covers all the aspects of the four key outage and loss scenarios: site outages (building or infrastructure), IT system outages, staff outages and service provider outages. Business continuity management incorporates preventative components (emergency preparedness) and reactive components (emergency and crisis management) in equal measure.

For the purpose of business continuity management, business processes are analysed and categorised based on how critical they are, and the supporting resources for each case examined accordingly. Identifying critical business processes and their dependency on supporting resources forms the basis for effective business continuity management. Individual measures are developed for these business processes and their supporting resources, ensuring that the required availability is guaranteed and business risks are reduced. These include emergency workstations, emergency plans, communication tools and alerts/alarms. KfW Group's crisis team takes responsibility for crisis management as a whole when unforeseen events occur. It practises emergency and crisis organisation teamwork in regular crisis team tests.

## OTHER RISKS

### Equity investment risks

In managing equity investment risks, KfW Group differentiates between risks from equity investments at operational level and strategic equity investments.

#### Equity investments (operational level)

In making operational level private equity investments, the bank fulfils its mandate from the Federal Government to conduct promotional business, particularly financings. Accordingly, there are equity investments in connection with domestic and European investment financing and in the area of Financial Cooperation and in the business sector Export and project finance. KfW Group-wide basic rules for equity investments at operational level are set out in guidelines. Specific rules tailored to certain segments of equity investments are also set out in sub-portfolio guidelines, working instructions or risk guidelines. Risk measurement is performed at an individual loan commitment level for operational level equity investments in the same way as for credit risk. In terms of reporting requirements, equity investment portfolio risk is reported separately.

#### Strategic equity investments

Strategic equity investments support KfW's mandate of providing an efficient and sustainable promotional offering. In addition to reinforcing and expanding core competencies, the focus of this investment type is on complementing KfW's business sectors. Strategic equity investments normally have a long-term holding period. There are also equity investments in accordance with Article 2 (4) of the KfW Law (mandated transactions). Such equity investments are entered into particularly due to overarching strategic interests. A dedicated organisational unit is responsible for strategic equity investments based on an equity investment manual that describes legal bases, strategies, principles, procedures and responsibilities of equity investment management. Acquisitions and disposals of and changes to strategic equity investments are subject to defined due diligence processes as well as authorisation by the Executive Board and Board of Supervisory Directors in accordance with the KfW Bylaws. In addition, taking a stake in an equity investment in excess of 25% requires authorisation by the Federal Ministry of Finance in accordance with the Federal Budget Code (*Bundeshaushaltsordnung* – "BHO"). Strategic equity investments and their individual risks are constantly monitored and are presented to the Executive Board as part of an annual equity investment report – as well as in ad hoc reports. The individually defined strategies for the equity investments are updated annually. Moreover, the group is normally represented in the supervisory bodies of its strategic equity investments.

Due to the high risk relevance for KfW Group and for reasons of uniform group management, KfW IPEX-Bank and DEG's risks are managed as part of KfW Group's risk management. For example, the subsidiaries' business activities are included under the look-through principle in KfW Group-wide limits and in KfW Group's capital budget, while representatives of the subsidiaries are

included in KfW Group's risk committees. The group also monitors DEG and KfW IPEX-Bank on a stand-alone basis and regularly reports to the Executive Board as part of the monthly internal KfW Group risk report.

#### Reputational risk

Reputational risk is the risk that the perception of the group from the point of view of the relevant internal and external interest groups will deteriorate for the long term with a negative impact on KfW Group. This negative impact could lead to a decrease in KfW Group's net assets, earnings or liquidity (e.g. decline in new business) or may be of a non-monetary nature (e.g. difficulty in recruiting new staff). Reputational risk may arise as a consequence of other types of risk, or independently. In the risk management process, reputational risk is managed in a decentralised manner. The framework for this purpose includes sustainability management with group-wide environmental and social principles relevant to credit approvals, or basing the management of KfW Group's own securities portfolio on sustainability criteria. Furthermore, examinations of new activities in the NPP as well as of outsourced activities in outsourcing management are regularly conducted to detect potential reputational risks.

Moreover, as part of risk identification, the central reputational risk control function coordinates qualitative reputational risk assessment and creates a risk profile outlining the group's greatest reputational risks. In addition, reputational risk events that have occurred are reported on an ongoing basis.

#### Project risk

Original project risk comprises, in particular, planning assumptions that turn out to be inaccurate. Project risk has implications for the achievement of project objectives with regard to cost, time and quality (e.g. underestimating the cost of implementation, and time constraints arising from parallel projects). KfW Group's project risk arises particularly in connection with various major long-term projects. Managing project risk is part of project management and takes place in both the project planning and execution stages.

The Central Project Management Office supports major projects in fulfilling their objectives and achieving their targets. As the central authority for project portfolio management, it provides the methodological framework for KfW Group's major project implementation and creates transparency at the level of the entire project portfolio. This enables the Project Board and Executive Board to take targeted decisions. Setting requirements in respect of methods through the Central Project Management Office enables a consistently high quality of implementation. Compliance with this framework and these requirements by major projects is also monitored and supported.

## Internal monitoring procedures

### Internal Auditing

Internal Auditing is an instrument of the Executive Board. As an entity that works independently of KfW Group procedures, it audits and assesses all of KfW Group's processes and activities to identify the risks involved and reports directly to the Executive Board. With a view to risk management processes, Internal Auditing in 2016 audited the decentralised risk management processes and central aspects of risk management and risk control which were relevant group-wide. Focal points included analyses of market and credit risk and reporting in support of major projects, as well as in the IRBA self-assessment and assessment of the capital planning process. Regarding decentralised risk management processes, the audit focused on processes in risk management of financial institutions and countries, among other areas.

As in previous years, Internal Auditing also monitored the continued development of risk measurement procedures in 2016 by participating (with guest status) in meetings of decision-making bodies.

Internal Auditing also functions as KfW Group's internal auditing department. It is involved in subsidiaries' audit planning and incorporates the audit results of the subsidiaries' internal auditing departments in group-wide internal audit reporting.

### Compliance

The success of KfW Group is largely based on the confidence its shareholders, customers, business partners, employees and the general public place in its efficiency and above all in its integrity. This confidence rests to a large extent on the implementation of and compliance with relevant statutory, supervisory and internal regulations and other relevant laws and rules. The Executive Board bears the overall responsibility for compliance within the Group. The Executive Board delegates the associated tasks to the Compliance department.

The Compliance organisation is structured in accordance with the Three Lines of Defence model and, as the second line of defence, it is aligned with the requirements for a MaRisk compliance function. In this connection, group compliance has, for a number of years, included measures to comply with data protection regulations as well as measures for the prevention of insider trading, money laundering, terrorism financing and other criminal activities, and for monitoring legal requirements and the associated implementation measures. This also includes protection of information, buildings, individuals and the IT infrastructure as well as ensuring business continuity management. There are therefore binding rules and procedures that influence the day-to-day implementation of values and the corporate culture, which are continually updated to reflect current law as well as market requirements.

Regular training sessions on compliance and anti-money laundering are held for KfW Group employees. In addition to these

classroom seminars, e-learning programmes on data protection, information security, securities compliance, and prevention of money laundering and fraud are available.

### Internal control system (ICS)

The aim of KfW Group's ICS is to use suitable principles, measures and procedures to ensure the effectiveness and profitability of business activities, compliance with the legal requirements applicable to KfW Group, the accuracy and reliability of external and internal accounting, and the protection of assets.

There are group-wide ICS rules as well as binding group-wide minimum requirements of the ICS. KfW Group's ICS is based on the relevant legal (bank regulatory) requirements<sup>8)</sup>, in particular those set forth in the KWG and MaRisk, and the market standard COSO model<sup>9)</sup>.

In accordance with the COSO model, the ICS consists of the five following interrelated components: control environment, risk assessment, control activities, information/communication and monitoring/auditing. These components extend to all KfW Group's organisational entities, functions and processes. The control environment is the environment within which KfW Group introduces and applies rules. Risk assessment includes the identification, analysis and evaluation of risks that result from implementing corporate strategy. Control activities are aimed at achieving corporate objectives effectively and detecting or minimising risks. Adequate information and communication procedures in KfW Group enable all stakeholders to be provided with the information they need in the necessary detail. Appropriate monitoring and audit mechanisms determine the functionality and effectiveness of the ICS.

Procedural rules form the basis of the ICS. These constitute the framework for a proper business organisation within KfW Group, in the form of a binding policy.

Workflow organisational measures and controls ensure that monitoring is integrated into processes. Monitoring measures integrated into processes serve to avoid, reduce, detect and/or correct processing errors or financial loss. The effects of any planned changes to the operational and organisational structure on the procedure and intensity of monitoring are analysed in advance.

KfW Group has implemented accounting-related controls to minimise the risk of error in stand-alone and consolidated financial statements and ensure the correctness and reliability of internal and external financial reporting. The accounting-related controls are part of the ICS.

In ICS testing, Internal Auditing examines the proper implementation of controls relevant to ICS.

<sup>8)</sup> See section 25 a (1) no.1 KWG, MaRisk AT 4.3, and sections 289 (5), 315 (2) no.5, 324, and 264 d HGB.

<sup>9)</sup> COSO = Committee of Sponsoring Organizations of the Treadway Commission.

The system is supplemented by the Compliance department, which, on the basis of statutory and supervisory requirements/ conditions, defines and monitors compliance with relevant measures. The Compliance function performs regular process-based and accompanying monitoring of the relevant areas of the internal control system. It also takes into account the results of the Risk Controlling function (including OpRisk).

The adequacy and effectiveness of the ICS is also assessed by Internal Auditing on the basis of risk-based audits carried out independently of group procedures.

The details of the implementation of the internal control system at KfW and its legally independent subsidiaries KfW IPEX-Bank and DEG are determined by central requirements as well as the relevant business sectors and risk strategies.

The Executive Board holds overall responsibility for the group's internal control system. At DEG and KfW IPEX-Bank, overall responsibility is held by the management. The design and implementation at the different corporate levels is the responsibility of the relevant managers according to the organisational structure. A report is rendered annually to KfW Group's supervisory bodies.

To ensure the adequacy and effectiveness of the ICS, KfW Group regularly scrutinises and continually refines KfW Group's standards and conventions and ensures that they are implemented in the business sectors on a permanent basis.

# Forecast and opportunity report

The following forecast and opportunity report mainly reflects the scope and content of the group forecast and opportunity report published in the group management report. As business sector planning and earnings projections are prepared at

## General economic environment and development trends

KfW expects **global growth** of 3.4% for 2017, which means somewhat stronger momentum than in 2016.

A moderate upturn is predicted for both **industrialised countries** (2017 forecast: 1.7%) and **developing countries and emerging economies** (2017 forecast: 4.6%). Economic momentum in the United States (US) is likely to see moderate acceleration compared to the previous year. The United Kingdom (UK), in contrast, can expect to see increased negative consequences of the Brexit vote, causing a considerable slowdown in growth. Among developing countries and emerging economies, the situation in the largest crisis countries Brazil and Russia is expected to stabilise in 2017, while the gradual downturn in China is expected to continue, although a “hard landing” is unlikely. Sustained solid growth is forecast in many other emerging economies and a lot of the poorer developing countries. However, this world economic outlook is subject to major economic and geopolitical risks. A monetary policy shift – such as pursued currently and likely to be continued by the US Federal Reserve – poses some adjustment problems and will affect other countries, too. The crisis in the euro area is not over yet.

The Brexit vote, the election of Donald Trump as US president and the failed referendum in Italy have unsettled investors in these countries as well as trading partners. Proponents of free trade and integration are increasingly finding themselves on the defensive side in the United States and Europe. Higher and more sustainable economic growth in industrialised nations, developing countries and emerging economies requires greater investment as well as structural reforms (e.g. in relation to the labour market, competition, fiscal policy, infrastructure and financial sector). In addition to these economic risks, geopolitical risks such as military conflicts persist in many regions of the world – not to mention the threat of terrorism and challenges posed by waves of refugees.

Growth is set to remain stable in the **Economic and Monetary Union (EMU)** member countries in 2017 but will not accelerate beyond a moderate pace. Economic recovery remains tied to private consumption, which benefits from the improved labour market situation. The level of employment may return to a level last seen in 2008, although the creation of new jobs is still pro-

KfW Group level, a forecast and opportunity report is not prepared at individual institution level. The following forecast figures therefore relate to KfW Group.

ceeding too slowly. Fiscal policy may help in this regard, but a slight supportive impetus is the best that can be expected. Despite initial steps towards normalisation, the expansionary monetary policy means low financing costs. This, along with the already high degree of capacity utilisation, points towards a more dynamic trend in corporate investments. However, the fundamentally positive environment still harbours the political risks outlined above, which makes it very difficult for businesses to advance their plans and thwarts any major turnaround in what has been weak investment activity for many years now. Overall, KfW forecasts price-adjusted GDP growth of around 1.5% in EMU countries in 2017. Although the recovery continues intact, this means that per capita production in the euro area economy is still lower than ten years ago. This is a factor in the political tension within the euro area, especially given that the countries particularly affected by the debt crisis are only catching up slowly.

The **German economy** was generally in a healthy state at the beginning of 2017, particularly considering the difficult international environment. Domestic demand, the main driver of economic momentum, remains strong. The country is likely to see further solid growth in consumption in 2017 because the employment rate continues to rise. However, the climbing inflation rate will put pressure on real wage growth, meaning that consumption will likely grow at a somewhat slower pace than in 2016. The same is true for housing construction, although increasing interest rates should have a slight braking effect. Although the high utilisation of industrial capacity as such points to a noticeable increase in corporate investments, it is likely to be moderate, given the uncertainty associated with the consequences of the Brexit vote and the US's new trade policy. The risk of the world economy being less open in the future hampers investment planning, particularly in the export sectors that are key to the German economy. Nevertheless, exports are likely to recover to a certain extent, not least because important emerging economies such as Brazil and Russia seem to be able to overcome their recessions. Overall, KfW expects real growth of 1.3% in 2017, which would be around half a percentage point lower than that in 2016, with the majority of the deceleration due to considerable fluctuations in the number of working days. The 2017 economic growth forecasts publicly available at the end of 2016 ranged from 0.9% to 1.7%.

The **financial market environment** will remain characterised by an overall highly expansive monetary policy in 2017. Although the European Central Bank plans to reduce its bond purchases from EUR 80 billion to EUR 60 billion per month as of April 2017, this purchasing will continue until at least the end of 2017, which implies an additional major expansion of its balance sheet. The negative deposit rate is also expected to remain for quite some time in the euro area. In contrast, the US Federal Reserve has been tightening monetary policy since the end of 2015. So far, it has raised key interest rates only slightly and is expected to continue just as cautiously in 2017. In this environment, the potential for rising interest rates in the euro area in particular remains limited.

### Risk outlook – Risk situation and risk-bearing capacity

After the election of a new US president, it is difficult to forecast economic performance for 2017 in terms of risk. Whereas the expansionary fiscal and tax policy promised by the new administration could stimulate the US economy, it is hard to estimate the impact on the world economy of such change in economic policy in the United States. Historically, experience with such economic policy, reminiscent of Reaganomics – associated with tax cuts and increased public spending – has been sobering and led to massive increases in government debt and interest rates. Such periods were also marked by a very volatile US dollar. Moreover, if the announced protectionist foreign policy is systemically implemented, the potential for conflict in other areas of international cooperation (e.g. the environment or security) will also increase in the medium term. Those affected by the trade restrictions primarily include North American Free Trade Agreement (NAFTA) partners Mexico and Canada, but also China and the euro area (particularly Germany). Overall, there is thus potential for new turbulence in the world economy.

The growth outlook for the **industrialised countries** remains mixed for 2017, particularly due to the persisting structural problems in the euro area. Economic momentum is likely to wane in the UK given the prospects of Brexit. Growth prospects in Japan remain low. The **emerging economies**, among them large countries such as China, Mexico, Nigeria and South Africa, some of which suffered major declines in growth and depreciating currencies in 2016, remain very vulnerable to new shocks. In addition, a considerable risk remains that geopolitical tensions or renewed unrest in the **financial markets** may trigger a setback. Accordingly, the risks for global economic activity remain significant.

As in the previous year, the persisting low interest rate environment will continue to exert pressure on the profitability of the **German banking sector** in 2017 – with increasing challenges primarily for banks whose business models are heavily dependent on interest rates. The high margin pressure, new competitors (such as FinTech companies) and increasing regulatory requirements will force banks to pursue further cost savings and could accelerate the consolidation process. The **capitalisation of banks in the EU** has improved steadily in recent years.

Political events could again cause unrest in the financial markets in 2017. In addition to important elections in some euro member states and the expected start of negotiations on the UK's exit from the European Union (EU), there is high uncertainty at the beginning of 2017 with regard to the economic policy decisions the new US president will take. In the event of stronger fiscal policy impetus and related expectations of rising inflation, the US Federal Reserve may feel compelled to increase interest rates faster and higher than currently assumed by the majority of financial market players, entailing negative implications for other countries and the financial markets.

Nevertheless, banks in the southern European countries report a below-average tier 1 capital ratio (CET1 ratio), meaning that strengthening capital will still be very important for them in 2017. Many banks, particularly those from the Nordic countries, Germany, the Netherlands and Switzerland, will likely continue to be confronted with increasing capital requirements in the next few years, due to implementation of Basel III, meeting the **Total Loss Absorbing Capacity/Minimum Requirement for Eligible Liabilities (TLAC/MREL)** and the new requirements affecting, in particular, the calculation of risk assets (Basel IV). Factors leading to uncertainty remain significant for all **European banks** in 2017. In addition to the unsolved banking crisis in Italy, the election results in the Netherlands, France and Germany – along with Brexit negotiations with the UK – could place a burden on the financial markets and thus also the banks. The outlook for the **US banking market** is positive for 2017, given that profitability is set to improve following further rate hikes by the US Federal Reserve, continued credit growth and expected easing of banking regulation. However, some **banking markets in developing countries and emerging economies** will experience the downside to the higher interest rates in the US and a potential further appreciation of the US dollar. This will affect countries dependent on foreign refinancing, such as Turkey, but also those in which banks have written the majority of their loans in US dollars, including some Commonwealth of Independent States (CIS) countries and certain Latin American countries.

Positive overall performance is expected for the German **corporate sector** in 2017 in light of stable domestic demand and increasing exports. However, there is heightened uncertainty here, too, due to unpredictable political developments primarily in Europe and the US.

The positive sentiment in the German **private equity market** is now stable at a high level following a brief subdued period. Both fundraising and the exit climate are positive. The private equity scene is benefiting from the ongoing low interest rate environment and related continued investor interest in alternative investments. The Federal Government of Germany has also indicated its intention of improving the political and tax frame-

work, making the market outlook favourable for 2017, too. However, this may deteriorate depending on the development of the general politico-economic environment.

The performance of European **securitisations** is expected to remain stable at a good level in 2017, despite various politico-economic uncertainties. This is due to the solid hedged structures in place, including for securitisation transactions from southern and south-western Europe.

Overall, KfW does not anticipate material effects on the group's risk situation from the expected developments in the group's risk-relevant segments.

The forecasts for **KfW Group's tier 1 and total capital ratios** prepared in the group's internal capital adequacy process show that they will easily meet the expected minimum supervisory requirements in 2017.

## New business projections

### Overview

KfW Group plans a **promotional business volume** of EUR 75.5 billion for 2017. This reflects a continuation of the moderate growth in the business sectors operating abroad, as well as stable domestic promotional business at a high level. The decline compared to 2016 is largely due to special factors in 2016 – particularly in the promotional areas housing and infrastructure in the business sector Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions) – that resulted in a higher commitment volume. To implement KfW Group's strategic objectives, the plans for the group's business sectors contain measures with a strategic focus on financings with a high degree of relevance to development and on an orientation of business activities towards the key megatrends "climate change and the environment", "globalisation and technical progress" and "demographic change". KfW facilitates the digital transformation of the economy through its promotional support. The portion of promotional business volume dedicated to climate and environmental protection financing is planned to be 35%, thereby achieving the strategic objective threshold of approximately 35%. The SME financing share continues its stable development; at 45%, the share of financing planned for SMEs in the domestic promotional business is expected to be at the target level set in the strategic objectives (approximately 45%). The focus in KfW's domestic promotional business will remain on SME financing and on safeguarding the viability of companies. KfW's international business sectors are on course for growth in the medium term in order to support the internationalisation of German companies as part of globalisation.

Stable overall developments are anticipated for the group's economic risk-bearing capacity (99.99% solvency level) in 2017.

Potential changes in economic, political, legal and regulatory conditions may have a significant impact on capital ratios and economic risk-bearing capacity. There is thus considerable uncertainty regarding the forecast for 2017.

The **liquidity situation** was stable in 2016. The funding volume was in line with projections. The need for funding in 2017 is approximately EUR 75 billion and has thus increased compared to the previous year, due to lower cash inflows from repayments and higher outflows of funds compared to 2016. Unscheduled repayments can be expected to remain at a high level. No significant changes in liquidity risk are anticipated, due to the continued stable funding situation.

### Domestic business

Domestically, KfW supports the German economy with the promotional programmes of the business sectors Mittelstandsbank (SME Bank) and Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions) through the promotion of investments by private individuals, companies, cities and municipalities as well as non-profit and social organisations.

**Mittelstandsbank (SME Bank)** continues to regard itself as a reliable and goal-oriented partner of German SMEs and ministries, as well as its financing partners, for the future. The bank's long-term financings at favourable rates for investment and start-up projects, as well as for corporate succession, contribute indirectly to maintaining the competitiveness and future viability of the German economy and creating and safeguarding jobs. Equity finance was successfully realigned with the establishment of ERP Venture Capital Fund Investments and the launch of the coparion co-investment fund's operating activities. Mittelstandsbank remains an important financing partner in climate and environmental protection, particularly as part of the energy transition, with around 40% of its commitment volume. The KfW Energy Transition Action Plan launched in 2011 with a financing volume totalling over EUR 100 billion has been successfully implemented by the end of 2016. This area's promotional offering saw considerable further improvements in 2016 through the introduction of the "waste heat" component to the energy efficiency programme and the expansion of the renewable energy product offering to include other purposes, in particular making the electricity network more flexible and the digitalisation of the energy transition.

The following market developments are important external factors for Mittelstandsbank:

1. The low interest rate environment expected to persist will continue to enable banks to have ample liquidity.
2. Digitalisation is changing SMEs' economic parameters for the long term (Industry 4.0). As a consequence, innovative ability and speed will remain key to the success of German companies and the national economy, and the main focal point of the Federal Government's promotional policy, including its "Digital Strategy 2025" and "High-tech Strategy".
3. Supporting the energy transition remains highly relevant as one of the German government's chief economic and environmental policy projects. The government's commitment to the Paris Agreement on climate change again reinforces the urgency of achieving the political objectives to reduce greenhouse gas emissions. Climate and environmental protection financing continues to be strongly shaped by the regulatory framework at national and European levels.

For 2017, Mittelstandsbank plans to continue providing financing at the same level as in the previous year, with a promotional business volume totalling EUR 20.7 billion. It will focus primarily on the following developments:

- Relevant energy and environmental products will be bundled and marketed under the KfW Energy Transition Action Plan.
- The equity finance product offering with its three pillars, High-Tech Start-Up Fund, ERP Venture Capital Fund Investments and coparion co-investment fund, is to be maintained.
- The promotion of innovation will focus on the future trend of digitalisation, as part of the expansion of the "Digitalisation/ Industry 4.0" promotional offerings.
- Mittelstandsbank's main medium-term strategic target is to systematically digitalise all aspects of the promotional business (products, marketing and processes). To this end, the "On-lending Online 2.0" distribution platform for Mittelstandsbank's first products as well as for a pilot sales partner has paved the way for the fully online application and approval of commercial promotional products since mid-2016. In 2017, the platform will gradually be expanded to other sales partners and products in on-lending.

#### **Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions)**

continues to focus its promotional activities on the two megatrends "climate change and the environment" and "demographic change". The aim is to maintain high proportions of promotion within these megatrends along with high quality of promotional products.

In addition to its focus on private clients, the long-term objective of the business sector is to continue to be a reliable partner to municipalities and municipal service companies as well as to the promotional institutions of the federal states (*Landesförderinstitute*). Moreover, support for leasing investment finance addresses the major importance of the SME client group. Four major factors are expected to contribute to ongoing high demand in KfW's private client business in the medium term:

1. The persistent low interest rate environment and rising incomes promote investments in residential property.
2. Climate change and Germany's energy transition bolster demand in the housing-related programmes for Energy-efficient Construction and Refurbishment.
3. Demographic change requires increasing investments in the needs-based development of housing.
4. The increased intensity of education and training of skilled workers result in continued funding needs in educational programmes for primary and secondary school pupils, university students and those in professional training.

The Energy-efficient Construction and Refurbishment programmes, in particular, bring KfW in a position as the main promoter of environmental protection for *private clients* and standard-setter for energy efficiency in residential buildings. The business sector pursues the *strategic aim of "demographic change"* within the framework of promotional activities through programmes to improve accessibility in existing properties and public spaces, as well as through reliable and customer-focused financing offerings for housing and education. Moreover, the achievement of this strategic aim is underpinned by the continuation of the student loan programme, which has been successfully established on the market for ten years, and accompanying educational offerings for academic and professional qualifications. The two basic programmes "IKK – Investment Loans for Municipalities" and "IKU – Investment Loans for Municipal Companies and Social Organisations" serve to position KfW as a reliable partner to municipalities and municipal service companies. As a financing partner to the promotional institutions of the federal states, the business sector aims to ensure a business volume of programme-based global loans at the current high level. The aim in "general funding", too, is to maintain the business volume at a high level. Due to the major importance of KfW's "SME" customer group, the business sector's traditional domestic promotional offering is complemented primarily by global loans for lease financing and global loans to selected European commercial and promotional banks for SME and energy-efficiency financing.

After automating the online application process (On-lending Online 2.0) for housing-related promotional programmes, the business sector continues to drive the digitalisation strategy, particularly through the gradual expansion of KfW's newly launched grant portal.

For 2017, Kommunal- und Privatkundenbank/Kreditinstitute is aiming for a promotional business volume of EUR 28.5 billion.

#### **Financial markets**

The business sector **Financial markets** invests in securitisation transactions in order to support improvement in the credit supply via capital market instruments. In this way, KfW contributes to the diversification and stabilisation of funding opportunities for SMEs in Germany and Europe. Investments of around EUR 1.3 billion are planned for 2017, of which up to EUR 500 million will be European SME-related. KfW and the European Investment

Fund (EIF) were responsible for starting the EIF-NPB Securitisation Initiative (ENSI) in 2016, along with other European national promotional institutions (NPIs). The initiative is aimed at revitalising the market and thus improving funding opportunities for European SMEs via joint participation in securitisation transactions. The collaboration between KfW, EIF and NPIs will be further intensified in the framework of ENSI next year. In the future, capital market-supported SME financing in the framework of the European Fund for Strategic Investments (EFSI), also known as the “Juncker plan”, is to be strengthened via ENSI.

KfW's purchase of green bonds under the promotional mandate issued by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety in spring 2015 helps to fund suitable environmental and climate protection projects and support further development of the green bond market. The bank plans to expand its green bond portfolio volume to EUR 1 billion over the next two to three years and make new investments of around EUR 300 million in 2017.

For 2017, the business sector Financial markets is planning a promotional business volume of EUR 1.6 billion.

### **International business**

As a specialist financier and responsible partner, the objective of the **Export and project finance** business sector continues to be the strengthening of the German and European economies. Economic performance in the markets relevant to the business sector is stable in Germany and overall satisfactory in the OECD countries. In the relevant developing countries and emerging economies, the few regions with growth potential include Indonesia, the countries of the Andes and Mexico. Key markets such as Brazil, Russia and Turkey face challenges. Overall, there is sufficient potential for German and European exporters and enterprises that invest in their competitiveness; there are also opportunities for the Export and project finance business sector, accordingly. The Export and project finance business sector (i. e. the promotional business on KfW's balance sheet and the market business of KfW's subsidiary KfW IPEX-Bank) aims to sustainably support the German and European economy with project and export financing to maintain and increase competitiveness and internationalisation. The business sector aims to continuously enhance its structuring expertise to achieve its strategic objectives. This specifically means assessing and further developing strategic options in order to offer clients products geared to the market at competitive terms. Such products include those that conserve equity such as private risk insurance (PRI) and the assumption of selected roles in capital market transactions, like project bonds and structured corporate bonds, as well as the placement of large self-structured financings. A high priority is placed on the continued improvement of risk diversification to sustainably stabilise earnings. The main points are a stronger focus on marketing business that does not affect risk-weighted assets, and assessing the increased use of hedging instruments and transfer of risk to the market (PRI and syndication) as well as increased identification and management of hidden concentra-

tion risks (focus portfolios). Overall, this should result in less volatile and more limited risk costs. Moreover, a variety of projects have been pooled into the strategic initiative IPEXnext for the continuous development of the business sector. Following the normalisation of commitment volume in 2016, the business sector Export and project finance plans to continue along the growth path approved by the Executive Board for financial year 2017 with a promotional business volume of EUR 15.9 billion.

The **Promotion of developing countries and emerging economies** business sector encompasses the business activities of KfW Development Bank and DEG.

**KfW Development Bank** expects dynamic business growth to continue in the next few years: Germany's large contribution to official development assistance (ODA) will continue in view of the country's positive economic performance, the refugee and crisis situation and the ongoing need in climate financing. The main focal areas are crisis/refugee, vocational training/employment, climate financing and urban development. In view of the refugee and crisis situation, the European Commission announced a European External Investment Plan (EEIP) to combat the root causes of migration. In addition to the results of the 2015 climate summit, which were rendered more concrete and operational at this year's COP22 (22nd Conference of the Parties, United Nations), the implementation of the ambitious Sustainable Development Goals (SDGs) will strengthen the business models of bilateral and multilateral development banks as key sources of financing and expertise. Impact reporting requirements are also increasing in order to better measure progress. The majority of development banks – primarily the Asian Development Bank (ADB), the Agence Française de Développement (AFD) and the World Bank – are raising their financing volumes and further expanding their cooperation with regional and national development banks, particularly in Africa. As the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) commence operations, these new players and alliances will be able to support the growth objectives; however, at the same time, there is also a risk of a “race to the bottom” in terms of project quality. In addition, development banks are differentiating their products (e. g. non-sovereign loans, local currency financing and own guarantee mechanisms) and striving to achieve a greater role for the private sector in development work.

KfW Development Bank aims to quickly implement the additional budget funds and raise the promotional business volume accordingly as a means of supporting the Federal Government in expanding and globally positioning German Financial Cooperation. It will further expand its international climate financing, including through the implementation of new innovative promotional approaches such as climate risk insurance and further development of the climate adaptation portfolio, such as in the water sector or urban development. Collaboration with emerging economies will involve a focus on financing and technology transfers to support climate protection.

KfW aims to expand targeted cooperation with strategic partners. KfW has made important proposals under the EU's EEIP in close

cooperation with bilateral European promotional institutions (e.g. AFD), including a proposal to develop a European collateral instrument. In addition to intensive collaboration in a European context, selected cooperation projects are also being implemented with relevant international players.

KfW Development Bank is making a significant contribution to overcoming the refugee crisis with direct effects on Germany through the implementation of projects in crisis regions, as well as by reducing the consequences of climate change, globalisation and demographic change.

### Funding projections

As one of the world's largest non-governmental issuers, KfW issues bonds worldwide and enjoys excellent credit quality thanks to the explicit, direct guarantee from the Federal Republic of Germany. KfW has achieved a stable position in the **capital markets** with a well-diversified long term-oriented funding strategy. It enjoys an excellent reputation among international market participants and is in a position to react in a flexible way to rapidly changing market conditions. KfW seeks to maintain this position with great care and responsibility in order to secure the funding of KfW's promotional business.

KfW anticipates a high funding volume over the next two years. KfW expects funding volume via the capital markets of approximately EUR 75 billion in 2017.

### Earnings projections

In the current group **earnings projections** for 2017, KfW expects Consolidated profit (before IFRS effects) of approximately EUR 1 billion based on anticipated macroeconomic conditions. The expected result is thus at the level of the strategic objective. Contributions from Net interest income and Net commission income (in each case before promotional activity) are at a high level similar to that of previous years; however, the ongoing low interest rate environment may limit the potential for additional earnings contributions from interest rate and liquidity maturity transformation and consequently place an increasing burden on Total net interest income in subsequent years.

The planned Administrative expense for 2017 moderately exceed those of 2016. This increase is expected to be largely due to cost increases from modernisation and regulation, growth in the foreign business sectors and personnel cost increases associated with collective agreements. This is anticipated to only slightly change the expected cost/income ratio before promotional activity.

For 2017, KfW Development Bank expects a commitment volume of EUR 7.2 billion.

### Privatisation transactions with the German Federal Government

In connection with the Federal Government's **privatisation transactions**, KfW is generally also prepared to conduct further privatisation transactions in 2017, taking into account market conditions and the strategic requirements of the Federal Government.

Its funding strategy is based on reliable and forward-looking action, taking investor needs and market conditions into account. KfW aligns its bond supply and wide product range towards demand-side needs and is thus well received by investors around the world. The three most important pillars of KfW's funding strategy remain highly liquid benchmark bonds in euros and US dollars, public bonds and private placements. The sustainability strategy in the capital markets will also be continued in the future through the issue of "Green Bonds – Made by KfW" denominated in different currencies. Following the successful return to the capital market with a bond issue denominated in Singapore dollars and Hong Kong dollars in 2016, KfW hopes to generate new impetus through further issues in local currency markets.

The projected standard risk costs, which as a long-standing historical average are considerably higher for 2017 than the actual risk provisions for lending business in 2016, will have a negative effect on earnings. Market conditions permitting, KfW also expects promotional activity in 2017 to be close to the previous budget.

KfW's business model is oriented towards the medium to long term; income from the lending business (interest rate margins and net commission income) in particular is very stable.

**Opportunities and risks** for consolidated profit may arise above all for the treasury result from deviating market conditions in conjunction with KfW's positioning. In addition, opportunities and risks may arise for the valuations as a result of risk provisions that may vary from those planned as well as from temporary effects on results arising from the valuation of economically effective hedges (IFRS-related effects on results). The latter have no economic basis and therefore are not explicitly included in KfW's planning.

### HR strategy/development of workforce

**Adequate staffing** is a key requirement for implementing KfW's business strategy. Short and medium-term planning at KfW is complemented by strategic personnel planning for the future. This is currently being developed for major strategic projects in particular with the aim of early identification of necessary changes in terms of professional skills and to implement measures to accommodate these effects (e. g. targeted retraining of employees affected by staff reductions).

With a view to demographic change and the labour market situation, which also affect KfW, specialisation in recruiting will help to meet personnel needs in the future by hiring external staff – if necessary. Comprehensive talent and skills management is one of the core functions of Human Resources (HR) **development** in order to address changing needs regarding existing employees. In addition to using existing formats for hiring and developing managers, this includes expanding the definition of

### Digitalisation as an opportunity

The **digitalisation** of the economy drives productivity, innovation and new business models. It also presents significant challenges to businesses and policymakers. Digitalisation's success hinges on investment in the digital infrastructure, adequate data security and data protection plans and the relevant skills for employees. On the one hand, KfW supports the digital transformation of the economy via its promotional activities; on the other, the banking environment – including KfW with its unique business model – is already experiencing considerable change through the trend towards digitalisation and will experience

talent and therefore succession management at specialist level, developing new career models, such as for project managers, as well as maintaining the existing comprehensive offering of further training. With its professionalised and expanded change management programme, HR provides support for the numerous intensive change processes and major projects under way at the bank, for example due to digitalisation of the working environment.

KfW supports its staff in terms of gender balance, particularly by reconciling career and family life and offering flexible working hours. Diversity will become a new focal point in the next few years.

The HR department was realigned as of 1 January 2017 with the main objective being to provide future-oriented services in line with the KfW strategy, HR client needs and the competitive situation on the market.

more in the future. KfW recognised early on the need to take targeted steps to push KfW's digital transformation in all areas where it would provide a strategic and/or quantifiable benefit for KfW. For this purpose, it created a "digital office" in 2016, with the aim of continuously developing KfW's digital transformation, creating a broad technical understanding of digitalisation and advancing the necessary cultural change. An innovation lab was also created to increase innovation in digital and non-digital areas as well as to establish an active external network.

# Declaration of compliance

The Executive Board and Board of Supervisory Directors of KfW have resolved to recognise the principles of the Federal Public Corporate Governance Code (*Public Corporate Governance Kodex des Bundes* – “PCGK”) and apply them at KfW. The

Corporate Governance Report of KfW contains the declaration of compliance with the recommendations of the PCGK.

»» KfW financial statements 2016

# Financial statements

## Statement of financial position of KfW as of 31 December 2016

### Assets

	see note no.	31 Dec. 2016				31 Dec. 2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
<b>Cash reserves</b>						
a) Cash in hand				178		0
b) Balances with central banks				11,571,344		460
<i>of which: with Deutsche Bundesbank</i>		11,571,344				(460)
				<b>11,571,522</b>		<b>460</b>
<b>Loans and advances to banks</b>	(2)					
a) Due on demand				2,934,744		7,519
b) Other loans and receivables				301,739,319		298,560
				<b>304,674,063</b>		<b>306,078</b>
<b>Loans and advances to customers</b>	(3)					
<i>of which: secured with mortgages</i>						
Municipal loans		73,488,504				(81,119)
<b>Bonds and other fixed-income securities</b>	(4), (9)					
a) Money market paper						
aa) Of public sector issuers			0			0
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		0				(0)
ab) Of other issuers			1,246,679	1,246,679		1,149
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		0				(35)
b) Bonds and debentures						
ba) Of public sector issuers			6,247,089			6,182
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		6,083,331				(6,150)
bb) Of other issuers			21,913,559	28,160,648		21,055
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		17,631,253				(17,149)
c) KfW's own bond issuers				9,067,313		9,717
Nominal amount		9,674,134				(10,316)
				<b>38,474,640</b>		<b>38,104</b>

## Assets

	See note no.	31 Dec. 2016				31 Dec. 2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
<b>Equity investments</b>	(5), (7), (9)				<b>1,044,963</b>	<b>985</b>
<i>of which: in banks</i>		42,017				(43)
<i>of which: in financial services institutions</i>		0				(0)
<b>Shares in affiliated companies</b>	(6), (7), (9)				<b>3,049,805</b>	<b>3,257</b>
<i>of which: in banks</i>		429,000				(429)
<i>of which: in financial services institutions</i>		0				(0)
<b>Assets held in trust</b>	(8)				<b>16,318,578</b>	<b>16,557</b>
<i>of which: loans held in trust</i>		12,726,993				(13,101)
<b>Intangible assets</b>	(9)					
Concessions, industrial property rights and similar rights				125,003		113
					<b>125,003</b>	<b>113</b>
<b>Property, plant and equipment</b>	(9)				<b>866,473</b>	<b>862</b>
<b>Other assets</b>	(10)				<b>15,613,906</b>	<b>19,181</b>
<b>Deferred charges</b>	(11)				<b>1,503,171</b>	<b>1,590</b>
<b>Special loss account consisting of provisions under Section 17 (4) of the D-Mark Balance Sheet Act</b>					<b>26,412</b>	<b>26</b>
<b>Total assets</b>					<b>500,684,072</b>	<b>493,205</b>

## Liabilities and equity

	see note no.	31 Dec. 2016				31 Dec. 2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
<b>Liabilities to banks</b>	(12)					
a) Due on demand				17,212,813		21,178
b) With agreed terms or periods of notice				4,789,310		6,144
						<b>27,322</b>
<b>Liabilities to customers</b>	(13)					
Other liabilities						
a) Due on demand			712,183			1,017
b) With agreed terms or periods of notice			10,055,164	10,767,347		7,698
						<b>8,716</b>
<b>Certificated liabilities</b>	(14)					
Bonds issues				422,268,342		412,308
						<b>412,308</b>
<b>Liabilities held in trust</b>	(15)					
<i>of which: Loans held in trust</i>		12,726,993				(13,101)
<b>Other liabilities</b>						<b>72</b>
<b>Deferred income</b>	(16)					<b>3,234</b>
<b>Provisions</b>	(17)					
a) Provisions for pensions and similar obligations				1,091,605		1,093
b) Other provisions				1,070,523		1,123
						<b>2,215</b>
<b>Obligatory charges under the D-Mark Balance Sheet Act</b>						<b>0</b>
<b>Subordinated liabilities</b>	(18)					<b>300</b>
<b>Fund for general banking risks</b>						<b>600</b>

## Liabilities and equity

	see note no.	31 Dec. 2016				31 Dec. 2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
<b>Equity</b>	(19)					
a) Called in capital						
Subscribed capital			3,750,000			3,750
less uncalled outstanding contributions			(450,000)	3,300,000		(450)
b) Capital reserve				8,446,989		8,447
<i>of which: promotional reserves from the ERP Special Fund</i>		7,150,000				(7,150)
c) Reserve from the ERP Special Fund				1,190,752		1,191
d) Retained earnings						
da) Statutory reserve under Article 10 (2) of the KfW Law			1,875,000			1,875
db) Special reserve under Article 10 (3) of the KfW Law			8,311,812			7,021
dc) Special reserve under Section 17 (4) of the Balance Sheet Act			47,607	10,234,419		48
					<b>23,172,160</b>	<b>21,882</b>
<b>Total liabilities and equity</b>					<b>500,684,072</b>	<b>493,205</b>
<b>Contingent liabilities</b>	(20)					
a) On guarantees				1,114,224		2,328
					<b>1,114,224</b>	<b>2,328</b>
<b>Other commitments</b>	(21)					
a) Irrevocable loan commitments				76,088,547		55,800
					<b>76,088,547</b>	<b>55,800</b>

# Income statement of KfW

for the period from 1 January – 31 December 2016

	see note no.	1 January – 31 December 2016				2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
<b>Interest income from</b>						
a) Lending and money market transactions	(22)	10,207,291				9,065
Less negative interest from lending and money-market transactions		-113,446	10,093,845			-45
b) Fixed-income securities and bonds			101,766			168
				<b>10,195,611</b>		9,188
<b>Interest expense</b>	(22)	8,488,690				7,177
Less positive interest from the banking business		-53,136	8,435,554			-23
				<b>8,435,554</b>		7,154
					<b>1,760,057</b>	2,035
<b>Current income from</b>						
a) Shares and other non-fixed income securities				254		1
b) Equity investments				29,983		17
c) Shares in subsidiaries				0		0
					<b>30,237</b>	18
<b>Commissions and similar service charges earned</b>				<b>380,422</b>		382
<b>Commissions and similar charges payable</b>				<b>207,343</b>		221
					<b>173,079</b>	161
<b>Other operating income</b>	(23)				<b>233,945</b>	225
<b>General administrative expenses</b>						
a) Personnel expense						
aa) Salaries and wages			388,164			380
ab) Social security contributions and expense for pension provision and other employee benefits			56,592	444,756		154
of which: for pensions			3,377			(104)
b) Other administrative expenses				418,394		402
					<b>863,150</b>	936
<b>Depreciation, amortisation and impairment of property, plants and equipment and intangible assets</b>	(9)				<b>82,176</b>	47
<b>Other operating expense</b>	(23)				<b>31,308</b>	34

	see note no.	1 January – 31 December 2016				2015
		EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in millions
Income from the reversals of impairment losses on receivables and certain securities and reversals of provisions for loan losses					91,554	14
Depreciation, amortisation and impairment of equity investments, shares in subsidiaries and securities held as fixed assets					16,952	0
Income from reversals of write-downs of equity investments, shares in subsidiaries and securities held as fixed assets					0	20
Additions to/reversal of the fund for general banking risks					0	-100
Result from ordinary activities					1,295,286	1,355
Taxes on income					5,056	24
Profit					1,290,230	1,331
Allocation to retained earnings						
to the special reserve under Article 10 (3) of the KfW Law	(19)		-1,290,230			-1,331
				-1,290,230		-1,331
Net retained profits					0	0

# Notes

The financial statements of KfW have been prepared in accordance with the requirements of the German Commercial Code (*Handelsgesetzbuch – “HGB”*), the German Accounting Regulation for Banks and Financial Services Institutions (*Verordnung über die Rechnungslegung der Kreditinstitute und Finanzdienstleistungsinstitute – “RechKredV”*) and the Law Concerning KfW (KfW Law). The special provisions of the D-Mark Balance Sheet Act (*D-Mark-Bilanz-Gesetz – “DMBiLG”*) have also been observed. The KfW statement of financial position and income statement presentation of items was adjusted as follows: Equity was expanded to include the special items “Promotional reserves from the ERP Special Fund” as a sub-item of Capital Reserve, “Reserves from the ERP Special Fund” and the three sub-items in Retained earnings: “Statutory reserve under Article 10 (2) KfW Law” and “Special reserve under Article 10 (3) KfW Law” and “Special reserve under Section 17 (4) of the D-Mark Balance Sheet Act”. Disclosures on items in the statement of financial position which may be provided either in the statement of financial position or in the notes are provided in the notes.

## 1) Accounting policies

Cash in hand, Loans and advances to banks and customers and Other assets have been shown at cost, notional amount or lower fair value. Differences between notional amounts and lower paid out amounts of receivables, which are similar in nature to interest, have been included in Deferred income and recognised over the term through profit or loss in Interest income. Equity investments and Shares in subsidiaries are recognised at cost. In the case of permanent impairments, assets are written down to the lower value.

Interest rate reductions are recognised in the income statement as they arise, at their present value at the time the loan terms and conditions are determined. These transactions are measured by applying the parameters of the general promotional loan market the first time they are recorded at fair value. Consequently, these transactions result in interest rates below the market rate, which have a negative impact on KfW’s earnings position.

The difference that normally results upon loan commitment – present value of the nominal scheduled interest rate reductions during the first fixed interest rate period – is recognised in profit or loss with a negative impact on interest expense and accounted for as an adjusting item in Loans and advances under the balance sheet items Loans and advances to banks or Loans and advances to customers. The adjustment to the carrying amount is amortised in Net interest income using the effective interest rate method. In the event of unscheduled repayment

in full, this will be recognised in profit or loss under Interest income. Differences that relate to irrevocable loan commitments are reported in Provisions. Changes to the portfolio are offset via the adjustments to the carrying amounts of already disbursed promotional loans recognised on the assets side.

The securities held as a liquidity reserve are valued strictly at the lower of cost or market (*strenges Niederstwertprinzip*), where they are not hedged. For securities held as fixed assets, the modified lower of cost or market principle (*gemildertes Niederstwertprinzip*) has generally been applied. In some cases, hedging relationships are recognised for securities and their interest hedges (primarily interest rate swaps) in accordance with Section 254 HGB. No securities have been allocated to the trading book. Reversals of impairment losses have been accounted for in accordance with the statutory requirements. Structured securities with embedded derivatives are accounted for as one unit and are valued strictly at the lower of cost or market value.

Property, plant and equipment and intangible assets are reported at cost, reduced by straight line depreciation/amortisation over their expected useful life. Impairment is recognised as required. Minor fixed-assets items are combined to form a collective item and are depreciated/amortised over a period of five years using the straight-line method. The bank opted not to recognise internally generated intangible fixed assets.

Liabilities are recognised at their settlement amount; differences between agreed higher repayment amount and issue amount are recognised in the item Deferred charges. Zero-coupon bonds issued are recognised at their current redemption amount.

Provisions for pensions and similar commitments were valued in accordance with actuarial principles on the basis of the 2005 G mortality tables by Dr Klaus Heubeck. The projected unit credit method with the following parameters was applied to KfW’s calculations for all active staff members.

	<b>31 Dec. 2016</b>
Actuarial discount rate (10-year average interest rate)	4.01%
Rate of salary increases (depending on pay scale)	2.20%
Rate of pension increases (depending on pension scheme)	1.00% to 2.50%
Rate of staff turnover	1.50%

Other provisions are reported in the amount of the estimated expenditure required to settle the obligation as dictated by prudent business judgment, taking future price/cost increases into account. Provisions with a remaining life of more than one year are discounted at the market interest rate published by the Deutsche Bundesbank.

Risks, primarily for lending business as a result of the structure of KfW's business, were sufficiently addressed through value adjustments and provisions. KfW distinguishes between significant receivables (volume from each individual borrower of EUR 1 million or more) and non-significant receivables. For significant receivables, an individual assessment of credit exposure regarding future payments is undertaken when there are indicators of impairment. The calculation takes into account the scope and value of the collateral as well as the political risk. For non-significant receivables, a general risk provision is created based on homogenous sub-portfolios. Latent credit and transfer risks are covered by recognising portfolio-based impairments for the portion of the portfolio that is not already individually impaired. For non-performing loans, interest income is generally accrued based on the probability of collection. Additions and usage are recognised net in the item Impairment of receivables and certain securities and additions to provisions for loan losses or Income from the reversals of impairment losses on receivables and certain securities and reversals of provisions for loan losses. The same applies to unrealised and realised results from equity investments, shares in subsidiaries and securities treated as fixed assets. The possibility of netting in the income statement in accordance with Section 340c (2) and Section 340f (3) HGB has been utilised.

The assets and debts in foreign currencies and the cash transactions not completed on the date of the statement of financial position have been converted into euros at the average spot exchange rate. The bank applies the principle of special cover in accordance with Section 340h HGB in conjunction with Section 256a HGB.

The valuation of interest-related transactions in the banking book (*Refinanzierungsverbund*) follows the management of interest rate fluctuation risk at KfW. The principle of prudence is taken into account by creating a provision for anticipated losses from onerous contracts in accordance with Section 340a in conjunction with Section 249 (1) sentence 1, 2nd alternative, HGB for any excess obligations resulting from the valuation of the interest-related banking book. The requirements of the statement of the Banking Committee of the German Institute of Auditors (*Institut der Wirtschaftsprüfer – "IDW"*) on the loss-free valuation of the banking book ("BFA 3") are taken into account. To determine any excess obligation, KfW calculates the net value of all discounted future period results of the banking book. In addition to net interest and relevant commission income, this includes the associated administrative costs and risk costs in the amount of expected losses. No provision for contingent losses was required during the reporting year.

Negative interest generated as a result of the persisting low interest rate environment is reported in the statement of financial position under Interest from lending and money-market transactions and Interest expense. The previous year's figures were adjusted accordingly.

# Notes to the assets

## 2) Loans and advances to banks

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
This item includes:		
Loans and advances		
To affiliated companies	23,908	23,659
To companies in which KfW holds a stake	13	29
Without underwriting borne by the on-lending bank	1,599	1,769
Subordinated loans	1,977	1,949
Due		
On demand	2,935	7,519
Within 3 months	24,717	23,909
Between 3 months and 1 year	34,398	33,105
Between 1 year and 5 years	121,670	123,553
In more than 5 years	117,748	114,186
Accrued interest	3,205	3,808
<b>Total</b>	<b>304,674</b>	<b>306,078</b>

An adjusting item in the amount of EUR 1,357 million (previous year: EUR 1,588 million) is reported under Loans and advances to banks due to the interest rate being below the market rate for promotional loans disbursed with additional promotional support in the form of interest rate reductions with an impact on KfW's earnings.

## 3) Loans and advances to customers

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
This item includes:		
Loans and advances		
To affiliated companies	70	38
To companies in which KfW holds a stake	0	0
Subordinated loans	2,573	3,077
Due		
With no fixed maturity	11,413	11,413
Within 3 months	12,991	14,889
Between 3 months and 1 year	6,288	6,211
Between 1 year and 5 years	33,661	30,616
In more than 5 years	42,747	42,528
Accrued interest	315	333
<b>Total</b>	<b>107,416</b>	<b>105,991</b>

An adjusting item in the amount of EUR 142 million (previous year: EUR 174 million) is reported under Loans and advances to customers due to the interest rate being below the market rate for promotional loans disbursed with additional promotional support in the form of interest rate reductions with an impact on KfW's earnings.

#### 4) Bonds and other fixed-income securities

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
Due within the following year		
Money market paper, bonds and notes	6,322	7,705
<i>Notional amount</i>	6,240	7,492
Own bond issues	338	572
<i>Notional amount</i>	336	572
<b>Total</b>	<b>6,660</b>	<b>8,277</b>
<i>Notional amount</i>	6,576	8,063
Listed securities	36,781	36,443
Unlisted securities	1,694	1,660
<b>Marketable securities</b>	<b>38,475</b>	<b>38,104</b>
Subordinated assets	109	13
Repurchase agreements	0	24

#### 5) Equity investments

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
Listed securities	57	0
Unlisted securities	47	48
<b>Marketable securities</b>	<b>104</b>	<b>48</b>

#### 6) Shares in affiliated companies

As in the previous year, this item does not contain any listed securities.

## 7) Disclosures on shareholdings

Name and domicile of company		Share held	Equity	Profit for the year
		in %	EUR in thousands	EUR in thousands
1	DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne <sup>1)</sup>	100.0	2,367,946	96,315
2	KfW Beteiligungsholding GmbH, Bonn <sup>1)</sup>	100.0	1,707,890	100,551
3	Interkonnektor GmbH, Frankfurt am Main <sup>1)</sup>	100.0	25,445	-1,287
4	tbg Technologie-Beteiligungsgesellschaft mbH, Bonn <sup>1)</sup>	100.0	177,321	8,721
5	Finanzierungs- und Beratungsgesellschaft mbH, Berlin <sup>2)</sup>	100.0	13,728	31
6	AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co. KG, Munich <sup>2)</sup>	47.5	148,307	7,584
7	Deutsche Energie-Agentur GmbH (dena), Berlin <sup>2)</sup>	26.0	4,527	-1,255
8	Berliner Energieagentur GmbH, Berlin <sup>2)</sup>	25.0	5,261	446
9	eCapital Technologies Fonds II GmbH & Co. KG, Münster <sup>2)</sup>	24.8	21,707	-1,193
10	Galaxy S.à r.l. Luxembourg, Luxembourg <sup>3)</sup>	20.0	7,227	-584

Name and domicile of company where KfW holds at least 5% of voting rights		Share of voting rights	Equity	Profit for the year
		in %	EUR in thousands	EUR in thousands
1	Procredit Holding AG & Co KGaA, Frankfurt am Main <sup>2) 4)</sup>	14.5	603,998	61,335
2	CJSC AccessBank Tajikistan, Dushanbe, Tajikistan <sup>2)</sup>	9.1	3,827	-2,794
3	Finca Microfinance Holding Company LLC, Delaware, USA <sup>2)</sup>	8.9	231,334	-11,550
4	AccèsBanque Madagascar SA, Antananarivo, Madagascar <sup>2)</sup>	7.3	7,703	1,276
5	AB Microfinance Bank Nigeria Ltd., Lagos, Nigeria <sup>2)</sup>	5.9	9,519	1,207

<sup>1)</sup> Most recent available financial statements 31 Dec. 2016

<sup>2)</sup> Most recent available financial statements 31 Dec. 2015

<sup>3)</sup> Most recent available financial statements 30 June 2015

<sup>4)</sup> Consolidated financial statements of ProCredit Group

Shares in investment funds		Share of total assets	Carrying amounts	Dividend payments	Redeemable daily
		in %	EUR in thousands	EUR in thousands	
1	Galaxy S.à r.l. SICAR	20.0	0	0	No
2	Microfinance Enhancement Facility SA, SICAV-SIF.	19.8	105,777	3,829	No
3	Global Climate Partnership Fund, SA SICAV-SIF	18.1	55,498	1,006	No
4	Europäischer Fonds für Südosteuropa SA SICAV-SIF	17.9	153,074	6,408	No
5	Green for Growth Fund, Southeast Europe SA, SICAV-SIF	17.0	56,162	1,395	No
6	Rural Impulse Fund II S.A., SICAV-SIF	16.5	9,177	2,447	No
7	Sanad Fund for MSME S.A., SICAV-SIF	16.1	30,000	245	No
8	Advans SA SICAR	15.0	9,358	0	No
9	Fondaco società di gestione del risparmio S.p.A.	14.6	10,417	0	No
10	MIFA Debt Fund S.A., SICAV-SIF	14.6	21,676	842	No
11	Africa Agriculture and Trade Investment Fund, SICAV-SIF	14.4	21,552	556	No
12	2020 European Fund for Energy, Climate Change and Infrastructure SICAV	14.1	54,650	0	No
13	DWM incl. Finance Equity Fund II	10.0	2,367	0	No

The shares in investment funds primarily serve to strengthen and support projects relating to climate protection, renewable energy and infrastructure expansion and whose main aim is promoting public interests. For this reason, the shares are reported under “Equity investments” and not under “Shares and other non-fixed income securities”. The

limitations imposed on daily redemptions are due to the funds' long-term orientation and the specific investors involved. These funds are an essentially illiquid investment vehicle. The investments are not impaired and an evaluation process takes place regularly.

## 8) Assets held in trust

	31 Dec. 2016	31 Dec. 2015
	EUR in millions	EUR in millions
Loans and advances to banks	918	994
Loans and advances to customers	11,809	12,093
Equity investments	3,592	3,470
<b>Total</b>	<b>16,319</b>	<b>16,557</b>

## 9) Fixed assets

### Statement of changes in fixed assets as of 31 December 2016

EUR in thousands		Equity invest-ments <sup>1)</sup>	Shares in affiliated companies <sup>1)</sup>	Securities held as fixed assets <sup>1)</sup>	Intangible assets	Property, plant and equipment <sup>4)</sup>	Total
Acquisition costs/ production costs as of 1 Jan. 2016 <sup>3)</sup>					146,125	1,159,975	
Additions 2016					45,088	54,089	
Disposals 2016	Changes <sup>2)</sup>	59,676	-207,656	710,918	15,937	16,965	
Transfers 2016					0	0	
Acquisition costs/ production costs as of 31 Dec. 2016					175,276	1,197,100	
Accumulated depreciation/ amortisation as of 1 Jan. 2016					33,230	297,676	
Depreciation/amortisation 2016					32,979	49,198	
Reversal of impairments 2016					0	0	
Depreciation/amortisation of additions 2016					2,073	13,941	
Depreciation/amortisation of disposals 2016					1,176	926	
Depreciation/amortisation of transfers 2016					0	0	
Accumulated depreciation/ amortisation as of 31 Dec. 2016					50,272	330,627	
Net carrying amount 31 Dec. 2016		1,044,963	3,049,805	27,640,661	125,003	866,473	<b>32,726,906</b>
Net carrying amount 31 Dec. 2015		985,287	3,257,461	26,929,743	112,894	862,300	<b>32,147,686</b>

<sup>1)</sup> The bank exercised the option under Section 34 (3) RechKredV to consolidate Securities and investments.

<sup>2)</sup> Including price changes

<sup>3)</sup> The simplification under Section 31 (3) of the Introductory Act to the German Commercial Code (*Einführungsgesetz zum Handelsgesetzbuch - "EGHGB"*) has been applied.

<sup>4)</sup> Of which net carrying amount as of 31 December 2016: – Total amount of land and buildings used for the bank's activities EUR 801,930 thousand  
– Total amount of office furniture and equipment EUR 64,543 thousand.

Bonds and other fixed-income securities, as well as shares and other non-fixed income securities, intended for permanent use for business activities and therefore usually held until maturity, have been included with the securities held as fixed assets. They are presented separately from current assets and are valued according to the modified lower of cost or market value principle.

The carrying amount of the marketable securities in fixed assets not valued strictly at the lower of cost or market value was EUR 27,641 million as of 31 December 2016. This includes investments in securities whose book value of EUR 6,133 million was higher than the market value of EUR 6,080 million. Since these securities are to be held until maturity, no impairment loss was recognised.

## 10) Other assets

	31 Dec. 2016	31 Dec. 2015
	EUR in millions	EUR in millions
Main items:		
Adjusting item from the currency translation of derivatives	14,982	18,569
Amount receivable from the Federal Agency for Special Tasks Associated with Unification	603	604

The Other assets item mainly comprises the adjustment from the currency conversion of derivatives used in the context of managing foreign currency exposure. The amount receivable from the Federal Agency for Special Tasks Associated with Unification is reported due to the transfer to KfW of the insurance business of the State Insurance Company of the GDR in liquidation (*Staatliche Versicherung der DDR in Abwicklung – "SinA"*). Actuarial provisions have thus been set up in the same amount.

## 11) Deferred charges

The line item Deferred charges includes the differences between the repayment amount and the lower issuing amount for liabilities in the amount of EUR 615 million (previous year: EUR 770 million).

# Notes to the liabilities and equity

## 12) Liabilities to banks

	<b>31 Dec. 2016</b>	<b>31 Dec. 2015</b>
	<b>EUR in millions</b>	<b>EUR in millions</b>
The item includes:		
Liabilities to		
Affiliated companies	8	63
Companies in which KfW holds a stake	0	0
Due		
On demand	17,213	21,178
Within 3 months	95	1,026
Between 3 months and 1 year	138	71
Between 1 year and 5 years	1,206	1,141
In more than 5 years	956	993
Accrued interest	2,394	2,913
<b>Total</b>	<b>22,002</b>	<b>27,322</b>

## 13) Liabilities to customers

	<b>31 Dec. 2016</b>	<b>31 Dec. 2015</b>
	<b>EUR in millions</b>	<b>EUR in millions</b>
The item includes:		
Liabilities to		
Affiliated companies	172	373
Companies in which KfW holds a stake	0	0
Due		
On demand	712	1,017
Within 3 months	3,733	876
Between 3 months and 1 year	513	1,053
Between 1 year and 5 years	2,912	2,452
In more than 5 years	2,801	3,228
Accrued interest	95	90
<b>Total</b>	<b>10,767</b>	<b>8,716</b>

## 14) Certificated liabilities

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
The sub-item – Bonds issued – includes:		
Liabilities to		
Affiliated companies	2,116	1,988
Companies in which KfW holds a stake	0	0
Due within the following year	111,131	109,223

## 15) Liabilities held in trust

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
Liabilities to banks	0	0
Liabilities to customers	16,319	16,557
<b>Total</b>	<b>16,319</b>	<b>16,557</b>

## 16) Deferred income

Deferred income includes discounts on receivables totalling EUR 460 million (previous year: EUR 633 million).

## 17) Provisions

	31 Dec. 2016 EUR in millions	31 Dec. 2015 EUR in millions
Main items:		
Provisions for pensions and similar obligations	1,092	1,093
Actuarial provisions in connection with the transfer to KfW of the insurance business of SinA	603	604
Provisions for variable compensation components incl. social security payments	57	57
Irrevocable loan commitments below market rate	44	47
Provisions for credit risks	39	54
Provisions for covering future interest charges resulting from the transfer of the ERP Special Fund	37	56

For provisions with a remaining term of more than one year and a carrying amount as of 31 December 2016 of EUR 45 million, KfW exercised the option to retain the carrying amount without discounting in accordance with Section 67 (1), Sentence 2, of the Introductory Act to the German Commercial Code ("EGHGB"). The value after discounting at the applicable Bundesbank interest rate totals EUR 44 million, yielding excess coverage of EUR 1 million.

Expenses of EUR 41 million resulting from accrued interest on provisions for pensions and similar obligations and other long-term provisions are recognised in Interest expenses.

There was a difference of EUR 137 million between the discounting of provisions for pensions at the average market rate of the past ten years and the discounting of this item at the average market rate of the past seven years. This difference is excluded from distribution.

An adjusting item in the amount of EUR 44 million is reported in financial year 2016 under Other provisions due to the interest rate being below the market rate for promotional loans irrevocably committed with additional promotional support in the form of interest rate reductions with an impact on KfW's earnings position.

### 18) Subordinated liabilities

As part of the new legislation governing ERP economic promotion as of 1 July 2007, the ERP Special Fund provided a subordinated loan to KfW in the original amount of EUR 3,247 million. The ERP Special Fund waived KfW repayment of EUR 100 million as of 1 January 2016; thus Subordinated liabilities of EUR 200 million were recognised as of the reporting date. The loan consists of three tranches with different fixed-interest periods. The period during which capital is tied up in all tranches ends on 31 December 2027. Interest was charged on the tranches at an average rate of 1.82 % in financial year 2016 (previous year: 1.82 %).

Interest expenses for the subordinated loan amounted to EUR 4 million in financial year 2016 (previous year: EUR 5 million).

KfW has no obligation to repay the subordinated loan ahead of schedule. In the event of insolvency relating to KfW's assets or the liquidation of KfW, the loan redemption claim will not be satisfied until all other non-subordinated creditors have been paid.

### 19) Equity

	31 Dec. 2015	Profit for the financial year	Other changes	31 Dec. 2016
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
KfW's subscribed capital	3,750	0	0	3,750
Uncalled contributions outstanding	-450	0	0	-450
Capital reserve	8,447	0	0	8,447
<i>Promotional reserves of the ERP Special Fund</i>	7,150	0	0	7,150
Reserve from the ERP Special Fund	1,191	0	0	1,191
<b>Retained earnings</b>				
a) Statutory reserve under Article 10 (2) of the KfW Law	1,875	0	0	1,875
b) Special reserve under Article 10 (3) of the KfW Law	7,022	1,290	0	8,312
c) Special reserve under Section 17 (4) of the D-Mark Balance Sheet Act	48	0	0	48
<b>Equity</b>	<b>21,882</b>	<b>1,290</b>	<b>0</b>	<b>23,172</b>

All of the profit for 2016 was allocated to retained earnings. As of year-end 2016, KfW's equity amounted to EUR 23,172 million.

# Other required notes to the liabilities and equity

## 20) Contingent liabilities

	31 Dec. 2016	31 Dec. 2015
	EUR in millions	EUR in millions
This item includes:		
Guarantees for special loans	245	292
Guarantees for export financing	170	146
Guarantees for aircraft finance	149	205
Guarantees for synthetic securitisation platform (mainly PROMISE, PROVIDE)	92	998
Guarantees for foreign loans	85	217
Guarantees for other financing	373	470
<b>Total</b>	<b>1,114</b>	<b>2,328</b>

The risk of guarantees is reduced to the contracting entity through the existing recourse possibilities and is largely based on that entity's credit rating and the value of any collateral. The bank regularly assesses the risk as part of credit risk monitoring. If there are reasons for a probable outflow of funds, the bank creates individual provisions; general provisions are made for latent risks. Contingent liabilities are reduced by received cash collateral and provisions accounted for as liabilities.

## 21) Other commitments

	<b>31 Dec. 2016</b>	<b>31 Dec. 2015</b>
<b>Irrevocable loan commitments</b>	<b>EUR in millions</b>	<b>EUR in millions</b>
This item includes:		
Investment finance of Kommunal- und Privatkundenbank/Kreditinstitute	35,969	18,661
Export and project finance	14,957	13,697
Investment finance of Mittelstandsbank (SME Bank)	11,331	9,930
Loans for the Promotion of developing countries and emerging economies	10,936	10,051
Guarantees	272	288
Forward-forward agreements	1,124	1,073
Other loan commitments	1,500	2,100
<b>Total</b>	<b>76,089</b>	<b>55,800</b>

Irrevocable loan commitments are used for regular credit risk monitoring. If there are specific findings regarding a loss from an expected outflow of funds, the bank creates an individual provision; latent risks are covered through the creation of portfolio provisions.

Provisions created for the interest rate reductions in irrevocable loan commitments granted by KfW in the promotional lending business and with a negative impact on its earnings position are included.

# Notes to the income statement

## **22) Interest income and Interest expenses**

The Interest and similar income from loans and advances to banks and customers item comprises EUR 113 million in negative interest from lending and money-market transactions as a result of the persisting low interest rate environment. Of this amount, EUR 9 million is attributable to receivables from the Federal Government resulting from the privatisation of Deutsche Telekom AG and Deutsche Post AG, and EUR 104 million (previous year: EUR 45 million) to money-market transactions. The Interest and similar expenses for liabilities to banks and customers item comprises EUR 53 million (previous year: EUR 23 million) in positive interest from money-market transactions.

## **23) Other operating income and Other operating expenses**

In accordance with Sections 277 (5), Sentence 2, and 340h HGB, expenditure on and income from currency conversion have been presented as gross figures in Other operating expenses (EUR 7 million, previous year: EUR 7 million) and Other operating income (EUR 6 million, previous year: EUR 12 million). Exchange rate-related value changes of specific impairments denominated in foreign currencies are also presented in Other operating expenses or Other operating income.

## **24) Auditor's fees**

KfW has exercised the option under Section 285, No. 17, HGB and refers to the breakdown of auditor's fees in KfW Group's consolidated financial statements.

## **25) Geographical markets**

As KfW has no foreign branch offices, the total amounts reported under certain income line items in accordance with Section 34 (2), No. 1, RechKredV were not broken down by region.

# Other required notes

## 26) Assets and debts in foreign currencies

	<b>31 Dec. 2016</b>	<b>31 Dec. 2015</b>
	<b>EUR in millions</b>	<b>EUR in millions</b>
Assets in foreign currencies	63,295	52,997
Debts in foreign currencies	253,823	240,618

## 27) Other financial commitments

The bank has remaining payment obligations totalling EUR 447 million in connection with equity finance operations.

It also has remaining payment obligations to affiliated companies totalling EUR 151 million as of 31 December 2016.

In isolated cases, KfW staff or third parties appointed by KfW take on executive body functions at companies in which KfW holds equity investments or with which it has another relevant creditor relationship. The risks arising therefrom are covered by the directors and officers liability insurance policy of the respective company. Liability risks may arise for KfW in the event that such insurance coverage is not in place.

## 28) Derivatives reporting

KfW uses the following forward transactions/derivative products, mainly to hedge interest and exchange rate risks, and other price and credit risks:

1. Interest rate forward transactions/derivative products
  - Interest swaps
  - Interest rate options, swaptions
  - Caps and floors
2. Currency-related forward transactions/derivative products
  - Cross-currency swaps
  - FX swaps
  - Currency forwards
  - Spot FX deals
3. Credit derivatives
  - Single name credit default swaps

The following disclosure of derivatives transactions is in accordance with the requirements of Section 285, No. 19, HGB and Section 36 RechKredV. It discloses the positive and negative fair values of the derivatives positions as of 31 December 2016.

All types of contracts are marked to market. In cases where market prices were not available for derivatives instruments, fair values were established by means of market parameters based on generally accepted option price models and present value estimates.

Purchased and written options are presented as Other assets or Other liabilities at the amount paid as premiums.

## Volume

	Notional amounts	Notional amounts	Positive fair values	Negative fair values
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2016
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
<b>Contracts with interest rate risks</b>				
Interest swaps	418,530	484,928	13,864	17,308
Interest options				
<i>thereof purchases</i>	25	0	0	0
<i>thereof sales</i>	0	0	0	0
Caps and floors <sup>1)</sup>	56	0	0	0
<b>Total</b>	<b>418,611</b>	<b>484,928</b>	<b>13,864</b>	<b>17,308</b>
<b>Contracts with currency risks</b>				
Cross-currency swaps	203,445	206,027	20,593	4,135
FX swaps	25,079	32,712	612	176
Currency forwards	54	164	2	2
Spot FX deals	1	0	0	0
<b>Total</b>	<b>228,578</b>	<b>238,902</b>	<b>21,207</b>	<b>4,313</b>
<b>Credit derivatives<sup>2)</sup></b>				
<i>thereof purchases</i>	10	10	1	0
<i>thereof sales</i>	0	10	0	0
<b>Total</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>0</b>

<sup>1)</sup> Only caps and floors which are traded on a stand-alone basis

<sup>2)</sup> In this case single name credit default swaps

## Remaining life

Notional amounts	Interest rate risks <sup>1)</sup>		Currency risks		Credit derivatives <sup>2)</sup>	
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2015
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
<b>Due</b>						
Within 3 months	22,516	14,608	37,936	40,394	0	0
Between 3 months and 1 year	39,197	60,386	24,674	38,306	0	20
Between 1 year and 5 years	199,282	227,766	127,434	114,063	10	0
In more than 5 years	157,615	182,167	38,534	46,140	0	0
<b>Total</b>	<b>418,611</b>	<b>484,928</b>	<b>228,578</b>	<b>238,902</b>	<b>10</b>	<b>20</b>

<sup>1)</sup> Derivative financial instruments are shown without embedded derivatives.

<sup>2)</sup> In this case single name credit default swaps

## Counterparties

	Notional amounts	Notional amounts	Positive fair values	Negative fair values
	31 Dec. 2016	31 Dec. 2015	31 Dec. 2016	31 Dec. 2016
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OECD banks	642,319	719,379	34,822	21,279
Banks outside the OECD	824	25	21	2
Other counterparties	139	134	31	2
Public authorities	3,917	4,313	197	337
<b>Total</b>	<b>647,199</b>	<b>723,850</b>	<b>35,071</b>	<b>21,621</b>

### 29) Hedging relationships within the meaning of Section 254 HGB

The following section describes hedging relationships within the meaning of Sections 254 and 285, No. 23, HGB.

The following table details the volume of securities held as fixed assets and as a liquidity reserve (current assets), which are hedged against interest risks as of the reporting date.

	Carrying amount	Notional amount	Fair value
	EUR in millions	EUR in millions	EUR in millions
Securities held as fixed assets			
Bonds and other fixed-income securities	19,807	19,265	20,058
Securities held as liquidity reserves			
Bonds and other fixed-income securities	9,281	9,883	10,486
<b>Total</b>	<b>29,088</b>	<b>29,148</b>	<b>30,544</b>

KfW uses derivatives to hedge open positions only.

The option to apply hedge accounting for economic hedges is exercised with KfW's own holdings of securities as designated hedged items. The net hedge presentation method is applied to the effective portion of the hedge.

A portion of the securities held as fixed assets is hedged on a micro-basis against interest risks by designating fixed-income securities primarily with interest rate swaps. Thanks to identical conditions of the hedged item and hedging instrument, the offsetting effect is demonstrated both prospectively and retrospectively using the critical terms match method.

Through the use of the modified lower of cost or fair value principle for the fixed assets, only permanent impairment losses are recognised in the income statement.

The fixed-income securities held as a liquidity reserve are also hedged against interest risks using micro hedges (primarily interest rate swaps). Any expense related to the ineffective portion of the hedge is recognised in the income statement. In addition, hedging relationships are designated as part of the repurchase of own issues, with matching certificated liabilities as hedging instruments.

Due to the negative correlation of fair value changes and the similar risks of the hedged item and the hedging instrument, changes in fair value and in cash flows of hedged items and hedging instruments largely offset one another as of the reporting date.

Considering the long-term designation of the hedging relationships, the offsetting effects are expected to continue almost fully until the hedging relationships mature. In addition to hedging relationships pursuant to Section 254 HGB, derivative financial instruments used to hedge interest risks in the banking book and the interest-bearing hedged items are included in asset liability management. KfW manages the interest margin or fair value of all interest-bearing transactions in the banking book as a whole. Hedging relationships are also included in the loss-free valuation of the interest book (BFA 3).

### 30) Loans in the name of third parties for third party account

Loans in the name of third parties and for third party account totalled EUR 9,758 million as of 31 December 2016.

### 31) Employees

The average number of employees including temporary staff but excluding the Executive Board and trainees is calculated based on the levels at the end of each quarter of the reporting year.

	2016	2015
Female employees	2,315	2,265
Male employees	2,452	2,373
<i>Staff not covered by collective agreements</i>	3,256	3,146
<i>Staff covered by collective agreements</i>	1,511	1,492
<b>Total</b>	<b>4,767</b>	<b>4,638</b>

### 32) Compensation and loans to members of the Executive Board and the Board of Supervisory Directors

	Salary	Variable compensation	Other compensation <sup>1)</sup>	Total
	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
<b>Annual compensation 2016</b>				
Dr Ulrich Schröder (Chief Executive Officer)	742.2	275.0	88.5	1,105.7
Dr Günther Bräunig	563.6	0.0	33.3	596.9
Dr Ingrid Hengster	522.6	0.0	34.8	557.4
Dr Norbert Kloppenburg	551.2	0.0	44.7	595.9
Bernd Loewen	583.5	0.0	37.4	620.9
Dr Stefan Peiss	521.9	0.0	34.3	556.2
<b>Total</b>	<b>3,485.0</b>	<b>275.0</b>	<b>273.0</b>	<b>4,033.0</b>

<sup>1)</sup> Other compensation mostly comprises the use of company cars and insurance premiums and the taxes on these amounts.

Compensation to members of the Board of Supervisory Directors totalled EUR 193.8 thousand. This amount is broken down as follows:

Compensation for the members of the Board of Supervisory Directors is EUR 5 thousand p. a. plus EUR 0.6 thousand p. a. per membership on a Board of Supervisory Directors committee, paid on a pro-rata basis for memberships that commence during the year. Compensation to members of the Federal Government who are members of the Board of Supervisory Directors pursuant to Article 7 (1), No. 2, of the Law Concerning KfW was set at EUR 0 for financial year 2016. Moreover, compensation for the Chairman of the Board of KfW Supervisory Directors and his deputies was also set at EUR 0.

Provisions in the amount of EUR 42,439 thousand were set up as of 31 December 2016 for obligations under pension agreements for retired members of the Executive Board and their surviving dependants. The regular compensation totalled EUR 4,225 thousand. No loans exist to members of either the Executive Board or the Board of Supervisory Directors.

### **33) Group affiliation**

KfW is included in the consolidated financial statements of KfW Group, Frankfurt am Main, as of 31 December 2016. The consolidated financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS") and disclosed in German in the electronic Federal Gazette (*Bundesanzeiger*).

### **34) Events after the end of the financial year**

No events of particular significance for the assessment of net assets, financial position and results of operations of KfW occurred after the end of financial year 2016.

### **35) Mandates held by statutory representatives or other employees in supervisory boards of major joint stock companies in accordance with Section 267 (3) HGB**

#### **Dr Ulrich Schröder (Chief Executive Officer)**

DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne  
Deutsche Post AG, Bonn  
Deutsche Telekom AG, Bonn

#### **Dr Günther Bräunig**

Deutsche Pfandbriefbank AG, Munich

#### **Dr Ingrid Hengster**

Deutsche Bahn AG, Berlin  
ThyssenKrupp AG, Essen

#### **Dr Norbert Kloppenburg**

DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne  
Hamburger Hafen und Logistik AG, Hamburg  
KfW IPEX-Bank GmbH, Frankfurt am Main

#### **Bernd Loewen**

KfW IPEX-Bank GmbH, Frankfurt am Main

#### **Dr Stefan Peiss**

KfW IPEX-Bank GmbH, Frankfurt am Main

#### **Dr Lutz-Christian Funke**

IKB – Deutsche Industriebank AG, Düsseldorf

#### **Christian Krämer**

ProCredit Holding AG & Co.KGaA, Frankfurt am Main

### 36) The bank's executive bodies

#### Board of Supervisory Directors

##### **Sigmar Gabriel**

Federal Minister for Economic Affairs and Energy  
Chairman  
(1 January 2016 – 31 December 2016)

##### **Dr Wolfgang Schäuble**

Federal Minister of Finance  
Deputy Chairman  
(1 January 2016 – 31 December 2016)

##### **Kerstin Andreae**

Member of the German Bundestag  
Member appointed by the German Bundestag

##### **Jan Bettink**

Former Chairman of the Board of Management of Berlin Hyp AG  
Representative of the mortgage banks  
(until 31 December 2016)

##### **Anton F. Börner**

President of the Federation of German Wholesale, Foreign Trade and Services (BGA)  
Representative of trade

##### **Volker Bouffier**

Minister President of the State of Hesse  
Member appointed by the German Bundesrat  
(since 1 January 2017)

##### **Dr Uwe Brandl**

President of the Bayerischer Gemeindetag  
Representative of the municipalities

##### **Hans-Dieter Brenner**

Former Chief Executive Officer of Helaba Landesbank Hessen-Thüringen  
Representative of industrial credit

##### **Frank Bsirske**

Chairman of ver.di – United Services Trade Union  
Representative of the trade unions

##### **Alexander Dobrindt**

Federal Minister of Transport and Digital Infrastructure

##### **Georg Fahrenschon**

President of the German Savings Banks Association (DSGV)  
Representative of the savings banks

##### **Robert Feiger**

Chairman of the Federal Executive Committee of the IG Bauen-Agrar-Umwelt trade union (IG Bau)  
Representative of the trade unions

##### **Klaus-Peter Flosbach**

Member of the German Bundestag  
Member appointed by the German Bundestag

##### **Christian Görke**

Deputy Minister President  
Minister of Finance of the State of Brandenburg  
Member appointed by the German Bundesrat

##### **Dr Louis Hagen**

Chief Executive Officer of Münchner Hypothekenbank eG  
Representative of the mortgage banks  
(since 1 January 2017)

##### **Hubertus Heil**

Member of the German Bundestag  
Member appointed by the German Bundestag

##### **Monika Heinold**

Minister of Finance of the State of Schleswig-Holstein  
Member appointed by the German Bundesrat

##### **Dr Barbara Hendricks**

Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety

##### **Reiner Hoffmann**

Chairman of the German Trade Union Confederation (DGB)  
Representative of the trade unions

##### **Gerhard Hofmann**

Member of the Board of Managing Directors of the National Association of German Cooperative Banks (BVR)  
Representative of the cooperative banks

##### **Andreas Ibel**

President of the Federal association of independent housing and real estate companies (BFW)  
Representative of the housing industry  
(since 1 January 2017)

##### **Bartholomäus Kalb**

Member of the German Bundestag  
Member appointed by the German Bundestag

##### **Dr Markus Kerber**

Director General of the Federation of German Industries (BDI)  
Representative of industry

**Stefan Körzell**

Member of the Executive Board of the German Trade Union Confederation (DGB)  
Representative of the trade unions

**Dr Gesine Lötzsich**

Member of the German Bundestag  
Member appointed by the German Bundestag

**Dr Gerd Müller**

Federal Minister for Economic Cooperation and Development

**Eckhardt Rehberg**

Member of the German Bundestag  
Member appointed by the German Bundestag

**Joachim Rukwied**

President of the German Farmers' Association (DBV)  
Representative of agriculture

**Dr Nils Schmid**

Minister of Finance and Economics of the State of Baden-Württemberg  
Member appointed by the German Bundesrat  
(until 31 December 2016)

**Christian Schmidt**

Federal Minister of Food and Agriculture

**Andreas Schmitz**

Member of the Presidency of the Association of German Banks (BdB)  
Chairman of the Management Board of HSBC Trinkaus & Burkhardt AG  
Representative of the commercial banks

**Carsten Schneider**

Member of the German Bundestag  
Member appointed by the German Bundestag

**Peter-Jürgen Schneider**

Minister of Finance of the State of Lower Saxony  
Member appointed by the German Bundesrat

**Holger Schwannecke**

Secretary General of the German Confederation of Skilled Crafts (ZDH)  
Representative of the skilled crafts

**Edith Sitzmann**

Minister of Finance of the State of Baden-Württemberg  
Member appointed by the German Bundesrat  
(since 1 January 2017)

**Dr Markus Söder**

Bavarian State Minister of Finance, Regional Development and Regional Identity  
Member appointed by the German Bundesrat  
(until 31 December 2016)

**Dr Frank-Walter Steinmeier**

Federal Minister for Foreign Affairs  
(until 27 January 2017)

**Prof. Dr Georg Unland**

Saxon State Minister of Finance  
Member appointed by the German Bundesrat

**Dr Norbert Walter-Borjans**

Minister of Finance of the State of North Rhine-Westphalia  
Member appointed by the German Bundesrat

**Dr Martin Wansleben**

Chief Executive of the Association of German Chambers of Commerce and Industry (DIHK)  
Representative of industry

**Dr Kai H. Warnecke**

Managing Director Haus & Grund Germany  
Representative of the housing industry  
(until 31 December 2016)

# Executive Board

**Dr Ulrich Schröder**  
(Chief Executive Officer)

**Dr Günther Bräunig**

**Dr Ingrid Hengster**

**Dr Norbert Kloppenburg**

**Bernd Loewen**

**Dr Stefan Peiss**

Frankfurt am Main, 24 January 2017



**Dr Ulrich Schröder**  
(Chief Executive Officer)



**Dr Günther Bräunig**



**Dr Ingrid Hengster**



**Dr Norbert Kloppenburg**



**Bernd Loewen**



**Dr Stefan Peiss**

# Auditor's report

We have audited the annual financial statements, comprising the balance sheet, the income statement and the notes to the annual financial statements, together with the bookkeeping system, and the management report of KfW, Frankfurt am Main, for the business year from 1 January to 31 December 2016. The maintenance of the books and records and the preparation of the annual financial statements and management report in accordance with German commercial law [Handelsgesetzbuch "German Commercial Code"] and supplementary provisions of the Law concerning KfW (KfW Law) are the responsibility of KfW's Executive Board. Our responsibility is to express an opinion on the annual financial statements, together with the bookkeeping system and the management report based on our audit.

We conducted our audit of the annual financial statements in accordance with §317 HGB [Handelsgesetzbuch „German Commercial Code“] and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the annual financial statements in accordance with German principles of proper accounting and in the management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of KfW and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the books and records, the annual financial statements and the management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the annual financial statements and management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the annual financial statements comply with the legal requirements and supplementary provisions of the KfW Law and give a true and fair view of the net assets, financial position and results of operations of KfW in accordance with German principles of proper accounting. The management report is consistent with the annual financial statements, complies with the German statutory requirements, and as a whole provides a suitable view of KfW's position and suitably presents the opportunities and risks of future development.

Frankfurt am Main, 28 February 2017

KPMG AG  
Wirtschaftsprüfungsgesellschaft



Wiechens  
Wirtschaftsprüfer  
(German Public Auditor)



Helke  
Wirtschaftsprüfer  
(German Public Auditor)

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