



Management
Report
and Financial
Statements
2018

Key figures of KfW

Overall activities of KfW

	2018	2017	2016
	EUR in millions	EUR in millions	EUR in millions
Financial statements			
Volume of business	567,019	553,100	577,887
Total assets	489,634	477,947	500,684
Bonds issued	419,370	408,606	422,268
Subordinated liabilities	0	0	200
Own funds	25,552	24,668	23,772
Net interest income before promotional expense	1,996	1,964	1,983
Net commission income before promotional expense	263	193	196
Administrative expense before promotional expense	1,265	1,027	931
Promotional expense	216	213	230
Profit for the year	884	895	1,290
Cost-income ratio before promotional expense	56	48	43
Tier 1 capital ratio ¹⁾	20.1	20.6	22.3
Total capital ratio ¹⁾	20.1	20.6	22.3
Employees	5,184	4,990	4,872

¹⁾ The regulatory total capital ratio and the tier 1 ratio are calculated for internal purposes.
The figures relate to the group as a whole; data are based on the IFRS consolidated financial statements.

The figures in tables were calculated exactly and added up. Figures presented may not add to totals because of independent 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

The **global economy** can be expected to post growth in 2018 on par with the previous year (+3.7%) once again. Yet momentum was less strong at the beginning of the year than had been forecast, as the industrialised countries started off with an unexpectedly weak first quarter. Strong economic performance in the USA, also supported by the tax reform, was the main counterforce to restrained development in the euro area and Japan over the course of the year. The outlook for the emerging economies during the same period was marked by more stringent financing conditions and a turnaround in investor confidence. Country-specific factors determined the extent of currency devaluations and yield premiums, with Turkey and Argentina particularly affected. Global trade encountered headwind from various trade disputes, most notably from the cross-fire of tariffs and counter tariffs between the USA and China. Even though the global trade volume affected is limited, effects have been felt in some areas. Overall, the risks to global economic growth have shifted to the negative side over the course of the year.

Economic performance in the member states of the **European Economic and Monetary Union (EMU)** last year failed to match the momentum of 2017 (+2.4%). Overall, economic output in EMU member states rose by 1.8% year on year in 2018. The economic slowdown was considerably reinforced by a series of temporary non-recurring effects (see also the section on Germany). This was disappointing given the high expectations. KfW had also expected greater growth of 2.4%. The economic slowdown affected all four major euro zone economies (Germany, France, Italy and Spain). The European industry, in particular, suffered from weaker export demand. In addition to the increasing protectionist tendencies, the appreciation of the euro is also likely to have had a delayed impact. Private consumption maintained its role as a reliable driver of growth, and investment activity made a stable contribution to growth despite political risks back on the rise and gloomy corporate sentiment.

Germany grew by 1.5% in 2018 according to initial estimates by the German Federal Statistical Office, and thus at a slower pace than in 2017 (+2.2%). A year ago, KfW predicted strong economic growth of 2.5% for 2018. Like almost all forecasters, it thus overestimated the actual momentum of gross domestic product. The 2018 economic growth forecasts published at the beginning of 2018 ranged from 1.9% to 2.8%. An accumulation of special factors contributed significantly to the 2018 forecasts subsequently proving to be overly optimistic. For example, the economy got off to a much more subdued start in 2018 than originally anticipated, as a severe flu outbreak, warning strikes and an unusually severe period of cold weather towards the end

of winter hampered economic activity in the first quarter. In the third quarter, major problems in implementing the new Worldwide Harmonized Light Vehicles Test Procedure (WLTP) emissions test resulted in a massive reduction in production in the automotive industry, on the heels of which economic performance declined slightly quarter on quarter for the first time since the beginning of 2015. Despite the fact that initial high expectations of the economy were not ultimately met, Germany still posted sound annual growth for 2018 as a whole. This is underscored not only by a sustained rise in employment and declining rate of unemployment, but also by the level of gross fixed capital formation. These rates increased noticeably again in 2018 although the global economic environment, essential to Germany as an export nation, became more difficult over the course of the year.

The **financial markets** presented a mixed picture in 2018 – on one hand of the course of the year, and on the other hand in terms of the various currency areas. Until early October, the US financial markets recorded the most positive performance. The broad-based S&P 500 share price index rose by almost 10% from the start of the year until shortly after the beginning of autumn. Both short and long-term US dollar interest rates had also risen appreciably in view of a strong economy and more contractionary monetary policy. However, pessimism then began to spread among international investors. This was primarily due to concerns that the US Federal Reserve could be overreacting with its key interest rate hikes against the backdrop of the US-China trade disputes and the late-stage US economic cycle. The major stock indices declined noticeably as a result and also decreased in value compared to the beginning of the year. At the same time, yields on government bonds with high credit ratings fell, while credit spreads widened. Various emerging economies had suffered from rising US interest rates earlier in the year, which was reflected in heavy depreciation in some of their national currencies. Argentina and Turkey faced currency crises; however, these were triggered by domestic problems.

The European Central Bank (ECB) continued its gradual exit from its unconventional monetary policy in 2018. In January, it had lowered its monthly net asset purchase volume from EUR 60 to 30 billion. The ECB then maintained the volume at this level until the end of September. Thereafter, the ECB once again reduced the monthly net purchase volume by 50 percent. The ECB ended its purchase programme at the end of the year. At the same time, it indicated in its forward guidance that key rates would remain unchanged at least “through the summer of 2019” and that maturing bond proceeds would be reinvested until long after the first key rate increase. The ECB interprets

the euro area's slower economic growth observed in the second half of 2018 as a slowdown that can be expected to be overcome in early 2019. Against this background, the euro area money market rates remained virtually unchanged at historically low levels (and still negative). Slight upward movements then occurred around the end of 2018. On the capital market, in contrast, interest rate increases were only observed at the beginning of the year. Yields then continued to fluctuate and decline further overall. On one hand, this expressed investors' increasing pessimism regarding the economy and, on the other hand – at least in relation to bonds with high credit ratings – the desire to hold more secure investments in view of increased risk perception. The annual average yield on ten-year German government bonds in 2018, for instance, was ten basis points higher than the prior-year average. However, at the end of the year "Bunds" yielded just under 0.25% – almost twenty basis points lower than at the beginning of the year. The yield curve flattened at the same time. The annual average yield spread of ten-year and two-year German government bonds fell by four basis points to 105 basis points compared to the previous year, and by as much as 20 basis points, to 85 basis points, compared to the beginning of the year.

US money market rates rose over much of 2018 in view of even more resolute moves by the US Federal Reserve, which hiked rates four times in 2018, each by 25 basis points, after three such hikes in 2017. The key interest rates thus ranged from

2.25% to 2.50% at the end of the year. The US Federal Reserve also further reduced its balance sheet, from autumn 2018 by USD 50 billion per month. The US government bond market yields had trended upwards until early October. Increasing investor pessimism set in thereafter (see section above on general financial market developments), resulting, among other things, in a sharp drop in US Treasury yields. The interest rates on bonds with longer maturities declined more sharply than those on bonds with shorter maturities. The yield curve consequently flattened again. In early 2018, the yield spread between ten-year and two-year US government bonds was just above 50 basis points. This narrowed to just below 20 basis points by the end of the year. The yield on ten-year US government bonds had risen to around 3.25% by the beginning of October, after which it fell back to around 2.75% by the end of the year.

The EUR/USD exchange rate initially rose from around USD 1.19 per EUR to over USD 1.25 per EUR in 2018. However, from mid-April it lost value again due to weaker euro area economic data. Moreover, the confrontational course charted by the Italian government newly elected in May against the European Commission burdened the common currency from the middle of the year. The exchange rate stabilised at around 1.14 towards the end of the year. However, the 2018 average of 1.18 was well above the prior-year rate of 1.13.

Strategic objectives 2023

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. "Strategic objectives 2023" was adopted in 2018. It includes new focus areas, particularly sustainability and process quality.

KfW's **primary objective** is **promotion**. It aims to improve economic, social and environmental living conditions in Germany, Europe and around the world, attaching particular importance to financing German SMEs. KfW is aiming for a domestic SME financing rate of more than 40%. This primary objective is supported by the two promotional principles of subsidiarity and sustainability.

Subsidiarity means that KfW focuses on eliminating market weaknesses without obstructing or driving out private-sector enterprises. Putting this principle into practice, KfW strives to maintain a consistently high quality of its promotional activities.

KfW is also aiming for a moderate increase in new commitments volume, in line with the development of Germany's nominal GDP growth.

It should be noted with regard to the principle of sustainability that KfW has set a new strategic objective of achieving top sustainability rankings among national and international promotional banks. KfW is thus stepping up its efforts to be a sustainable bank in a holistic sense – in business, in its operations and as an employer. This means that KfW incorporates the highest environmental and social standards of corporate governance.

Within the framework of these promotional principles, KfW finances projects relating to today's key social megatrends.

To address the "climate change and the environment" megatrend, for example, KfW finances measures to support renewable energy, improve energy efficiency, safeguard biodiversity and prevent and/or reduce environmental pollution. To address the

particular importance of this megatrend, KfW has set an environmental commitment ratio of over 35% of the total new commitment volume.

In the context of the “globalisation” megatrend, KfW contributes to strengthening the international competitiveness of German companies by granting loans in areas including projects to secure Germany’s supply of raw materials, and infrastructure and transport.

KfW’s objective with respect to the “social change” megatrend is focused on the issues of demographic change in the stricter sense (e.g. age-appropriate infrastructure and succession financing), housing and vocational and further training.

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. The overall strategy and planning process includes the close collaboration of staff responsible for planning in all areas.

The group-wide strategic objectives set by the Executive Board form the basis for the 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. It defines KfW Group’s medium-term targeted positioning, and sets top-level objectives for the entire bank. The strategic objectives are reviewed annually for relevance, completeness and outstanding requirements and adjusted where necessary – for example, due to changed parameters or newly determined focus areas. Efforts are made, however, to maintain a high degree of consistency to ensure that there are no fundamental changes made to the strategic road map in the course of the annual review. Major medium-term strategic initiatives are developed by the business sectors and departments in a base case within this strategic framework. Promised benefits (e.g. project efficiencies) are pooled, monitored and included in business sector planning. Assumptions regarding the future development of determinant factors are made based on a risks and opportunities assessment. This analysis takes into account both external factors (including market development, regulatory requirements, the competitive situation and customer behaviour) and internal factors and resources (including human, technical and organisational resources, promotional expense, primary cost planning and tied-up capital) as well as targeted earnings levels. It involves regular evaluation of the key business and revenue drivers for the business sectors and the group. 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. The first regular capital budget in the base case is prepared on a multi-year horizon. This enables early identification of any

The “digitalisation and innovation” megatrend reflects the importance of digital transformation that is critical to the German economy’s success. In response to this megatrend, KfW is committed to advance and expand targeted promotion in this area through suitable product approaches.

The stated priorities set for the primary objective are complemented by **secondary objectives** regarding profitability and efficiency, risk and capital, and regulatory aspects and processes. “Strategic objectives 2023” incorporates a sustainable improvement in process quality as a new objective. Moreover, KfW’s success depends upon a high level of customer and employee satisfaction as well as digitalisation and agility.

capital bottlenecks arising from strategic considerations or changed parameters, in response to which measures can be agreed on to mitigate such capital shortages. The Executive Board defines top-down objectives for all departments or subsidiaries (with regard to business, risk and cost indicators and FTE figures) for the entire planning period based on the assessment and prioritisation of all strategic initiatives from a group perspective. Strategic group-level planning was expanded as of 2017 to include business strategy scenario analysis. Scenario analysis is a “what if” analysis of a specific but plausible scenario, looking at the interaction of external determinant factors and translating the results into management-relevant parameters: new business, earnings and risk/capital. Such scenarios assist the process of identifying potential risks and opportunities for promotional targets and KfW’s profitability and risk-bearing capacity, and enable these factors to be considered in the further planning process.

The business sectors plan their new business, risks and earnings, and individual departments their budgets and FTEs based on the top-down objectives defined 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 interest rate forecast plays a key role in shaping KfW’s earnings position. Thus, a high and a low interest rate scenario are also examined in addition to the anticipated base case. The plans are also assessed for future risk-bearing capacity in a second round of regular capital budgeting in a base and stress case over a multi-year horizon. The Executive Board approves the resulting operating budget or has plans fine-tuned in a revision round if necessary. The operational planning process ends when the Executive Board has adopted a final budget for the entire planning period, including the future capital requirement.

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 out 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 decided on the business and risk strategy, it is appropriately communicated to the staff.

The adoption of the business sector planning serves as foundation for the group's qualitative and quantitative objectives. The Executive Board reviews target achievement both on a regular and on 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 reasons for any shortfalls are analysed as part of strategic management. Strategic assumptions are reviewed and a systematic variance analysis of early objectives and forecasts is performed at the beginning of every year. Findings gained from this comparison are incorporated into the next planning process. This is accompanied by an annual struc-

Alternative key financial figures used

KfW uses key financial figures in its strategic objectives that treat promotion as the core business activity. It also uses key figures which summarise the results reported in the income

statement prepared in accordance with commercial law on the basis of their economic substance.

tured peer group comparison of key indicators, which yields important contributions to the systematic assessment and indicates any need for action. The integrated forecasting process 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 providing a well-founded guide to achieving planned objectives. 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 under KfW's 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, a comprehensive analysis of significant relevance to overall group performance are also presented directly to the Executive Board. The risk controlling function has been implemented alongside strategic and operational controlling. Early warning systems have been established and mitigation measures defined for all material risk types in line with the risk management requirements set out in the risk strategy. All controlling and monitoring approaches are integrated into regular and comprehensive risk reporting. The Board of Supervisory Directors receives a risk report quarterly.

statement prepared in accordance with commercial law on the basis of their economic substance.

KfW has defined the following alternative key financial figures:

Promotional business volume

Promotional business volume refers to the commitments of each business sector during the reporting period. In addition to the lending commitments shown in the statement of financial position, promotional business volume comprises loans from Federal Government funds for the promotion of developing countries and emerging economies – which are accounted for as trust activities – as well as financial guarantees, equity financing and securities purchases in certain asset classes (green bonds, SME loan securitisation). Promotional business volume also includes grants committed as part of development aid and in domestic promotional programmes. Allocation to the promotional business volume for the current financial year is generally based on the commitment date of each loan, financial guarantee and grant, and the transaction date of the equity finance and securities transactions. On the other hand, allocation of global loans to the promotional institutions of the federal states (*Landesförderinstitute* – “LFI”) and BAföG government loans is based on the individual drawdown volume and date, instead of the total volume of the contract at the time of commitment. In the lending business, financing amounts denominated in foreign currency are converted into euros at the exchange rate on the commitment date, whereas in the securities and equity finance business the conversion generally occurs at the rate on the transaction date. See the “Development of KfW Group” economic report or segment reports for a breakdown of promotional business volume by individual segment.

Promotional expense

Promotional expense is understood to mean certain expenses from the two business sectors *Mittelstandsbank & Privatkunden* (*SME Bank & Private Clients*) and *Individualfinanzierung & Öffentliche Kunden* (*Customised Finance & Public Clients*) that have a positive impact on the achievement of KfW’s promotional objectives.

Development of KfW

KfW further reduced its 2018 promotional business as planned, recording a total volume of EUR 60.9 billion after EUR 67.0 billion the previous year. Given the strong economic performance and the sustained positive financing environment for commercial and private investors, KfW decreased its promotional business in Germany to EUR 46.0 billion in 2018 from EUR 51.8 billion in 2017. KfW aligned its promotional activities with qualitative targets in 2018, as in the preceding years. The favourable overall economic environment enabled KfW to focus on issues of particular relevance to the future. Promotion focussed on innovation and digitalisation, as well as on the sustainable improvement of living conditions in Africa and other partner countries.

KfW’s **earnings position** continued its stable development in financial year 2018, although it closed below the prior-year level. Net interest income before promotional expense was slightly above the previous year’s figure. Higher administrative expense had a negative effect on KfW’s net income. The cost/income

Interest rate reductions accounted for at present value are the key component of KfW’s promotional expenses. KfW grants these reductions for certain domestic promotional loans for new business during the first fixed interest rate period in addition to passing on KfW’s favourable funding conditions. The difference between the fair value of these promotional loans and the transaction value during the first fixed interest rate period, due to the interest rate being below the market rate, is recognised in profit or loss as an interest expense and accounted for as an adjustment to the carrying amount under the items (i) Loans and advances to banks or (ii) Loans and advances to customers. In addition, the accumulated interest rate reductions over the fixed interest rate period are recognised in Net interest income through profit or loss (see the relevant Notes on KfW’s promotional lending business, loans and advances to banks or customers, and provisions).

An additional promotional component (in commission expense) comprises the expense paid in the form of upfront fees to sales partners for processing microloans. Promotional expense also contains disposable and product-related marketing and sales expenses (administrative expenses).

Cost/income ratio (before promotional expense)

The cost/income ratio (before promotional expense) comprises administrative expenses, (excluding promotional expense) in relation to net interest income and net commission income before promotional expense.

The cost/income ratio (CIR) shows costs in relation to income and is thus a measure of efficiency. To enable comparison of the CIR with other (non-promotional) institutions and to determine a correct standardised figure, an adjustment for promotional expense is made to the numerator (administrative expense) and denominator (net interest income and net commission income).

ratio (before promotional expense) increased to 56.0% (2017: 47.6%) due to the rise in administrative expense and stable net interest income as well as a slight rise in net commission income. KfW sustainably strengthened its capital base due to its good earnings position, with net income of EUR 884 million.

Total assets rose from EUR 477.9 billion to EUR 489.6 billion, with business volume increasing from EUR 553.1 billion to EUR 567.0 billion.

Business performance in 2018 was largely characterised by the following developments:

A. Promotional business volume

KfW slightly reduced its promotional business in financial year 2018 in line with general economic activity. Promotional commitment volume decreased by EUR 6.1 billion from the previous year’s EUR 67.0 billion, to EUR 60.9 billion in 2018.

Demand in Germany declined by EUR 5.8 billion from EUR 51.8 billion to EUR 46.0 billion. This caused new business volume in the business sector Mittelstandsbank & Private Kunden (SME Bank and Private Clients) to fall by EUR 6.1 billion to EUR 36.3 billion. Given the robust economic performance and the positive financing conditions for commercial and private investors, KfW reduced its domestic promotion. This affected in particular new commitments in the priority area of **energy transition**, which amounted to EUR 19.1 billion in financial year 2018 after EUR 23.8 billion in 2017. This included the promotional programmes Renewable Energy (EUR –2.0 billion) and Energy-efficient Construction and Refurbishment (EUR –2.2 billion). Moreover, **corporate investments** declined by EUR 2.7 billion, to EUR 3.1 billion.

The areas providing impetus for the future, on the other hand, posted increases. New business in the ERP Digitalisation and Innovation Loan promotional programme, for instance, rose by EUR 1.4 billion in financial year 2018 to EUR 2.9 billion.

A very high level of demand was recorded for the “Baukindergeld” scheme newly introduced in September 2018. The subsidiary KfW Capital GmbH & Co. KG, which will substantially expand

venture and equity financing activities, got off to a successful start in the financial year 2018.

New commitment volume in the business sector Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) of EUR 9.5 billion remained almost unchanged from the prior-year volume of EUR 9.3 billion.

Commitments in International financing of EUR 13.5 billion were also at the prior-year level of EUR 13.7 billion. The greatest demand in the Export and project finance business sector came from the Maritime Industries segment with EUR 1.4 billion (2017: EUR 0.9 billion) and the Power, Renewables and Water segment with EUR 1.0 billion (2017: EUR 0.8 billion). The KfW Development Bank business area further increased new commitments in 2018. Around EUR 8.7 billion in financing was provided to developing countries and emerging economies over the past year on behalf of the German Federal Government (2017: EUR 8.2 billion), 58% of which was destined for climate and environmental protection projects. Projects in Africa and the Middle East will be financed by 47% of all new commitments.

KfW promotional business volume

	2018	2017	Change	Change
	EUR in millions	EUR in millions	EUR in millions	in %
Domestic business	45,979	51,812	-5,833	-11
Mittelstandsbank & Private Kunden (SME Bank & Private Clients)	36,294	42,388	-6,094	-14
Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)	9,544	9,319	225	2
KfW Capital	141	105	36	34
Financial markets	1,472	1,541	-69	-4
International business	13,459	13,673	-214	-2
Export and project finance	4,767	5,476	-709	-13
Promotion of developing countries and emerging economies	8,692	8,197	495	6
Volume of new commitments	60,910	67,026	-6,116	-9

B. Operating result below prior-year level

The operating result before valuation and before promotional expense for financial year 2018 stood at EUR 1,081 million and thus below the previous year’s figure of EUR 1,226 million. Net interest income rose slightly year on year. Commission income was above the prior-year level. This resulted from changes to the contractual terms regarding fees for individual promotional programmes. Higher administrative expense, due in particular to one-time creation of pension provisions in connection with the modernisation measures at KfW, had a negative impact. Net other operating income fell slightly but remained stable and made a positive contribution to the operating result.

C. Positive valuation result thanks to low risk provisions

Risk provisions for lending business were at a low level, with an expense of EUR 18 million (2017: EUR 122 million expense).

This was due in particular to net additions to the individual risk provisions in the business area Mittelstandsbank & Private Kunden (SME Bank and Private Clients), primarily from education financing, as well as in the business area Export and project finance. These effects were partially offset by recoveries on loans written off. Risk provisions for lending business contained additions of EUR 68 million due to changes in the method used to calculate portfolio impairment charges.

Net income totalling EUR 14 million was recorded from the valuation of equity investments (2017: EUR 5 million). The securities portfolio also made a positive contribution of EUR 11 million (2017: EUR 6 million).

Overall, the result continued to benefit from very low risk provisions compared to the bank’s total loan portfolio.

D. Limited interest rate reductions in the persistent low interest rate environment

KfW's domestic promotional expense, which had a negative impact on KfW Group's earnings position in the financial year, rose slightly to EUR 216 million in 2018 (2017: EUR 213 million), which was still lower than expected.

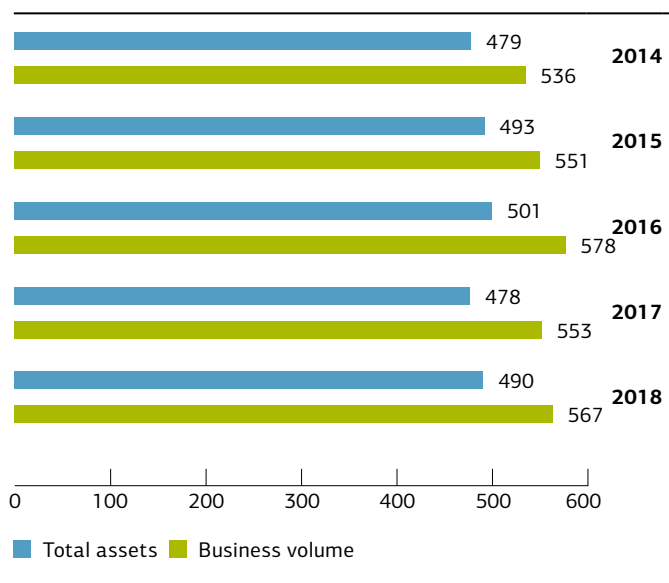
The key components of promotional expense are reductions of interest rates, which reached a volume of EUR 185 million (2017: EUR 186 million) and were thus on par with the previous year. The volume of commitments subsidised with KfW funds rose slightly over the previous year to EUR 11.9 billion (2017: EUR 11.7 billion).

Development of net assets, financial position and earnings position

KfW saw both its total assets and its volume of business increase in 2018.

Total assets and volume of business

EUR in billions



Volume of receivables

The volume of receivables (loans and advances to banks and customers, including irrevocable loan commitments, loans held in trust and guarantees) rose from EUR 491.6 billion to EUR 498.6 billion.

The rise is primarily due to the increase in demand in order financing and adjustments to contractual terms.

The volume of loans held in trust, which primarily comprise loans to promote developing countries financed by budget funds

provided by the Federal Republic of Germany, declined slightly to EUR 11.7 billion (2017: EUR 12.1 billion).

Guarantees remained almost unchanged at EUR 0.7 billion following EUR 0.8 billion the previous year, while irrevocable loan commitments rose by EUR 2.3 billion to EUR 76.7 billion, largely due to an increase in domestic financing as well loans to promote developing countries and emerging economies.

Volume of receivables

	2018	2017	Change	Change
	EUR in millions	EUR in millions	EUR in millions	in %
Loans and advances to banks	309,366	302,028	7,338	2
Loans and advances to customers	100,060	102,255	-2,195	-2
Loans held in trust	11,747	12,124	-377	-3
Contingent liabilities from financial guarantees	694	755	-61	-8
Irrevocable loan commitments	76,691	74,398	2,293	3
Total	498,558	491,560	6,998	1

Funding

In the year under review, KfW funded its business predominantly by issuing bonds in the capital market. It raised funds totalling EUR 76.1 billion in 2018 (2017: EUR 78.2 billion) and issued 144 bonds in twelve currencies.

Bonds issued increased by EUR 10.8 billion year on year and totalled EUR 419.4 billion as of 31 December 2018. Fluctuations in foreign exchange rates, particularly in that of the US dollar, had an impact on portfolio development, as did new issues and maturities.

Bonds issued accounted for 90.5% of borrowed funds, which was below the previous year's level (96.0%). They therefore remain KfW's most important source of funding. The euro market share registered a record high of 61% (2017: 53%), in contrast to the US dollar market share, which decreased to 27% (2017: 34%). KfW utilised the favourable euro refinancing conditions and high investor demand to cost-effectively fund its promotional business. KfW placed significant benchmark bonds in the strategically important US dollar market.

The bank has also established itself as the largest German bond provider in the green bond market. With issues of EUR 1.6 billion in 2018, the outstanding volume rose to a total of EUR 14.5 billion. KfW issued two Swedish krona green bonds, one euro green bond and one euro promissory note loan.

The share of funds from banks and customers (excluding federal budget funds) at 4% of borrowed funds is above the previous year's 3% share. This includes cash collateral received primarily to reduce counterparty risk from the derivatives business in the amount of EUR 6.2 billion (2017: EUR 4.1 billion).

Borrowings

	31 Dec. 2018	31 Dec. 2017	Change	Change
	EUR in millions	EUR in millions	EUR in millions	in %
Federal Republic of Germany				
– ERP Special Fund	691	633	58	9
– Federal budget	4,253	3,233	1,020	32
	4,944	3,866	1,078	28
Other lenders	6,767	5,268	1,499	28
Liabilities to customers	11,711	9,134	2,577	28
Liabilities to banks	10,340	7,991	2,349	29
Bonds issued	39,678	52,693	-13,015	-25
Bearer securities (incl. commercial paper)	376,943	352,793	24,150	7
Accrued interest and interest payable	2,749	3,120	-371	-12
Bonds and notes issued	419,370	408,606	10,764	3
Total	441,421	425,731	15,690	4

Own funds

The fund for general banking risks remained unchanged from the previous year at EUR 0.6 billion. The annual profit of EUR 884 million was fully allocated to retained earnings.

KfW's own funds thus amounted to EUR 25.6 billion as of 31 December 2018, 3.6% up on the previous year. This increase was due exclusively to the net profit allocated to retained earnings.

	31 Dec. 2018	31 Dec. 2017	Change
	EUR in millions	EUR in millions	EUR in millions
KfW's subscribed capital	3,750	3,750	0
Uncalled outstanding contributions	-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	10,092	9,207	884
c) Special reserve under Section 17 (4) D-Mark Balance Sheet Act ¹⁾	48	48	0
Fund for general bank risks under Section 340g HGB	600	600	0
Total	25,552	24,668	884

¹⁾ To be adjusted by the special loss account shown on the assets side in accordance with Article 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 20.1% (2017: both 20.6%). Ratios are determined based on IFRS figures for the group.

Changes in other significant items in the statement of financial position

Total bonds and other fixed-income securities decreased slightly by EUR 0.6 billion to EUR 38.5 billion (2017: EUR 39.2 billion). Holdings of repurchased own issues also recorded a decline – down to EUR 6.0 billion from EUR 8.7 billion the previous year. This volume was equivalent to 2% of bonds issued.

At a total amount of EUR 32.5 billion, holdings of securities of other issuers, which make up 84% of the total holdings of all bonds and other fixed-income securities, slightly exceeded the previous year's level of EUR 30.5 billion by EUR 2.0 billion. Of the securities from other issuers, 79% are 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 5.5 billion, (previous year: EUR 4.8 billion), related to its securitisation and SME finance activities. Potential risks are sufficiently addressed by appropriate risk provisioning. KfW supported climate change mitigation and environmental protection through its green bond portfolio in 2018, buying green bonds with a volume of around EUR 365 million.

The value of shares in affiliated companies at EUR 3.3 billion was identical to the previous year.

KfW's assets held in trust rose by EUR 0.7 billion from EUR 15.9 billion to EUR 16.6 billion. This was mainly due to the acquisition of shares in Eurogrid International CVBA from the Belgian Elia System Operator SA. Eurogrid International CVBA indirectly holds all shares in the German transmission systems operator 50Hertz.

Other assets was on par with the previous year. This item includes, in particular, the receivable of EUR 0.6 billion due 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. Other liabilities includes in particular the currency adjustment item from foreign currency derivatives in the amount of EUR 0.6 billion.

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 upfront payments for derivative financial instruments which are amortised pro rata temporis. Deferred income includes in particular premiums from certificated liabilities and accrued upfront payments for derivative financial instruments deferred over the loan life.

Provisions rose to EUR 2.5 billion in 2018 from EUR 2.2 billion the previous year. The total amount includes provisions for pensions and similar obligations (EUR 1.4 billion) and other provisions (EUR 1.0 billion). Other provisions include in particular the actuarial provisions relating to SinA, the provisions for early retirement, the provisions relating to the present value approach applied to interest rate reductions and the provision for variable compensation components.

Earnings position

KfW's operating result before valuation and promotional expense was EUR 1,081 million, which was lower (by EUR 145 million) than the previous year's figure of EUR 1,226 million.

At EUR 1,996 million, net interest income (before promotional expense) was slightly higher than the previous year (EUR 1,964 million). The increase was due to lower interest expense resulting from favourable funding conditions for KfW on the money and capital markets and partially offset by a reduction in interest income from lending and money-market transactions. The changes to the contractual terms of individual promotional programmes such as the Energy-efficient Construction and Refurbishment promotional programmes implemented in 2017 also contributed to the reduction. The corresponding fees are now recorded in Commission income. However, Net interest income remained the main source of income.

Net commission income (before promotional expense) of EUR 263 million was above (by EUR 70 million) the previous year's level of EUR 193 million. The increase was mainly due to remuneration for the Energy-efficient Construction and Refurbishment and "Baukindergeld" promotional programmes.

Administrative expense (before promotional expense) increased by EUR 238 million to EUR 1,265 million, due to higher personnel expense, resulting from increased pension costs. This due in part to the further decrease in the discount rate for pension provisions and in part to the change to the current 2018 G actuarial tables. Heubeck AG revised its existing 2005 G actuarial tables in financial year 2018 and published the new 2018 G actuarial tables. Expenses for wages and salaries rose as well, due to wage increases and a larger number of employees. Non-personnel expense increased by EUR 25 million in financial year 2018, largely due to higher costs for external service provision required to meet regulatory requirements and for the modernisation of KfW's information technology architecture. Depreciation and amortisation of property, plant and equipment and intangible assets also rose as a result of new financial architecture which became operational during the financial year.

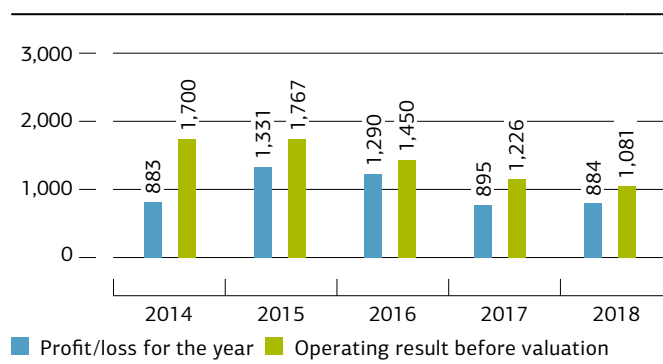
Net other operating income primarily comprised income from KfW IPEX-Bank GmbH's agency agreement.

The net income of EUR 26 million (2017: EUR 11 million) from the valuation of equity investments was largely due to sale proceeds from equity investments and securities assigned to the banking book. This was partially offset by impairments of equity investments.

Expenses from risk provisions totalled EUR 18 million (2017: EUR 122 million). Net additions to specific valuation allowances, particularly from education financing, and in Export and project

Operating result before valuation and before promotional expense and profit/loss for the year

EUR in millions



finance, in the Maritime Industries segment, were offset by income from successful recovery of loans written off. There was a decline in specific valuation allowances and specific provisions for the lending business from EUR 498 million to EUR 465 million. Non-performing loans in the amount of EUR 123 million were written off in financial year 2018 (2017: EUR 125 million). Expected losses were sufficiently covered by specific and general valuation allowances.

KfW's domestic promotional expense, which has a negative impact on its earnings position, amounted to EUR 216 million in 2018, following EUR 213 million in 2017, thus at the prior-year level and below projections. The key component of KfW's promotional expense is interest rate reductions of EUR 185 million, granted during the first fixed interest rate period in addition to passing on its favourable refinancing conditions. Moreover, promotional expense, as reported in Net commission income and Administrative expense, was incurred in the amount of EUR 30 million (2017: EUR 27 million). This activity was aimed among other things at better and more targeted sales for KfW's promotional products.

Net other operating income declined slightly year on year, largely due to higher additions to provisions. However, it had a continued positive impact on the earnings position.

Interest on the silent contribution in KfW IPEX-Bank GmbH, which is now recorded in Income from profit pooling, profit and loss transfer or partial profit transfer agreements, totalled EUR 18 million for financial year 2018. This was offset by the absorption of KfW Capital's loss of EUR 2 million.

Financial year 2018 closed with profit for the period of EUR 884 million (2017: EUR 895 million), which was fully allocated to retained earnings.

Reconciliation of earnings position before promotional expense with the income statement prepared in accordance with commercial law for financial year 2018

Earnings position	EUR in millions	Promotional expense EUR in millions	Cross compensation EUR in millions	EUR in millions	German Commercial Code income statement form
Net interest income (before promotional expense)	1,996	-185		1,810	Net interest income incl. current income
Net commission income (before promotional expense)	263	-12		251	Net commission income
General administrative expense (before promotional expense)	1,265	18		1,284	General administrative expenses incl. depreciation, amortisation and impairments on property, plant and equipment and intangible assets
Other operating income and expenses	88			88	Other operating income and expenses
Operating result (before risk provisions/ valuation/ promotional expense)	1,081	-216		866	Operating result (before risk provisions/ valuation)
Valuation result	26		-2	24	Income from reversals of write-downs of equity investments, shares in affiliated companies and securities held as fixed assets
Risk provisions for lending business	-18		2	-16	Impairment of receivables and certain securities and additions to provisions for loan losses
Net result from transfer agreements	16			16	Income from profit pooling, profit and loss transfer and partial profit transfer agreements as well as expense from loss absorption
Profit/loss from operating activities (before promotional expense)	1,106	-216		889	Profit/loss from operating activities
Promotional expense	216	-216		0	-
Taxes on income	4			4	Taxes on income
Other taxes	1			1	Other taxes
Profit for the year	884			884	Profit for the year

**Reconciliation of earnings position before promotional expense with the income statement
prepared in accordance with commercial law for financial year 2017**

Earnings position	EUR in millions	Promotional expense EUR in millions	Cross compensation EUR in millions	EUR in millions	German Commercial Code income statement form
Net interest income (before promotional expense)	1,964	-186		1,777	Net interest income incl. current income
Net commission income (before promotional expense)	193	-14		179	Net commission income
General administrative expense (before promotional expense)	1,027	13		1,040	General administrative expenses incl. depreciation, amortisation and impairments on property, plant and equipment and intangible assets
Other operating income and expenses	96			96	Other operating income and expenses
Operating result (before risk provisions/ valuation/ promotional expense)	1,226	-213		1,013	Operating result (before risk provisions/ valuation)
Valuation result	11		-4	7	Income from reversals of write-downs of equity invest- ments, shares in affiliated companies and securities held as fixed assets
Risk provisions for lending business	-122		4	-118	Impairment of receivables and certain securities and additions to provisions for loan losses
Profit/loss from operating activities (before promotional expense)	1,115	-213		902	Profit/loss from operating activities
Promotional expense	213	-213		0	-
Taxes on income	5			5	Taxes on income
Other taxes	1			1	Other taxes
Profit for the year	895			895	Profit for the year

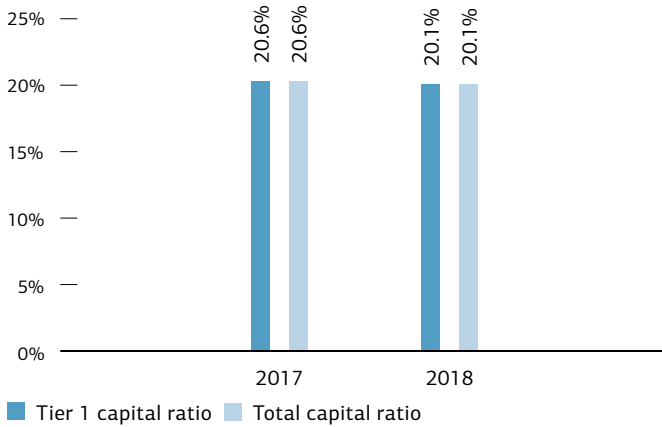
Risk report

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

Overview of key indicators

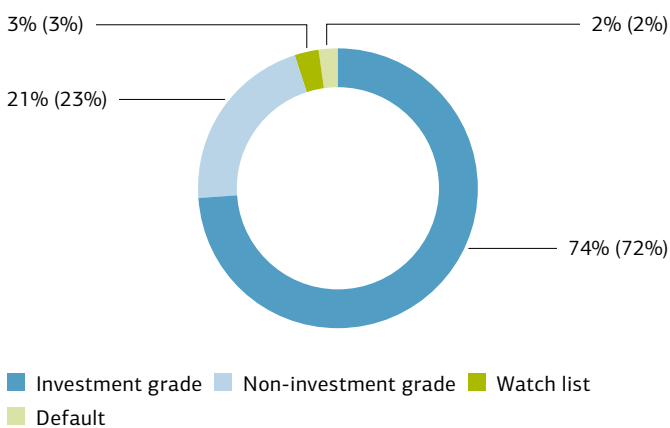
Risks are reported in accordance with KfW Group's internal risk management. The key risk indicators are presented below:

Regulatory capital ratios remain at a good level



The slight decline in capital ratios is primarily due to changes in methods, exchange rates and some rating downgrades.

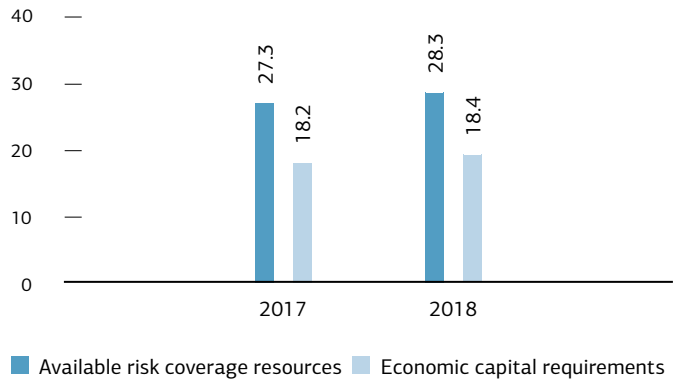
Credit risk: Good credit quality structure maintained 2018 (2017), Net exposure breakdown



The share of investment grade net exposure comprised 74% of the total net exposure. Risk provisions (stages 1–3) remained largely stable in 2018 at EUR 1.6 billion (31 Dec. 2017: EUR 1.5 billion).

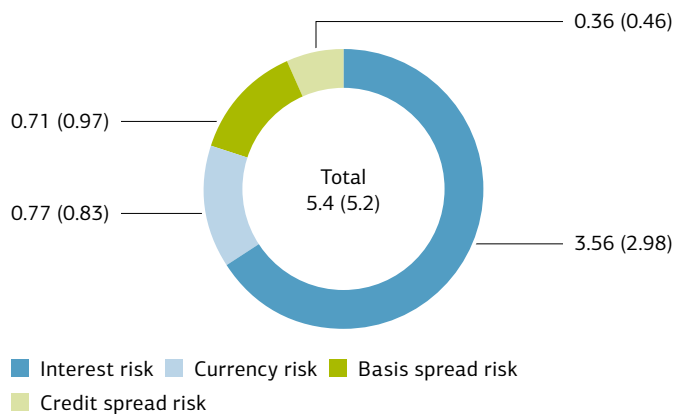
report. As risk management and risk controlling are focused on KfW Group, a risk report is not prepared at single institution level.

Economic risk-bearing capacity: Clearly secured EUR in billions



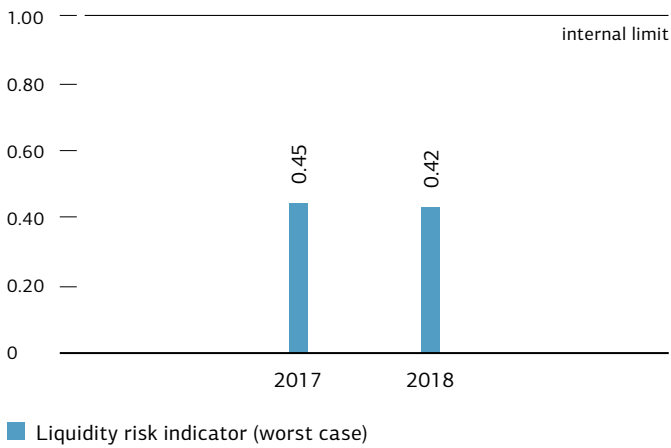
The excess coverage was extended in 2018. Risk-bearing capacity is clearly secured at a solvency level of 99.99%.

Market price risks: Slight increase in capital requirement 2018 (2017), ECAP EUR in billions



The capital requirement for market price risks increased slightly year on year. This was primarily due to increased ECAP requirements for interest risks due to the scheduled increase in the risk tolerance threshold as part of internal management.

Liquidity risk: Situation remains comfortable



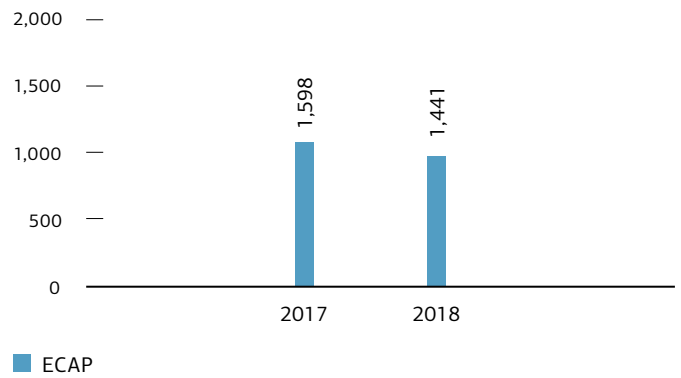
The liquidity risk indicators remained considerably below the internal limit throughout 2018.

Current developments

The global economy recorded real growth of over three percent for the sixth consecutive year in 2018, with momentum remaining at the high level of the previous year. This healthy development was a result of the broadly stable economic trend overall in many industrialised countries and emerging economies. However, among the industrialised countries, only the USA showed a significant increase in growth, while Canada, the euro area (particularly Italy), Japan and the UK – as expected after the Brexit vote – registered a slowdown in growth, in some cases significant. In the UK, uncertainty about the modalities of a withdrawal from the EU has highlighted and reinforced previously known problems such as the traditional twin deficits (simultaneous fiscal and current account deficits) and comparatively weak international competitiveness in the industrial sector. If it actually comes to a hard, i.e. a no deal Brexit, a recession on the British Isles is also possible. In the major emerging economies, India was able to expand its high prior-year growth level, while China showed a moderate slowdown in growth momentum. Brazil and Russia continued the path out of recession, which began in 2017, with slightly higher growth rates, while South Africa suffered a significant slowdown in growth compared with the previous year. Continued positive sentiment among consumers and businesses, generated and buoyed by an impetus from economic policy along with increased industrial production, served to secure growth on a broad base in many countries. Growth expectations for 2019 remain good in the baseline scenario, although current sentiment indicators and

Operational risk: Decrease in capital requirement

EUR in millions



The updating of risk scenarios and improved modelling led to a reduction in economic capital requirements in 2018.

incoming orders suggest a moderate slowdown in growth in many industrialised countries and emerging economies.

However, the continued stable growth momentum for the global economy in 2018 should not disguise the fact that economic performance is restrained compared to previous upswing periods. Despite the evident improvements, the after-effects of the 2008 financial crisis are still noticeable in 2018 in the areas of productivity, investment, wage development and trade. The higher economic momentum in the industrialised nations was largely supported by the continuing expansionary monetary policy and an easing of fiscal policy. The downside to this economic policy is the steady rise in risks to be seen in the financial markets, because the long period of low interest rates has both increased risk tolerance and caused asset prices to climb, particularly in the residential property markets. Growth development, and thus the recovery process in the emerging economies and developing countries where growth is also still weaker than in the past, is being inhibited by reduced or delayed reform efforts and increasing financial risks as a result of rising government debt. Moreover, there is a rising danger that the US Federal Reserve's recent tightening of monetary policy could result in a new financial crisis, particularly due to the prevalent phenomenon of frequently high and increasing private debt levels (households and businesses), which has significantly increased private sector vulnerability to external shocks in many countries (e.g. Ireland, Belgium, Canada, China, Singapore, Vietnam, Brazil,

Chile and Turkey). Furthermore, the diversion of capital flows resulting from the interest rate hike could put additional pressure on numerous emerging economies with high current account deficits.

These trends are under constant observation and assessment at KfW Group. The downward adjustments to the country risk assessment in 2018 again mainly concerned countries that are highly vulnerable to external shocks (primarily economies with high current account deficits and/or high levels of debt) and those with significantly increased political risks.

In the German banking market, small and medium-sized financial institutions and building societies continued to feel the effects of low interest rates and increased regulatory requirements. Despite a robust economy and low risk provisions for lending business, the profitability of many banks remained weak. Improved commission income failed to compensate for the decline in net interest income. The fiercely competitive German banking market combined with high pressure caused by costs and change (e.g. through digitalisation) is forcing financial institutions to adapt their business models.

As a result of the budget dispute between the Italian government and the EU, interest rates on Italian government bonds temporarily rose back to their 2013 high. The banks, which are suffering from a large volume of non-performing loans (NPLs), face increased write-downs from the market value losses of the large portfolios of Italian government bonds.

Disputes between the USA and Turkey temporarily accelerated the decline of the Turkish Lira. The difficult conditions are an increasing challenge for the Turkish financial market, which is heavily dependent on foreign currency refinancing, and for the domestic banks.

The ECB ended its net purchases under the asset purchase programmes in December as planned. The stress tests conducted by the US Federal Reserve, the ECB and the Bank of England showed an overall increase in bank robustness. However, weaknesses were evident in some German, Italian and British financial institutions.

In the Chinese financial market, fewer transactions were carried out due to the trade dispute with the USA, causing the associated fee income of some major banks to shrink. This dispute also had a negative impact on the already highly indebted Chinese companies, which had a negative effect on the already declining credit quality in the bank portfolios.

The Indian financial sector also exhibited some anomalies. In addition to only moderate capital resources, high NPLs and weak earnings, a fraud of around USD 2 billion at a large state-owned bank uncovered in February 2018 demonstrated weaknesses in the internal controls of various banks. In the non-banking financial corporations sector (NBFCs), a larger institution was also unable to service its commercial paper debt and defaulted. As a result, the refinancing costs of other market participants rose noticeably and revealed weaknesses in maturity transformation.

Changes in the banking markets are under constant observation and assessment to enable risk-mitigating measures to be taken early on.

Against the backdrop of stable domestic demand, the German and European corporate sectors are expected to continue their positive basic performance in 2019, albeit more subdued than in 2018 due to the aforementioned macroeconomic factors. Moreover, it cannot be ruled out that the various forms of pressure (diesel, trade dispute, Brexit, transition to electromobility, new competitors) will begin to affect the German automotive industry, which has been very stable to date. As long as no escalations arise in any of the different hotspots around the world, the group expects stable overall development in portfolio credit quality. The sub-portfolios concerned continue to be closely monitored.

KfW has assessed the impact of Brexit on the various business sectors of KfW Group and derived options for action under the conservative assumption of a "hard" Brexit without a transition period. There is a particular need for technical action with regard to OTC derivatives, money market, securities and issuing business (accreditation process for new EU entities of KfW business partners, contractual negotiations on the structure of framework agreements for OTC derivatives, transfer of the existing portfolio to EU entities in the medium term). With respect to central clearing, KfW would only be indirectly affected if there were any effects on our business partners. The potential impact on credit risk is acceptable overall. The necessary preparations of KfW Group for a disorderly Brexit are advanced. From today's perspective, the effects of a hard Brexit would be bearable for KfW.

The group's portfolio recorded stable performance overall in 2018. 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 2018, as in previous years, KfW Group systematically refined the processes and instruments in its risk management and controlling, taking into account current banking regulations. This related in particular to the further development of the concept for limiting counterparty default risks and risk concentrations in specific countries, the further development of credit risk methods and the introduction of new OpRisk standard software for recording event data, scenarios and measures. In addition, KfW Group's internal capital adequacy assessment process (ICAAP) was further developed. For example, the annual ICAAP adequacy assessment was redesigned and significantly expanded. In addition, preparations were made for the implementation of the new guidelines for the supervisory assessment of internal risk-bearing capacity concepts from 2019 onwards.

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.

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. A particular focus on this topic is the "Further development of risk culture" project, which involves, among other things, defining a target risk culture and developing procedures for assessing the risk culture. 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.

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 Risk and Credit Committee set up by the Board of Supervisory Directors 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. The Risk and Credit Committee 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 separate annual and consolidated financial statements.

Risk management within KfW Group is exercised by closely interlinked decision-making bodies. At the top of the system is the Executive Board, which takes the key decisions on risk policy and receives relevant information for this purpose. 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 KfW subsidiaries are also included. Additional working groups do the preliminary work for these committees. Committee resolutions are adopted by simple majority with middle and back office departments (*Marktfolge*) or Risk Controlling being entitled to veto decisions. Escalation to Executive Board level is possible in all committees.



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, members of the Executive Board with front-office responsibilities and KfW IPEX-Bank's Chief Risk Officer ("CRO"). The weekly meetings of the Credit Risk Committee involve making important lending decisions, with KfW IPEX-Bank and DEG exposures also being presented. In addition, current developments in the loan portfolio, including country and sector risks, are discussed once a month on an ad hoc basis; DEG's CRO is also entitled to vote in these discussions. An additional meeting, held on a quarterly basis, also includes the Director of Risk Controlling and those of the business sectors materially affected by credit risk issues, as well as the DEG CRO. Internal Auditing, Group Development and Legal staff are granted guest status. This quarterly meeting involves discussion and decisions on general credit risk matters. These include reports and draft resolutions on the risk situation and risk management as well as on credit risk methods and principles. Reports are also made on the development of regulatory requirements, their impact and the progress of implementation projects in KfW Group.

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 is responsible for handling fundamental aspects of collateral acceptance and valuation, particularly in terms of the methods used and their validation as well as the collateral management processes. The Rating Systems Working Group is responsible for credit risk measurement instruments and rating procedures. The Corporate Sector Risk Working Group analyses sector and product-related credit risks in the corporate segment. The decisions taken and important issues dealt with in the working groups are also regularly reported via the meeting minutes.

Market Price Risk Committee

The Market Price Risk Committee meets monthly and, as required, is chaired by the Chief Risk Officer. The members of the Executive Board responsible for capital markets business and finance are also represented. The regular members of the committee also include the directors of Risk Controlling, Financial Markets, Accounting, Transaction Management, Group Development and Economics as well as the CROs of KfW IPEX-Bank and DEG. Internal Auditing and Compliance have guest status. 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 and 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.

Furthermore, the Market Price Risk Committee is supported by the Hedge Committee, which deals primarily with the earnings effects of IFRS hedge accounting and the further development thereof, and the Market Price Risk Working Group. In addition to accepting validation reports and changes to models, this 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 provides support to the Executive Board in cross-functional management and the necessary decisions and acknowledgements in respect of operational and reputational risk, and group security including business continuity management. The Operational Risk Committee comprises the Chief Risk Officer, who is responsible for chairing the meetings, a further Executive Board member (deputy chair of meetings) and all KfW directors. KfW IPEX-Bank, DEG and KfW Capital are also represented on the committee. Internal Auditing participates in the meetings but is not entitled to vote. The committee's task is to resolve on risk principles anchored in guidelines and on methods and instruments that are applied by the first line of defence in the risk management cycle. It also takes decisions on group-wide management measures. Moreover, the committee discusses the risk status on the basis of the findings obtained through different methods and instruments and evaluates any group-wide need for action, with the aim of adequate risk management. 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. The committee has formed the Group Security Board ("GSB") to take up matters relating to group security and business continuity management ("BCM") and the OpRisk Working Group as a subcommittee for exchange with the decentralised department coordinators for operational risk and business continuity management ("BOB").

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.

		Strategic objectives				
Strategy	Business strategy		Risk strategy (including risk appetite)			
	←←		→→			
Objective	Securing KfW's promotional capacity by ensuring capital adequacy (observing economic and regulatory risk-bearing capacity, avoiding excessive indebtedness) and liquidity					
Processes/Instruments	Risk culture	Risk committees			Additional internal monitoring procedures	
		Credit Risk Committee	Market Price Risk Committee	Operational Risk Committee		
		Risk inventory	Risk appetite	Stress tests		Reporting
		Internal capital adequacy assessment process (ICAAP)				Internal liquidity adequacy process (ILAAP)
		Credit risk	Market price risk	Operational risk		Liquidity risk
		<ul style="list-style-type: none"> - Portfolio guidelines - Risk guidelines - Second vote or central voting (programme business) - Limit management system - Proactive collateral management - Internal rating models - Credit portfolio models - Early warning procedure - Intensive support 	<ul style="list-style-type: none"> - Proprietary models for interest rate, foreign currency, basis spread and credit spread risks - Limiting and budgeting 	<ul style="list-style-type: none"> - Model for determining capital requirements (pillar II) - Risk assessments - Risk indicators - Loss event analyses - Business impact analysis - Emergency plan, crisis team 		<ul style="list-style-type: none"> - Proprietary models for liquidity risks - Liquidity transfer pricing - Limiting - Scenario analyses - Early warning procedure - Emergency planning
			Investment risk	Project risk		
			<ul style="list-style-type: none"> - Risk management process for equity investments (operational level) - Management of strategic equity investments - Group risk management 	<ul style="list-style-type: none"> - Central project portfolio management - Management of individual projects 		
				Reputational risk		
				<ul style="list-style-type: none"> - Sustainability management - Countries blacklist 		
		Intra-group risk				
		<ul style="list-style-type: none"> - Group risk management is monitoring the subsidiaries' business activities according to "look through" principle 				
		Regulatory risk				
		<ul style="list-style-type: none"> - Impact and scenarios analyses, including in multi-year capital planning 				
		Model development and validation processes				
Model inventory	←←	→→	Modelling guideline	←←	→→	Methodology principles

To ensure capital and liquidity adequacy in line with defined risk tolerance, Risk Controlling supports the Executive Board in developing and implementing the group's **risk strategy** together with the relevant 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 determining KfW Group's appetite for material risks.

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 quantifiable potential danger for KfW Group's net assets, earnings and liquidity, as well as the materiality threshold defined by the Executive Board. 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 2018 inventory identified that KfW Group faces the following material risks: credit, market price, liquidity, operational, equity investment, regulatory, project, reputational and intra-group risks. **Risk concentrations** associated with material risks either within a risk type

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 the available financial resources for both perspectives.

A further core feature of the capital adequacy assessment process is the proactive focus resulting from additional forward-looking components. These components evaluate the absorption potential of KfW Group's reserves – and thus also its ability to act – in the event of certain economic (stress) scenarios. A traffic light system, established in this context with thresholds for regulatory and economic risk-bearing capacity, signals a

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.

The methods and instruments for KfW group-wide risk measurement and controls are regularly validated and adjusted through further development, if necessary. The focus is particularly on models to measure, control and price credit, market price, liquidity and operational risks, along with models for financial reporting measurement. Validation and further development activities 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 policies and procedures to identify, measure, control and monitor risk. The policies 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.

need for action in the event of critical developments as part of operational and strategic management.

Budgets based on risk-weighted assets at the level of each business sector/department are taken into account to ensure risk-bearing capacity. The allocated budgets are available to the business sectors/departments for backing existing 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 as their central control and limit variable, and monitored monthly.

To avoid excessive debt, the leverage ratio is integrated into the capital adequacy assessment process as a further control variable. The leverage ratio is taken into account in additional forward-looking projections, and compliance with defined traffic light limits checked on 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. Using scenario-based extrapolations over a multi-year observation horizon enables the capital planning process to identify potential capital bottlenecks early in order to derive recommendations for actions 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, capital adequacy indicators are also observed 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 an annual review of its adequacy. The results are taken into account accordingly in the assessment of risk-bearing capacity.

With the publication in May 2018 of the revised guidelines on risk-bearing capacity concepts and their procedural integration into overall bank management, the German banking supervisory authority fundamentally adjusted its requirements for risk-bearing capacity concepts of banks. In order to implement the normative and economic perspective required in the guidelines, KfW developed major adjustments to its risk-bearing capacity concept in 2018 and will apply these in its risk-bearing capacity calculations from January 2019.

Regulatory risk-bearing capacity

Key regulatory figures (pursuant to advanced IRBA)

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Total risk exposure in accordance with Art. 92 CRR	140,832	133,072
– Credit risk	133,785	126,180
– Market price risk	1,276	1,233
– Operational risk	5,798	5,660
Regulatory capital (available risk coverage resources)	28,297	27,347
– Tier 1 capital	28,278	27,347
– Tier 2 capital	19	0
Tier 1 capital ratio	20.1%	20.6%
Total capital ratio	20.1%	20.6%

As expected, KfW received an initial partial approval as of 30 June 2017 to calculate the regulatory capital ratios in accordance with the advanced IRBA. The aim is to obtain additional approval for other portfolio segments by 2022. Meanwhile, portfolio segments not yet approved are evaluated applying the generally more capital-intensive credit risk stand-

ard approach ("CRSA"). The slight decline in the capital ratio over the course of the year is due to changes in methods, exchange rates and rating downgrades of some business partners. At 20.1%, the total capital ratio at year-end 2018 remained above the overall capital requirement.

Minimum requirements for total capital ratios

	31 Dec. 2018	31 Dec. 2017
Total SREP Capital Requirements (TSCR)	13.8%	13.0%
Capital conservation buffer	1.875%	1.250%
Countercyclical capital buffer	0.114%	0.054%
Overall Capital Requirement (OCR)	15.7%	14.3%

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 economic capital requirement for various types of risks is aggregated by adding them, with no allowance made for 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, a buffer determined on the basis of different quantification approaches, which is validated annually, is applied in calculating economic risk-bearing capacity.

The economic capital requirement for **equity investments** at operational level is measured in the same way as for counterparty and migration risks.

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 for interest and foreign currency risks is defined and backed with capital. Ultimately, the economic capital requirement is defined as the sum of the value-at-risk and the additional stop loss buffer.

The economic 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 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 2018 satisfied a solvency level of 99.99%. The excess coverage of the available financial resources beyond the total capital requirement as of 31 December 2018 of EUR 9,928 million increased compared to 31 December 2017 (EUR 9,119 million). The increase is mainly attributable to the improvement of risk coverage potential through the inclusion of the interim results for the fourth quarter of 2017 and the first half of 2018¹⁾. The total economic capital requirement, on the other hand, increased only slightly. The capital requirement for credit risks remains at roughly the same level as in 2017. The increased capital requirement for market price risks is largely due to the higher interest risk. The capital requirement for operational risks and project risks fell slightly, while the hidden burdens for securities rose.

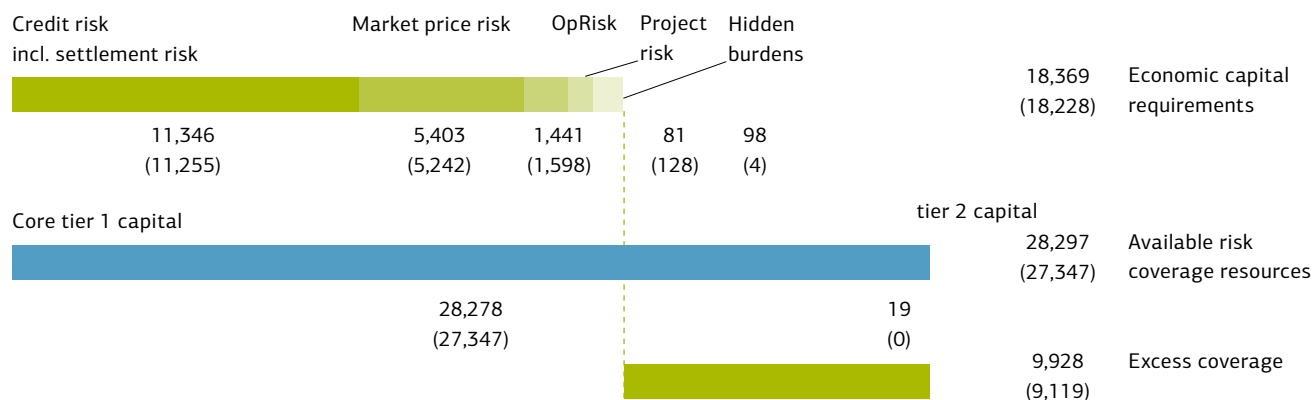
The Group manages **liquidity risks** primarily on the basis of appropriate internal risk indicators. In addition, maximum liquidity gap limits (outflows on a monthly and yearly basis), available liquidity (liquidity potential) and the difference between the average residual maturity of inflows and outflows (maturity gap) are monitored. On the basis of the KfW Law, KfW’s liquidity risks are additionally limited by the utilisation threshold in accordance with Article 4 of the KfW Law. The utilisation threshold compares current and non-current liabilities and must not exceed 10%. Internal indicators relating to the liquidity situation are based on comparing liquidity requirements and liquidity potential as a ratio in stress scenarios of differing severity. No capital is currently allocated as part of calculating risk-bearing capacity.

Reputational risks are evaluated and managed on a qualitative basis. Capital is not currently allocated as part of calculating risk-bearing capacity as the materiality of risk is primarily due to the fact that KfW is a government-owned institution with a high moral responsibility and as such subject to corresponding expectations of the public at large and other stakeholders. Materiality is thus not based on observed or potential decreases in KfW Group’s net assets, earnings or liquidity.

¹⁾ The result for the second half of 2018 will not be taken into account until after publication with the auditor’s report (31 March 2019).

Economic risk-bearing capacity as of 31 December 2018

EUR in millions



In brackets: figures as of 31 December 2017

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 works continually to refine its risk models and processes.

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 2019 shows a significant increase in excess coverage of available financial resources over the economic capital requirement compared to 31 December 2018. At the same time, the forecast shows an improvement in the total capital ratio compared to 31 December 2018.

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 over-

all increase in credit risk (counterparty and migration risks) and equity investment risk. 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, credit spreads and basis 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, economic risk-bearing capacity at a solvency level of 99.99%, the regulatory capital ratios and the leverage ratio are at an adequate level.

Further stress tests are regularly carried out in addition to the economic scenarios to examine the resilience of KfW Group's economic and regulatory risk-bearing capacity. In addition to the standard stress tests, current potential macroeconomic dangers form the basis for varying scenario stress tests. The focus in 2018 was on scenarios of a possible crisis of confidence in the EU, an economic crisis in Turkey with repercussions for other emerging economies and a possible hard Brexit with contagion effects in the EU. 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 2018, they again simulated the potential impact of the planned regulatory changes associated with the finalisation of Basel III on the group's capital ratios.

Types of risk

COUNTERPARTY DEFAULT RISK

KfW Group faces counterparty default risks²⁾ in the context of its promotional mandate. In the domestic promotional lending business, the majority of final 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 final 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
Major rating procedures (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	Exposure at default			
Portfolio level	Loss given default			
	Loan portfolio model			

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.

KfW Group uses internal rating procedures to determine the probability of default for banks, countries, corporations, small and medium-sized enterprises (SMEs), start-ups, the self-employed and investment funds. These procedures are based on scorecards³⁾ and generally 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 existing small retail positions (e.g. from

the area of education financing) are valued using a procedure specially set up for this purpose. 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. The rating procedures are continuously validated and further developed.

²⁾ 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.

³⁾ 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 prevalence or value and weighted for aggregation.

Exposure at default (“EAD”) and valuation of collateral have significant influence on the severity of loss. Collateral has a risk-mitigating effect in calculating loss given default (“LGD”). In valuing acceptable collateral, the expected net revenue from collateral realisation in the case of loss, including haircuts, is determined. Haircuts to cover the credit risk of final borrowers are a major factor in the valuation of assignments made by financing partners in the on-lending business. For tangible collateral, haircuts are applied in particular for market price volatility, the costs of realisation and devaluation resulting from depreciation. 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 LGD. The collateral valuation procedure and the procedure for estimating the EAD and the LGD are also subject to regular validation and further developed as needed, with new regulatory requirements also addressed.

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 require a second vote depending on the type, scope of the risk content and complexity of the transaction. The qualification levels for approval of new business depend on rating, collateralisation or net exposure and total commitments to the group of connected customers. 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. This involves regularly reviewing and documenting the economic situation, the particular borrower’s market environment and the collateral provided, and formulating proposals for remedial action – particularly proposals for risk-limiting measures. Non-performing loans and, to a great extent, watch-list exposures⁴⁾ 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 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’s non-performing loans and exposures under intensive support, including KfW and DEG’s trust activities, are managed directly by each subsidiary. 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 under the direction of the Credit Risk Management department, immediate loss analysis and implementation of the necessary next steps.

Maximum risk of default

According to IFRS 7.36, the maximum exposure to credit risk for KfW Group arising from financial instruments as of 31 Dec. 2017 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.

⁴⁾ 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.

Maximum risk of default as of 31 Dec. 2017

	Loans and advances to banks	Loans and advances to customers	Value adjustments from macro fair value hedge accounting
	31 Dec. 2017	31 Dec. 2017	31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions
Carrying amount as equivalent for maximum risk of default	274,119	126,671	9,648
Risk provisions for lending business	177	1,280	0
Carrying amount neither past due nor impaired	273,674	123,669	9,648
<i>Collateral provided</i>	151,487	51,108	0

	Derivatives designated for hedge accounting; other derivatives	Securities and investments; investments accounted for using the equity method	Contingent liabilities; irrevocable loan commitments
	31 Dec. 2017	31 Dec. 2017	31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions
Carrying amount as equivalent for maximum risk of default	14,219	34,029	83,733
Risk provisions for lending business	0	2	61
Carrying amount neither past due nor impaired	14,219	33,879	83,718
<i>Collateral provided</i>	3,797	182	0

Financial instruments past due and not individually impaired as of 31 Dec. 2017

	Loans and advances to banks	Loans and advances to customers	Securities and investments; investments accounted for using the equity method
	31 Dec. 2017	31 Dec. 2017	31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions
Carrying amount less than 90 days past due	341	1,854	0
Carrying amount 90 days and more past due	52	284	1
Total	394	2,138	1
<i>Collateral provided</i>	245	452	0

Individually impaired financial instruments as of 31 Dec. 2017

	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. 2017	31 Dec. 2017	31 Dec. 2017	31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Carrying amount	52	864	150	14
Individual impairments, provisions	26	930	0	8
Collateral provided	1	446	0	0

The 2017 figures for maximum risk of default are not comparable to the following disclosures information on default risk and default risk concentrations as of 31 December 2018. Neither are they

comparable to the credit risks and related collateral of financial instruments carried at amortised cost as of 31 December 2018 resulting from the initial implementation of IFRS 9.

Information on default risk and default risk concentrations as of 31 Dec. 2018¹⁾

		Loans and advances to banks			Loans and advances to customers		
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Investment grade	Rating 1–4	165,648	0	0	32,677	0	0
	Rating 5–8	83,773	0	0	28,338	15	0
Non-Investment grade	Rating 9–15	29,814	144	0	31,203	1,419	0
Watch list	Rating 16–18	581	309	0	3,432	3,011	0
Default	Rating 19–20	0	0	127	0	0	17,159
Total		279,816	453	127	95,650	4,445	17,159

		Securities and investments			Off-balance sheet transactions		
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Investment grade	Rating 1–4	23,234	0	0	34,545	0	0
	Rating 5–8	8,780	16	0	29,042	3	0
Non-investment grade	Rating 9–15	719	20	0	20,637	108	0
Watch list	Rating 16–18	0	0	0	1,198	259	0
Default	Rating 19–20	0	0	91	0	0	211
Total		32,732	35	91	85,422	370	211

¹⁾ Gross carrying amount

Credit risks and related collateral of financial instruments carried at amortised cost as of 31 Dec. 2018

	Maximum risk of default ¹⁾	Maximum risk of default stage 3	Risk mitigation from collateral stage 3	
			tangible	personal
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	280,201	88	0	25
Loans and advances to customers	115,904	16,184	120	15,718
Securities and investments	32,851	91	0	90
Off-balance sheet transactions	85,930	260	0	10
Total	514,885	16,568	120	15,843

¹⁾ Net carrying amount, excluding collateral and other credit enhancements

A large part of the personal collateral of the financial instruments classified as stage 3 comprises federal guarantees and credit insurance. These also include the federal guarantee for the fully protected mandated transaction within the framework of the support measures for Greece in the approximate amount of EUR 15 billion. Tangible collateral for financial instruments classified as stage 3 exclusively consists of ship mortgages.

The collateral for financial instruments measured at fair value almost entirely relates to the collateral for financial derivatives. The collateral is provided in the form of cash balances by the respective business partner.

KfW Group did not take possession of any significant assets previously held as real collateral in 2018. Forbearance measures in the performing portfolio in 2018 were primarily in the Export and project finance business sector. This forbearance volume is not significant in relation to the total lending volume.

Portfolio structure

The contribution of individual positions to the risk associated with KfW Group's loan portfolio⁵⁾ 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.

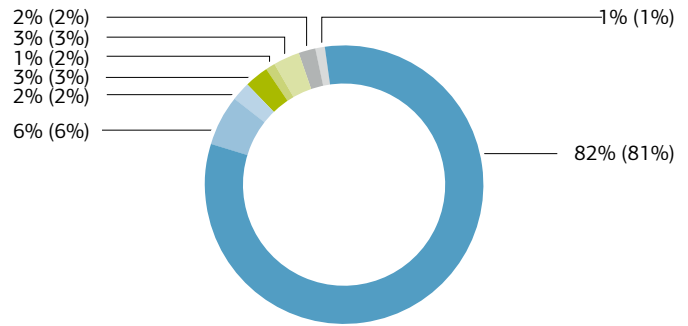
⁵⁾ The loan portfolio includes loans as well as securities and investments in performing business. The non-performing portfolio is only included in the presentation of credit quality.

Regions

The economic capital requirement for the loan portfolio has remained virtually constant overall. The euro area's share rose slightly to 88% (31 Dec. 2017: 87%) due to new business in the energy transition and housing categories, as well as innovation in the Mittelstandsbank & Private Kunden (SME Bank & Private Clients) business sector.

Economic capital requirements by region

31 Dec. 2018 (31 Dec. 2017)



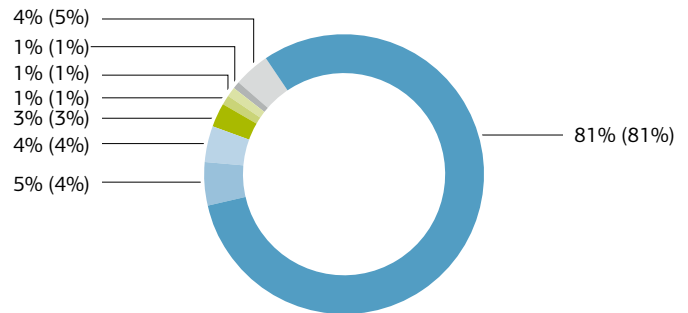
■ Germany ■ Euro area countries (excl. Germany)
 ■ EU countries (excl. euro area countries and Germany)
 ■ Europe outside EU ■ Africa ■ Asia (incl. Australia and New Zealand) ■ Latin America ■ North America

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 slightly overall, primarily due to the rise in on-lending business. The economic capital requirement of financial investments/funds are also increasing as a result of new business in the venture capital area. The share of the total economic capital requirement remains virtually stable in all other sector clusters.

Economic capital requirements by sector

31 Dec. 2018 (31 Dec. 2017)



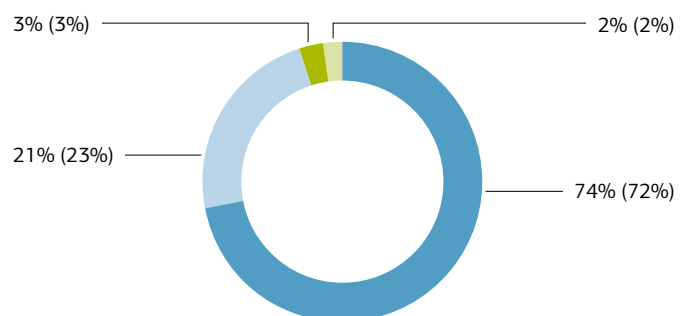
■ Financial sector ■ Financial investments/funds ■ Consumer
 ■ Energy/environment ■ Essential goods
 ■ Transport infrastructure ■ Commodities ■ Other

Credit quality

As credit quality is a major factor influencing economic capital requirements, when analysing the credit quality structure it is appropriate to examine the distribution of net exposure⁶⁾ by credit quality category. Overall, the net exposure increased mainly as a result of new business in the Export and project finance business sector and a higher money market trading volume in the Financial markets business sector. This resulted in an increase in good rating classes and a higher investment grade exposure. The non-investment grade share decreased largely as a result of changes in methods (reparametrisation of the LGD model), which particularly affect retail loans (student loans). The watch list and default shares remain almost unchanged. KfW Group's loan portfolio continued to possess a good credit quality structure.

Credit quality by net exposure

31 Dec. 2018 (31 Dec. 2017)



■ Investment grade ■ Non-investment grade ■ Watch list
 ■ Default

⁶⁾ Net exposure is the economic loss that potentially occurs in the event of an economic or political default event.

Securitisations in KfW Group's portfolio

Securitisations had a par value of around EUR 5.5 billion as of 31 December 2018. Accounting for the mark-to-market valuation of the securities reported at fair value and impair-

ments, the portfolio also had a book value (including pro rata interest) of around EUR 5.5 billion. The following tables show the composition of the securitisation portfolio by asset class, rating grade and geographic distribution.

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

	31 Dec. 2018	31 Dec. 2017
	%	%
Europe	99.5	99.3
World	0	0
North America	0.5	0.7
Africa	0	0
Asia	0	0

Exposure based on par values

	CLO	RMBS	CMBS	ABCP	Other securiti-sations	Total 31 Dec. 2018	Total 31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Investment grade	0	1,777	4	1,642	2,558	5,381	4,773
Non-investment grade	0	0	1	0	92	93	50
Watch list	0	0	0	0	0	0	0
Default	15	0	0	0	0	15	21
	15	1,777	5	1,642	2,650	5,488	4,844

The portfolio volume increased over the volume of 31 December 2017 (nominal EUR +0.6 billion). The increase primarily relates to the investment grade portfolio. In the geographic breakdown of the underlying asset pool, the entire portfolio remains almost

exclusively attributable to Europe, with Germany accounting for the lion's share. 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 5.4 billion in economic capital as of 31 December 2018. This is EUR 161 million more than as of 31 December 2017. KfW Group market price risk breaks down as follows:

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Interest risk	3,562	2,975
Currency risk	769	833
Basis spread risk	711	969
Credit spread risk	361	464
Market price risk	5,403	5,242

Interest risk

KfW Group assumes limited interest rate risk in EUR and USD only, 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 in the banking book. 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. 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 shift prescribed by regulatory law, 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 risen by EUR 586 million as of 31 December 2018. The increase was proportional to the growth of the financial resources available for risk coverage.

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. USD appreciation in the reporting year (EUR/USD as of 31 December 2018: 1.1450 and as of 31 December 2017: 1.1993) resulted in positive effects on net present value. Moreover, the stop loss buffer was reduced by EUR 50 million at the beginning of the year to a current amount of EUR 500 million. This equates to a reduction of the economic capital requirement by the same amount. Currency hedging transactions (forward margin sales) at the beginning of the year led to a further reduction in capital requirements.

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 2018 stood at EUR 711 million, representing a year-on-year decrease of EUR 258 million. This was the result of risk-mitigating market data effects and a lower cross-currency position in USD.

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 economic capital requirement for credit spread risk as of 31 December 2018 was EUR 361 million. Credit spread risk declined by EUR 103 million year on year. This was largely due to a less volatile market data history.

LIQUIDITY RISK

Liquidity risk is the risk of a lack of liquidity on the part of an institution or a market. A distinction is made between

- insolvency risk (the risk of not being able to meet payment obligations),
- refinancing risk (the risk of lower income due to more expensive funding (liabilities) that cannot be passed on to borrowers) 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 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 Article 4 of the KfW Law. In addition, liquidity gaps are limited based on business already concluded, available liquidity potential and the maturity gap between inflows and outflows.

INTERNAL LIQUIDITY ADEQUACY ASSESSMENT PROCESS (ILAAP)

The ILAAP principle describes the management and monitoring of KfW Group's liquidity risk position. The procedure established by the institution serves to identify, measure, manage and monitor liquidity in accordance with Article 86 of Directive

2013/36/EU (CRD IV). The aim of the ILAAP is to ensure liquidity and avoid liquidity bottlenecks. It also assesses internal governance and institution-wide controls.

KfW Group prioritises management of insolvency risk. Market liquidity risk and refinancing risk are examined annually as part of the risk inventory. At present, however, they are not classified as material and are therefore not (directly) managed. The refinancing risk is indirectly limited by limiting the maturity gap. Insolvency risks are mainly limited through economic liquidity risk ratios and limits for liquidity potential and liquidity gaps. Another key figure requiring compliance and which limits liquidity risk is the utilisation threshold in accordance with Article 4 (2) of the KfW Law. The aim of the liquidity risk strategy is to preserve the ability to meet payment obligations at all times and when due, even in stress scenarios. For this reason, it essentially requires compliance with all limits (= risk tolerance limits) for all these indicators. The adequacy of the limits is reviewed annually.

In particular the Market Price Risk Committee, which meets monthly, is responsible for managing and monitoring liquidity risks in consultation with the Executive Board. In the event of a liquidity emergency, the committee is convened on an ad hoc basis in order to decide on the measures necessary to remedy the liquidity bottleneck identified.

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 the table below by maturity range:

Contractual payment obligations arising from financial instruments by maturity range

31 Dec. 2018¹⁾

	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	5,311	59	2,999	1,448	12,878	22,694
Certificated liabilities	23,277	27,882	64,737	213,225	108,050	437,170
Net obligations arising from derivative financial instruments	-247	-44	-1,936	-2,406	-3,491	-8,123
<i>thereof Obligations arising from derivative financial instruments</i>	11,710	19,141	50,230	105,942	36,420	223,442
Obligations arising from on-balance sheet financial instruments	28,341	27,897	65,800	212,268	117,436	451,742
Obligations arising from off-balance sheet transactions	88,212	0	0	0	0	88,212
Total	116,553	27,897	65,800	212,268	117,436	539,954

¹⁾ The net obligations under derivative financial instruments comprise payment obligations which are offset against the corresponding payment claims under these contracts; the gross payment obligations are reported as Obligations arising from derivative financial instruments. Off-balance sheet transactions are generally allocated to the first maturity range.

Contractual payment obligations arising from financial instruments by maturity range

31 Dec. 2017¹⁾

	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	4,394	1,795	565	3,144	8,596	18,494
Certificated liabilities	25,916	18,311	69,123	209,530	103,246	426,126
Net obligations arising from derivative financial instruments	-190	-251	-356	297	-6,842	-7,341
<i>thereof Obligations arising from derivative financial instruments</i>	16,465	15,086	44,213	129,157	43,442	248,363
Obligations arising from on-balance sheet financial instruments	30,120	19,856	69,332	212,972	105,000	437,279
Obligations arising from off-balance sheet transactions	83,733	0	0	0	0	83,733
Total	113,852	19,856	69,332	212,972	105,000	521,012

¹⁾ Net obligations arising from derivative financial instruments comprise payment obligations which are offset against the corresponding payment claims under these contracts; the gross payment obligations are reported as Obligations arising from derivative financial instruments. Off-balance sheet transactions 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 Bundesbank, 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 2018:

KfW liquidity risk indicators as of 31 December 2018

	Indicator
Normal case	0.00
Stress case	0.13
Worst case (institution-specific)	0.17
Worst case	0.42

The internal liquidity risk indicators remained below the internal limit of 1 throughout 2018.

Current funding environment

The international capital markets were subject to major fluctuations in 2018 due to political factors such as the negotiations on Brexit, the trade conflict between the USA and China and the political situation in Italy. In addition, economic warning signs and the announcement of the termination of the Eurosystem's public sector purchase programme (PSPP) shaped the market environment. Reinvestments by the Eurosystem, on the other hand, gave stability to the markets.

KfW Group's established funding strategy is characterised by high flexibility in terms of currencies, instruments and structures and reaches a large investor base around the world. It raised a total volume of EUR 76.1 billion on the international capital markets (2017: EUR 78.2 billion) in financial year 2018. It issued a total of 144 individual transactions in 12 different currencies. Around 88% of its long-term funding was undertaken in the two main funding currencies: euro and US dollar. The share of bonds denominated in euros rose again – to 61% in 2018 (2017: 53%); those denominated in US dollars amounted to 27% (2017: 34%). The trend in 2018 showed a clear preference

among investors for large-volume, liquid bonds in the core currencies euro and US dollar.

The development of KfW's funding activities in the money market segment was equally positive in 2018. The programme volume of the Euro Commercial Paper ("ECP") programme designed for investors worldwide was increased from EUR 60 billion to EUR 70 billion in November 2018. The volume issued in the ECP programme was lower in 2018 than in the previous

OPERATIONAL RISK AND BUSINESS CONTINUITY MANAGEMENT

KfW Group's organisational structure provides for a two-tier system comprising decentralised and centralised units liaising with the Operational Risk Committee. Management of risks is decentralised and performed within the business sectors and subsidiaries by the respective directors or managing directors, who are supported by the respective sector coordinators of Operational Risk and Business Continuity Management. Monitoring and communication of risks is performed on a cross-functional basis by Risk Controlling (central OpRisk Controlling) and Compliance (central Business Continuity Management). These staff develop the relevant methods and instruments for identifying and assessing risks and monitor their group-wide 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 even in the event of loss of key resources.

In accordance with Article 4 (1) No. 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 risk/sub-types of operational risk are also defined and monitored as a rule by specialised second line of defence units: compliance risk, information security risk, payment transaction risk, physical security risk, legal risk, conduct risk, service provider risk (including outsourcing risk), personnel risk, operational risk from adjustment processes, model risk and information technology risk unrelated to information security.

Losses are recorded in KfW Group in an OpRisk events database. After each quarter, a detailed report is made to 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

year. The outstanding volume here amounted to EUR 35.1 billion at the end of 2018 (year-end 2017: EUR 34.7 billion). The issue volume in the US Commercial Paper ("USCP") programme was also lower year on year in 2018. The USCP, with a programme volume of USD 10 billion, is specially designed for the US market. KfW Group uses this programme to cover a large portion of its need for short-term funds in US dollars. The outstanding volume amounted to USD 6.8 billion at the end of 2018 (year-end 2017: USD 8.1 billion).

potential operational risks. Within the risk assessments, operational risk is measured on the basis of expert estimates in combination with other information such as internal loss events, which are backed by a distribution assumption for loss frequency and amount. The results of the risk assessment are reported to the Operational Risk Committee and the Executive Board. 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").

Where adequate monitoring of operational risks using metrics is possible, risk indicators are used. Compliance with centrally prescribed risk-mitigating requirements (e.g. training course participation, deadlines, escalation procedures) is monitored using business area-specific OpRisk information dashboards that ensure escalation across all levels up to the Executive Board in the event of non-compliance.

Overall, operational risk within the group required a total of EUR 1,441 million in economic capital as of 31 December 2018. This is EUR 157 million less than as of 31 December 2017. In addition to the updating of risk scenarios, the reduction in economic capital is attributable to improvements in the statistical model. The focus of further development was on increasing model stability, taking greater account of risk scenarios and improving the model's transparency.

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 responsi-

bility for overall crisis management if necessary. 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)

Undertaking equity investments at operational level is part of the group's promotional mandate. Accordingly, there are equity investments in connection with domestic and European investment financing and in the Promotion of developing countries and emerging economies and Export and project finance business areas. 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 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. Equity investment portfolio risks are reported separately in a dedicated report as well as quarterly in the Risk Report.

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. KfW also makes equity investments in accordance with Article 2 (4) of the KfW Law (mandated transactions). The Federal Government mandates these equity investments to KfW because the Federal Republic of Germany has a state interest in them.

Dedicated organisational units are 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. Moreover, acquiring an equity investment in excess of 25%, increasing such an equity investment or their partial or full disposal requires authorisation by the Federal Ministry of Finance in accordance with Section 65 (3) of 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, if necessary. 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.

Intra-group risk

Due to the high risk relevance for the group and the objective of consistent group management, the risks of KfW IPEX-Bank, DEG and KfW Capital, which was founded in 2018, are fully taken into account as part of Group risk management. For example, the business activities of these subsidiaries are applied to the group-wide limits on a look-through basis and included in the capital allocation of the group, and representatives of the subsidiaries are members of the group's risk committees. KfW also monitors the risk situation of its subsidiaries on a stand-alone basis. The management of each subsidiary reports regularly to the responsible members of the Executive Board on risk, as well as on finance and strategy.

Reputational risk

Reputational risk is the risk that the perception of the group from the point of view of the relevant internal and external stakeholders 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 achievement of objectives (e.g. new technical requirements, 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.

Additional internal monitoring procedures

Process-integrated 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) requirements⁷⁾, in particular those set forth in the KWG and MaRisk, and the market standard COSO model⁸⁾.

The KfW 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.

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 mini-

Regulatory risk

Regulatory risks for KfW Group arise primarily from an increase in requirements regarding minimum capital ratios and from possible negative effects on the group's business model due to future changes in the regulatory environment. These include the costs resulting from the implementation and ongoing fulfilment of the additional requirements as well as the associated capital tie-up.

As part of the capital adequacy process, regulatory risk is addressed through conservative traffic light limits as a management and early warning instrument with regard to regulatory capital requirements. In addition, the capitalisation of KfW Group is continuously reviewed as part of capital planning and in cooperation with the owners. In this context, potential negative effects arising from the finalisation of the capital adequacy requirements under Basel III are analysed and assessed, in particular.

In addition, KfW keeps active track of changes in its legal environment, which makes it possible to identify new regulatory requirements at an early stage and to determine any necessary action.

misg 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 operational processes and structures 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.

The system is supplemented by the Compliance department, which defines and monitors compliance with relevant measures, on the basis of relevant rules and norms. The Compliance function performs regular process-based and accompanying monitoring of the relevant areas of the internal control system. The results of additional second line of defence units (OpRisk in particular) are included in monitoring and the further development of the internal control system.

⁷⁾ 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.

⁸⁾ COSO = Committee of Sponsoring Organizations of the Treadway Commission

To ensure the adequacy and effectiveness of the ICS, KfW regularly scrutinises and continually refines its standards and conventions.

A report is rendered annually to KfW Group's supervisory bodies. 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.

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 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 2018 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 in support of major projects, as well as review of rating systems to meet the provisions of Article 191 of the Capital Requirements Regulation ("CRR").

As in previous years, Internal Auditing also monitored the continued development of risk measurement procedures in 2018 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.

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 KfW

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

General economic environment and development trends

KfW expects the **global economy** to slow down in 2019, with global growth likely to be 3.6% lower than in the previous year. The industrialised countries are leading this economic trend, having overshot its peak in 2018. This applies particularly to the USA and the euro area and implies a real growth rate of 2.0% for the industrialised countries in 2019, following 2.3% the previous year. No additional downward momentum is expected from developing countries and emerging economies, with an unchanged growth rate of 4.7%. Economic divergence has been increasing since a broad-based global upswing was recorded in 2017. Developing countries and emerging economies in Asia will continue to post the highest growth rate, even if it is likely to be lower than in 2018. The extent of cooling will largely be determined by China due to the size of its economy and its regional trade relations. It will have to manage not only the planned slowdown in growth but also the negative impact of the trade dispute with the USA. China must also bring its supportive fiscal and monetary measures in balance with steps to slow credit growth.

The high 2018 growth expectations for the **European Economic and Monetary Union (EMU)** were not met. Due to the lack of momentum from foreign trade, the EMU economy downshifted to a slower growth rate. KfW expects the economy to continue to gradually cool down in 2019. Real GDP is expected to grow by 1.6% in 2019, in a difficult risk environment. This still represents a sound growth potential and means the multi-year upswing will continue. Foreign trade will dampen European growth to a certain degree this year as well, requiring a boost from the domestic economy, due to tighter financing conditions and a tense trade environment putting downward pressure on global economic growth. Basic conditions look set to make this happen – low unemployment, real wages on the rise, high capacity utilisation and a noticeable fiscal stimulus all provide support.

General conditions for driving domestic demand in **Germany**, as in the euro area overall, remain very good at the beginning of 2019. Consumption and housing construction can thus be expected to further buoy the economy. By contrast, the numerous

global uncertainties such as US protectionism, Brexit and the Italian budget will likely persist, putting a damper on growth in corporate investment. The slowdown in the global economy was already noticeable in 2018 with a slump in exports. This trend is unlikely to change significantly in 2019. Overall, KfW expects a real growth rate of 1.6% for 2019, which approximately corresponds to German growth potential. Capacity utilisation thus remains high but will not increase further. Downside risks are considerable.

As in the final months of 2018, the **financial market environment** in 2019 is expected to remain strongly characterised by the question of whether investors believe the US Federal Reserve can keep tightening monetary policy without hurting the US economy. Although that is precisely the US Federal Reserve's job, many investors still vividly recall the 2007–2008 financial crisis, which was in part sparked by the US tightening monetary policy too swiftly. KfW assumes that members of the Federal Open Market Committee (FOMC) will have learned a lesson from the crisis and will consequently exercise caution in further rate hikes. The federal funds target rate was between 2.25% and 2.50% at the end of 2018, having been raised by 25 basis points four times during the course of the year. KfW expects the FOMC to undertake a maximum of three such rate hikes in 2019 before ceasing. This would only constitute a moderate rise in US interest rates and bring more calm to the financial markets, while tending to support equities around the world and allowing risk premiums to decline. Across the ocean, the European Central Bank ended its net asset purchases as of 31 December 2018 and communicated that its key rates would remain unchanged at least “through the summer of 2019” and maturing bond proceeds would be reinvested until long after the first key ECB rate increase. KfW expects an initial cautious rise in the deposit rate in the autumn of 2019 and thereafter increases in all three key ECB interest rates of 25 basis points every six months. This should consequently result in a slight upward shift in the yield curve for the euro area as well as for the US in 2019. The curve for the US dollar can be expected to remain very flat and that for the euro to become steeper.

Risk outlook – Risk situation and risk-bearing capacity

The **global economy** grew by the same rate in 2018 as in 2017. The upswing driven primarily by monetary and fiscal policy stimuli was generally stable as regards indicators, economic sectors and the number of countries. Although short-term economic prospects remain generally positive, opportunities and risks in terms of global economic growth are no longer balanced and have shifted onto the negative terrain.

Considerable downside risks threaten medium to long-term growth, for reasons including (i) persistent uncertainties about US economic and foreign policy, particularly with regard to escalation of its trade disputes, above all with China and the EU, (ii) lack of clarity as to how the UK's exit from the EU will change the European economic and political climate in Europe, (iii) the extent to which Italy's precarious banking problems and debt burden will spill over to other European countries, (iv) the impact of the forthcoming European Parliament elections on the new European Commission's political and economic decision-making and ability to act, and (v) central banks' limited capacity to take any countermeasures in the event of a drastic downturn, given the low interest rate environment. Moreover, there is a rising danger that the US Federal Reserve's recent tightening of monetary policy could result in a new financial crisis, particularly due to the prevalent phenomenon of considerably high and increasing private debt levels, which has significantly increased private sector vulnerability to external shocks in many countries. Furthermore, the diversion of capital flows resulting from the interest rate hike could put additional pressure on numerous emerging economies with high current account deficits.

Added to this are increasing geopolitical risks with an international dimension from various crisis countries and regions, such as the Persian Gulf (Iran, Qatar, Saudi Arabia), eastern Ukraine/Crimea, Turkey/northern Syria, the civil war in Syria, multiple regional conflicts in Africa, Asia and Latin America as well as persistent tensions in the South China Sea.

Against this backdrop, a constantly high global economic growth in 2019–2020, as recently forecast by the IMF and the OECD, is a very optimistic scenario. The downside risks deemed to have increased for the medium term are likely to result in global economic growth slowing down as early as 2019–2020. In the worst case scenario, such risks could also trigger crises over the next two years.

The forecasted slowdown in economic growth will also have a dampening effect on the business activities of the **European banking markets**. As these banks have only been able to slightly improve their earnings in recent years due to increased

demand for loans and following several years of very low credit risk costs, KfW expects risk costs to rise again – in particular from the second half of 2019 onwards. This is because a weaker economic environment has a slightly lagged negative effect on the asset quality of bank balance sheets.

The profitability of the European financial sector, which is only moderate by international standards, is thus likely to stagnate in 2019. The key ECB interest rate hike anticipated by most market observers for the end of 2019 will not have a positive impact on the currently severely narrowed net interest margin and the profitability of banks until 2020 at earliest.

Supervisory authority pressure to further reduce non-performing loans (NPLs) in Europe is also having a negative effect on earnings. The EBA's final Guidelines on management of non-performing and forborne exposures published last year will enter into force in June 2019. The European Commission is also calling for a higher level of loan loss provisions, which the ECB will prescribe from 2021 onwards for the banks under its supervision.

The end of net purchases under the ECB's purchase programme is likely to increase bond market volatility, which could beget greater customer and trading revenue. This would give banks the opportunity to boost their recently declining trading revenues.

The European financial sector will continue to invest heavily in digitalisation and modernisation of its IT systems in 2019. EBA data for European banks indicates continued room for improvement in efficiency as measured by banks' cost-income ratios. Thus a further reduction of overcapacities in branches and back-office units is expected.

The capital base of systemically important German and European banks has been strengthened to a solid level. Individual financial institutions, in particular small or unilaterally oriented institutions, still need more capital. Findings of the ECB's targeted review of internal models (TRIM) project indicate, however, that a correction of common equity tier 1 (CET1) ratios appears possible for certain institutions, which could also potentially result in implementation of new capital measures at these institutions.

Growing financial sector concerns in the US since the end of 2018. Although the sector still posted record results in 2018 thanks largely to considerable relief stemming from the US tax reform, this boost will disappear in 2019. Smaller banks in particular are worried that the rise in interest rates will slow down their credit growth. The trade dispute between the USA and China is also likely to affect the business activity of major international

banks. A repetition of the robust 2018 results is therefore not to be expected.

The aforementioned political and geopolitical risks (USA-China, USA-EU, Italy, UK/Brexit) harbour the potential to create turbulence in the financial markets. Such risks may also have an adverse effect on some banking sectors in emerging economies and may impede their access to the capital markets. The US Federal Reserve's tighter monetary policy already had this type of impact in those regions in the previous year. The Emerging Markets Bond Indices (EUR and USD), for example, recorded spread widenings of well over 100 basis points.

Against the backdrop of stable domestic demand, the **German and European corporate sectors** are expected to continue their solid basic performance in 2019, albeit weaker than in 2018 due to the aforementioned macroeconomic factors. Moreover, it cannot be ruled out that the various forms of pressure (e.g. diesel, trade dispute, Brexit, transition to electromobility, new competitors) will begin to weigh on the German automotive industry's profitability, which has been very stable to date. The German private equity market continues to benefit from a stable market environment in terms of fundraising, the number and quality of the investment properties presented and the opportunities to sell existing projects. The low interest rate environment, which is likely to persist in 2019, still favours investor interest in alternative investments. However, the high liquidity in the market and the increasing competition among investors is reflected in relatively high company valuations and aggressive financing structures in the private equity sector, characterised by high debt levels and weak financial covenants, implying risks in

New business projections

Overview

KfW Group plans a new business volume of EUR 78.1 billion for 2019, which, compared to the 2018 plans, corresponds to the principles of subsidiary growth in line with the bank's strategic objectives. This reflects the continuation of the growth path, determined by a quality initiative, in the foreign business sectors, as well as a slight overall growth in domestic new business by taking the strategically relevant areas of energy efficiency and digitalisation into account as well as implementing the "Baukindergeld" scheme.

In order 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 "promotional quality" and on an orientation of business activities to the key megatrends "climate change and the environment", "globalisation", "social change" and "digitalisation and innovation". The proportion of total promotional business volume dedicated to climate and environmental protection financing of 37% and the "promotional quality" of 86% are at a high, stable level. Both primary objectives are thus steadily above the strategic objective requirements. The SME share of planned new SME commitments in domestic promotional business will therefore reach the target level of 41%.

case of a downturn. In summary, the market outlook for 2019 thus appears set to remain positive, assuming a stable politico-economic environment; otherwise there is a risk of a significant setback, particularly in the private equity sector, if the aforementioned negative macroeconomic scenario occurs.

The performance of European securitisations is expected to remain at a good, stable level in 2019 due to the solidly hedged structures in place, despite various politico-economic uncertainties.

Anticipated developments in KfW Group's risk relevant segments are not expected to have any material adverse effects on the risk situation in general even if some of the risks increase substantially.

Stable overall development is anticipated for the group's tier 1 and total capital ratios in the financial year 2019, based on the forecasts prepared in the group's internal capital adequacy process. Due to new regulatory requirements, the concept for determining the group's economic risk-bearing capacity will be adjusted at the beginning of 2019. Overall, the group's economic risk-bearing capacity is expected to be clearly secured in financial year 2019.

The liquidity situation was stable in 2018. The funding volume was in line with projections. The need for funding in 2019 has increased year on year, due to slightly higher cash inflows from repayments and higher outflows of funds compared to 2018. Unscheduled repayments are expected to remain at a high level. Due to the continued stable funding situation, no significant changes in liquidity risk are anticipated.

Domestic business

Domestic business was restructured on 1 April 2018 in line with the organisational model developed as part of the "Domestic objectives 2020+" project completed in 2017. The business sector Mittelstandsbank & Privatkunden (SME Bank & Private Clients) will bundle the retail business capable of being digitalised and automated in the future and will carry around 80% of the domestic promotional volume with a broad range of promotional offerings in various key promotional areas. The business sector Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) offers innovative and customised promotional solutions for companies and banks and is an attractive partner to the German Federal Government, states and municipalities thanks to its expertise in municipal financing.

The newly founded venture capital subsidiary KfW Capital invests in venture capital and venture debt funds to improve the sustainable provision of venture and growth capital, thus also strengthening Germany as an innovation hub in the long term.

The business sector **Mittelstandsbank & Privatkunden (SME Bank & Private Clients)** serves as a reliable partner to the German Federal Government and is divided by client group into two segments: SME Bank and Private Clients.

The SME Bank segment will also support the German economy in 2019 with a broad range of promotional offerings in various key promotional areas. Given the expected development of the economy and interest rates, the business sector in the SME Bank segment expects brisk demand for commercial financing. It is worth noting that further development of the ERP digitalisation and innovation loan is expected to establish a high level of innovation promotion for the long term. The Federal Government's implementation of its energy efficiency and heat from renewable energy promotional strategy has generated a new promotional programme: "KfW Energy Efficiency Programme – Industry and Commerce". This industrial programme promotes specific individual measures and projects in plant and process modernisation projects that embrace technology as well as measures to provide process heat from renewable energy. The promotion of renewable energy, on the other hand, is decreasing – due in particular to amendments to Germany's Renewable Energy Sources Act (*Erneuerbare-Energien-Gesetz – EEG*). Start-up financing is expected to be on a par with the previous year.

The Private Clients segment supports education, and energy efficiency in the construction and refurbishment of residential buildings, and also promotes the acquisition and construction of owner-occupied housing and accessible refurbishment and construction of new homes. Demand for housing-related financing in the Private Clients segment is expected to remain high in 2019. The primary drivers of this demand are: (1) the low interest rate environment and rising incomes favouring investments in residential property, (2) climate change and Germany's energy transition bolstering demand in the housing-related programmes for Energy-efficient Construction and Refurbishment (3) demographic change requiring increasing investment in the needs-based development of housing, and (4) the issue of affordable housing further incentivising promotion. Education financing will remain at a stable high level given the consistently high demand for funding.

A key driver of further development in the segment's promotional focus area is the implementation of the "*Baukindergeld*" scheme under the coalition agreement (launched in 2018 with a budgeted EUR 3.3 billion for 2019), which significantly increases the portion of grants.

The business sector *Mittelstandsbank & Privatkunden (SME Bank & Private Clients)* plans a total commitment of EUR 39 billion for 2019, which represents an increase from the 2018 plan level.

Systematic digitalisation of the promotional business remains a main strategic area of action. Key elements of the process are the holistic support of customers in their projects, from customer access to promotion, to fast communication and decisions to conclude promotion. Automated processes and standardised products are the retail business levers that can be adjusted to achieve these objectives.

The business sector **Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)** is divided into three segments.

The business segment Municipal and social infrastructure comprises broad basic funding of municipalities, municipal enterprises and not-for-profit organisations with a focus on the environment, the energy transition and social change (in this case, particularly through programmes to improve accessibility in existing properties). The investment opportunities of municipalities are primarily characterised by increasing heterogeneity in their budget and debt situation. In infrastructure financing, KfW acts as a standard-setter for energy efficiency in public buildings as well. 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.

The Customised corporate finance segment focuses beyond the digitalised retail business on tailored promotional solutions for companies with operations relating to the German economy. A variety of debt capital products with risk coverage are offered for this purpose. A substantial volume is planned in the medium term for the new "KfW Loans for Growth" programme aimed at investment in innovation and digitalisation in larger SMEs. Offering a new venture tech growth product will provide important impetus for financing fast-growing technology companies. Changes in the legal framework have created a permanent obstacle to provision of offshore funding opportunities for wind power in this segment. New European-level cooperation efforts can support SME growth financing in particular.

A sound refinancing situation at partner banks continues to characterise the market environment in the Individual financing of banks and promotional institutions of the federal states segment. There is a high demand for global loans to promote SME leasing investments in Germany, while global loan financing in other European countries remains subject to difficult conditions. The demand for refinancing of export loans appears to have picked up again somewhat recently.

As a financing partner to the promotional institutions of the federal states, this business sector aims to ensure a business volume of programme-based global loans at the current high level. As a reliable partner, it aims to further consolidate its promotion at a considerable level within general funding for the promotional institutions of the federal states (LFIs).

Stable planning approaches to global loans for lease financing and refinancing of export loans covered by the Federal Government provide effective support for the strategic primary objectives of promoting SMEs and the export economy. These measures are reinforced by European lighthouse projects.

With a new business volume of EUR 10 billion, the business sector plans to continue promotion in 2019 almost on par with that of the planned 2018 levels.

The newly founded subsidiary **KfW Capital** aims at establishing itself as an institutional fund investor in the German and European venture capital (VC) markets. KfW Capital relies on support from the Federal Government's ERP Special Fund to invest in German and European VC funds, thereby strengthening venture capital and early growth financing in Germany. The higher-volume funds enable fledgling technology-oriented growth companies in Germany to better access capital. By 2020, KfW Capital aims to double KfW's previous investment volume to an average of EUR 200 million p.a. (planned commitment volume in 2019 is EUR 155 million). Over the next ten years, KfW Capital aims to invest EUR 2 billion in funds that will in turn participate in German companies in at least this volume.

The political will to strengthen venture and early growth financing in Germany underlies the creation of KfW Capital. Studies demonstrate that this segment, in particular, needs to catch up. In terms of venture capital investments as a percentage of a country's GDP, Germany is actually below the European average. Yet, at the same time, a very promising dynamic start-up scene has developed in Germany in recent years. The number of innovative start-ups in Germany rose by 15,000 in the last year alone and now totals 108,000. The spin-off of KfW's VC investment business into a wholly-owned subsidiary enables a stronger focus on equity investments in the specialised institution. This also lends more visibility to the government's commitment to the German VC market and more adequately reflects its importance.

With its three existing products and programmes: High-Tech Start-Up Fund, coparion and ERP Venture Capital Fund Investments, KfW follows a targeted approach to reviving Germany's VC landscape without dominating the market. The target funds are, on one hand, already established European funds and, on the other hand, "first-time" funds in order to increase the number of venture capital providers. KfW Capital is investing a maximum of EUR 25 million and a maximum of 19.99% of fund volume in funds, thus substantially leveraging private capital.

Financial markets

The business sector **Financial markets** invests in securitisation transactions in order to support improvement in the credit supply via capital market instruments. Commissioned by the German Federal Ministry for Economic Affairs and Energy (BMWi), the business sector thus contributes to the diversification and stabilisation of funding opportunities for SMEs in Germany and Europe.

SME-related securities investments of EUR 1 billion are planned for 2019. Cooperation between European promotional institutions under the EIF-NPB Securitisation Initiative ("ENSI") will continue in order to strengthen the European securitisation market and support SME capital market financing in Europe.

KfW's purchase of green bonds under the promotional mandate issued by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) in spring 2015 helps to fund environmental and climate protection projects and support further development of the green bond market. The green bond portfolio has a target volume of up to EUR 2 billion. Over half of this amount had already been invested as of 31 December 2018. New business of EUR 0.3 billion is expected for 2019.

Once again, the business sector Financial markets plans a total new business volume of EUR 1.3 billion for the two promotional lending portfolios, which is at the same target as for 2018.

International business

The **Export and project finance** business sector is aimed at sustainably supporting the German and European economy with project and export financing, to maintain and increase competitiveness and internationalisation, as well as increasing its contribution to the group result.

While economic performance in the markets relevant to the business sector is stable in Germany and satisfactory overall in the OECD countries, there are indeed regions with growth potential in the relevant developing countries and emerging economies, such as the Andean states. Key markets such as Russia and, in particular, Turkey continue to face challenges. Geopolitical risks- like potential protectionist efforts – can have a noticeable adverse effect on world trade and thus on financing opportunities. Overall, however, there is sufficient potential for German and European exporters and enterprises that invest in their competitiveness, from which financing approaches for the Export and project finance business sector can be derived.

The business sector's financing activities also focus on environmental and climate protection, economic and social infrastructure and securing Germany's supply of raw materials. Sustainable development of structuring competence, particularly with products that conserve equity, is key to the business sector's positioning as a leading special finance provider. The ability to assume selected roles in capital market transactions is also examined, if these are used as substitutes for the core product loan, as is the case with project bonds (normally infrastructure financing). Leading roles in complex export and project financings are taken on even more frequently as a result of placements of large self-structured financings. Risks are reduced – primarily by placing loan volumes with banks, investors and insurers, and limits are kept open for business partners and additional projects, as part of more active portfolio management.

A high priority is placed on continued improvement of risk diversification to sustainably stabilise and increase earnings in an RWA-efficient manner. The main points are a stronger focus on the marketing business that does not affect risk-weighted assets, and the increased use of hedging instruments and transfer of risk to the market (private risk insurance (PRI) and syndication) as well as a more active portfolio management and the associated increase in RWA optimisation of the loan portfolio.

The business will continue its organic growth path in 2019 with planned new business volume of EUR 16.6 billion (an increase of just under 2% compared to the 2018 target).

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

The **KfW Development Bank** business area expects dynamic business growth to continue in the next few years. The political significance and associated budget funds for development cooperation from both the Federal Government's budget and the European Commission continue to increase. KfW Development Bank's main strategic objective is to support the Federal Government in its contribution to meeting international goals (Agenda 2030 and the Paris Agreement) and addressing international development challenges (poverty alleviation, crisis management and prevention). To this end, the focus remains on the swift utilisation of increasing budget funds, particularly in crises contexts, and an even stronger climate commitment.

International climate financing is to be expanded, through measures including broadening the climate adaptation portfolio, demand-based energy efficiency and incorporating renewable energy into energy systems. In addition to expanding crisis-related fi-

Privatisation transactions with the German Federal Government

In connection with the Federal Government's **privatisation transactions**, KfW is generally prepared to conduct further privatisation transactions in 2019 as well, taking into account

nancing (particularly in Africa and the Middle East), support is to be extended to the Federal Government to aid it in its civil contribution to global security and stability. Such support will assist the Federal Government in fulfilling its international obligations with clear visibility of Germany's use of the funds.

Further improvement in quality of funding is to be made at the same time. Because of rising indebtedness of various partner countries, particular priority will be given in this context to continued development of financing instruments to reduce debt risks for partner countries, such as greater local currency financing. Along with developing instruments, KfW Development Bank has also created a framework that takes even greater account of partners' debt sustainability in lending. Focus areas such as compliance with international environmental and social standards as well as anti-corruption standards will be further strengthened in view of stricter quality requirements for development cooperation as a whole and growing non-financial/reputational risks. Development in the monitoring and reporting of results and impact from Financial Cooperation will be enhanced, and transparency – particularly in the area of environmental and social risks – increased, to improve funding quality. The implementation of digitalisation measures is also aimed at optimising internal portfolio and data management.

Moreover, cooperation with central partners is to be maintained and expanded. As part of the EU External Investment Plan, KfW Development Bank is actively involved in developing and implementing EU guarantee instruments, closely cooperating with other European promotional institutions.

KfW Development Bank plans a new business volume of EUR 9.1 billion for 2019 – a volume well above the 2018 target of EUR 8.4 billion.

market conditions and the strategic requirements by the Federal Government.

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.

KfW enjoys an excellent reputation among international market participants and can react flexibly to changing market conditions. It will continue to maintain this prominent position with great responsibility in the future in order to secure the funding of KfW's promotional business. The three pillars of KfW's funding strategy remain: highly liquid benchmark bonds in euros and US dollars, public bonds and private placements.

Earnings projections

In the current group earnings projections for 2019, KfW expects Consolidated profit (before IFRS effects) of approximately EUR 0.8 billion based on anticipated macroeconomic conditions. The expected result is thus below the strategic objective of EUR 1 billion. Contributions from Net interest income (before promotional expense) are at a high level similar to that of previous years; although the ongoing low interest environment may limit the potential for additional earnings contributions from interest rate and liquidity maturity transformation and consequently become an increasing burden on total net interest income in subsequent years. Net commission income is expected to increase over 2018 as a result of the new "Baukindergeld" product.

Planned Administrative expense for 2019 amounts to EUR 1,370 million on account of high charges relating to modernisation and digitalisation, regulation, and implementation of corporate policy projects.

A Cost-income ratio before promotional expense of 46.3% is expected for 2019.

The product offering in the bond issue business will continue to be focussed on investors' needs. KfW's benchmark bonds in euros and US dollars will continue to account for the highest share of total volume. The business segment will further underpin KfW's positioning as a "responsible bank" through capital market dialogue on the issue of sustainability, thereby strengthening KfW's sustainability profile, including by continuing to issue green bonds in various currencies.

Long-term funding via the capital markets of approximately EUR 80 billion is planned for 2019, a figure at the upper end of the previous year's target range.

The projected standard risk costs, which as a long-standing historical average are considerably higher for 2019 than the actual risk provisions for the lending business in 2018, suggest a negative effect on earnings. Given the macroeconomic scenario on which the projections are based, the actual risk provisions for the lending business are not likely to reach the standard risk costs level for 2019 either, meaning that achievement of the strategic consolidated profit objective appears possible. As long as market conditions allow for it, KfW also expects promotional expense in 2019 to be close to the previous planned level.

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 from 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. In its rolling planning, the Executive Board adopts binding FTE ceilings each year for the entire budget period. These take all internal staff into account in order to ensure business operations in normal and crisis times and to enable flexible reaction to any changes in underlying conditions and/or responsibilities.

To improve personnel cost management, numerous measures have been and will be implemented over the next few years with the aim of raising cost awareness.

KfW has been subject to the remuneration regulations of the Remuneration Ordinance for Institutions (Institutsvergütungsverordnung – "IVV") since 1 January 2018. The new remuneration system is designed as a performance-based reward system with a focus on fixed remuneration in line with KfW's promotional mandate. Designing a new company pension scheme for new hires with the aim of a group-wide uniform company pension scheme with adequate provision and in line with the market was necessary taking into account cost and risk aspects.

Recruiting is increasingly targeted to specific groups and uses digital means in order to adequately cover KfW's personnel requirements in times of demographic change that are also characterised by a high level of employment and a shortage of skilled labour. Modern and demand-oriented support for junior talent in-

Digitalisation as an opportunity

The **digitalisation** of the economy drives productivity, innovation and new business models. The success of this change process hinges on investment in the digital infrastructure, adequate data security and data protection plans and in the relevant skills of employees.

On the one hand, KfW is facilitating the digital transformation of the economy. It is addressing the megatrend with suitable products in domestic promotion and financing projects to promote digitalisation in Germany and abroad. KfW is also working with suitable partners to develop digital platforms that focus on customers and their informational and advisory needs and offer comprehensive solutions (e.g. www.gruenderplattform.de). On the other hand, KfW sees the technological applications driving digitalisation as a chance to improve its own promotional offering. Consequently, it has taken targeted steps to push the digital transformation in all organisational areas where it would yield a strategic and/or quantifiable benefit for KfW. KfW pursues two

creasingly complements external recruiting. Moreover, comprehensive talent and skills management of existing employees is one of the core functions of **HR development** in order to address changing needs and establish skills as a strategic factor (e.g. IT skills and use of agility in the context of digitalisation).

With regard to the working environment, more and more flexibility is now being practiced in terms of location, working hours and organisation of work, driven in particular by digitalisation, regulatory requirements (e.g. the Part-Time and Limited-Term Employment Act – *Gesetz über Teilzeitarbeit und befristete Arbeitsverträge*), and greater importance attached to work-life balance. KfW is adapting its existing working models and service offerings to these new requirements for mobile and flexible working. In this manner, it is creating a modern and attractive working environment that supports staff employability (e.g. through measures facilitating family care).

Another important component of a sustainable HR strategy is the management of inclusion. This ensures that the potential of people with disabilities is also put to optimum use. Diversity management, which systematically includes diversity at KfW as a strategic competitive advantage, also comprises the sub-areas of gender balance and knowledge transfer between younger and older employees, which are integrated into a holistic, multi-dimensional approach to diversity management.

key objectives – ensuring and further developing promotion, and increasing efficiency. To this end, the bank continues to invest in digital solutions for streamlined, digital processing of promotional programmes (e.g. the digital on-lending platform "BDO" and the KfW grant portal) and tests new technologies to optimise processes and workflows in the promotional business (e.g. piloting blockchains in development cooperation and bond trading).

The digital transformation at KfW also includes supporting the cultural change and employee training, together with the HR team. The focus is on the long-term changes in working relationships, management and communication as a result of digitalisation. A digital academy serving as a central hub for exchanging knowledge and experience on digitalisation was created for this express purpose. Furthermore, new and agile working methods are in use and innovation is being stepped up in the digital and non-digital area.

Sustainable finance challenges

Ongoing European Commission legislative initiatives introduced in May 2018 concerning taxonomy and disclosure have the potential to substantially change KfW's promotional business framework regarding sustainability issues and their reporting. The financial sector generally welcomes the European Commission's initiative to define a common taxonomy or "language" on what "sustainable economic activities" are. This would enable the development of credible and scalable "green" or "sustainable" financial products. The legislative process on taxonomy may not be concluded this year as planned, but is likely to continue until 2020. Once the first stage, with definitions of "climate products," comes into effect, there will be implications for how KfW pre-

sents financing and promotional products to the public, as it is unlikely that all products will fully meet the EU taxonomy criteria for "green" developed thus far. We will also need to consider how to best deal with our method of measuring KfW's environmental share, which is less restrictive than the EU taxonomy. The European Commission disclosure initiative will result in expansion of the KfW sustainability reporting framework, as additional reporting requirements will be defined – even though still soft in the form of enhanced non-binding guidelines – primarily concerning climate risks. These will likely enter into effect in mid-2019 and thus affect the next KfW sustainability report that will appear in spring 2020.

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 Govern-

ance 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.

Non-financial statement

Information on the “Summarised non-financial statement of KfW as the parent company and of KfW Group” can be found in the standard report of the 2018 Sustainability report. The report adheres to the Global Reporting Initiative (GRI) standards and

can be accessed online at https://www.kfw.de/PDF/Download-Center/Konzernthemen/Nachhaltigkeit/englisch/Nachhaltigkeitsbericht-2018_EN.pdf



KfW Financial statements 2018

Annual financial statements

Statement of financial position of KfW as of 31 December 2018

Assets

	see note no.	31 Dec. 2018				31 Dec. 2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Cash reserves						
a) Cash in hand				0	0	
b) Balances with central banks				17,464	11,086	
<i>of which: with Deutsche Bundesbank</i>		17,464			(11,086)	
				17,464	11,086	
Loans and advances to banks	(2)					
a) Due on demand				7,361	10,507	
b) Other loans and receivables				302,005	291,521	
				309,366	302,028	
Loans and advances to customers	(3)			100,060	102,255	
<i>of which: secured with mortgages</i>						
Municipal loans		62,597			(67,181)	
Bonds and other fixed-income securities	(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			1,643	1,643	1,328	
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		0			(0)	
b) Bonds and debentures						
ba) Of public sector issuers			5,739		6,008	
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		5,495			(5,765)	
bb) Of other issuers			25,144	30,883	23,190	
<i>of which: eligible as collateral with Deutsche Bundesbank</i>		20,203			(18,600)	
c) KfW's own bond issuers				6,021	8,667	
Nominal amount		6,564			(9,154)	
				38,547	39,193	

Assets

	see note no.	31 Dec. 2018				31 Dec. 2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Equity investments	(5), (7), (9)				1,080	1,026
<i>of which: in banks</i>		35				(40)
<i>of which: in financial services institutions</i>		0				(0)
Shares in affiliated companies	(6), (7), (9)				3,306	3,250
<i>of which: in banks</i>		429				(429)
<i>of which: in financial services institutions</i>		0				(0)
Assets held in trust	(8)				16,578	15,859
<i>of which: loans held in trust</i>		11,747				(12,124)
Intangible assets	(9)					
Concessions, industrial property rights and similiar rights				109		138
					109	138
Property, plant and equipment	(9)				879	872
Other assets	(10)				654	628
Deferred charges	(11)				1,565	1,586
Special loss account consisting of provisions under Article 17 (4) of the D-Mark Balance Sheet Act					26	26
Total assets					489,634	477,947

Liabilities and equity

	see note no.	31 Dec. 2018				31 Dec. 2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Liabilities to banks	(12)					
a) Due on demand				5,117		3,586
b) With agreed terms or periods of notice				5,222		4,405
					10,340	7,991
Liabilities to customers	(13)					
Other liabilities						
a) Due on demand			854			760
b) With agreed terms or periods of notice			10,857	11,711		8,374
					11,711	9,134
Certificated liabilities	(14)					
Bonds and notes				419,370		408,606
					419,370	408,606
Liabilities held in trust	(15)				16,578	15,859
<i>of which: Loans held in trust</i>		11,747				(12,124)
Other liabilities	(16)				752	6,341
Deferred income	(17)				2,871	3,134
Provisions	(18)					
a) Provisions for pensions and similar obligations				1,356		1,184
b) Other provisions				1,104		1,030
					2,460	2,214
Obligatory charges under the D-Mark Balance Sheet Act					0	0
Fund for general banking risks					600	600

Liabilities and equity

	see note no.	31 Dec. 2018				31 Dec. 2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Equity	(19)					
a) Called in capital						
Subscribed capital			3,750			3,750
less uncalled outstanding contributions			-450	3,300		(450)
b) Capital reserve				8,447		8,447
<i>of which: promotional reserves from the ERP Special Fund</i>		7,150				(7,150)
c) Reserve from the ERP Special Fund				1,191		1,191
d) Retained earnings						
da) Statutory reserve under Article 10 (2) of the KfW Law			1,875			1,875
db) Special reserve under Article 10 (3) of the KfW Law			10,092			9,207
dc) Special reserve under Section 17 (4) of the D-Mark Balance Sheet Act			48	12,014		48
					24,952	24,068
Total liabilities and equity					489,634	477,974
Contingent liabilities	(20)					
On guarantees				694		755
					694	755
Other commitments	(21)					
Irrevocable loan commitments				76,691		74,398
					76,691	74,398

Income statement of KfW

for the period from 1 January – 31 December 2018

	see note no.	2018				2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Interest income from						
a) Lending and money-market transactions	(22)	6,284				6,871
Less negative interest from lending and money-market transactions		-196	6,088			-186
b) Fixed-income securities and bonds			41			58
				6,129		6,743
Interest expense	(22)	4,457				5,082
Less positive interest from the banking business		-89	4,368			-80
				4,368		5,002
					1,761	1,741
Current income from						
a) Shares and other non-fixed income securities				2		0
b) Equity investments				48		36
c) Shares in affiliated companies				0		0
					49	36
Income from profit pooling, profit and loss transfer and partial profit transfer agreements					18	0
Commissions income				437		369
Commissions expense				187		190
					251	179
Other operating income	(23)				120	118
General administrative expenses						
a) Personnel expense						
aa) Salaries and wages			422			399
ab) Social security contributions and expense for pension provision and other employee benefits			302	724		142
<i>of which: for pensions</i>			244			(85)
b) Other administrative expenses				472		442
					1,196	983
Depreciation, amortisation and impairment of property, plants and equipment and intangible assets	(9)				88	57
Other operating expense	(23)				32	22

	see note no.	2018				2017
		EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Impairments of receivables and certain securities and additions to provisions for loan losses					16	118
Income from reversals of write-downs of equity investments, shares in affiliated companies and securities held as fixed assets					24	7
Expense from loss absorption					2	0
Result from ordinary activities					889	901
Taxes on income					4	5
Other taxes					1	1
Profit					884	895
Allocation to retained earnings						
to the special reserve under Article 10 (3) of the KfW Law	(19)		-884			-895
				-884		-895
Net retained profits					0	0

Notes

KfW is a public law institution with registered office in Frankfurt am Main.

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 Article 17 (4) of the D-Mark Balance Sheet Act. Disclosures on items in the statement of financial position which may be provided in either the statement of financial position or 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 Net interest income. Equity investments and Shares in affiliated companies 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 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 – the 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 statement of financial position item 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 is recognised immediately 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, hedge accounting is applied for securities and their interest hedges (primarily interest rate swaps) in accordance with Article 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 value; differences between an 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 obligations are valued in accordance with actuarial principles on the basis of Heubeck AG's 2018 G actuarial tables. The projected unit credit method with the following parameters is applied to KfW's calculations for all active staff members.

	31 Dec. 2018
Actuarial discount rate (10-year average interest rate)	3.21 %
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 judgement, 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 valuation allowances and provisions. KfW distinguishes between significant receivables (non-retail, volume from each individual borrower of EUR 1 million or more) and non-significant receivables (retail). For significant receivables, an individual assessment of credit exposure regarding expected cash flows is undertaken when there are indications of impairment. The calculation takes into account the scope and value of the collateral as well as the political risk. For non-performing loans, interest income is generally recognised based on the probability of collection. For non-significant receivables with indications of impairment, a general risk provision (specific valuation allowance – retail) is created based on homogeneous sub-portfolios.

The automatically determined portfolio valuation allowance includes the expected basic loss resulting from the portfolio valuation model for all receivables (non-retail and retail) without indications of impairment. Until 31 December 2017, KfW calculated a one-year expected loss (portfolio valuation allowance and portfolio provision) for all non-impaired loans. This figure was multiplied by the loss identification period (LIP) to reflect the period between occurrence and knowledge of the loss event. The LIP factor was set at 1. With effect from 1 January 2018, KfW changed the valuation method for calculating portfolio impairment charges. These are now calculated based on the changes in credit quality since initial recognition, either in the amount of the one-year expected loss or, if there has been significant increase in credit risk since initial recognition, in the amount of the expected loss over its lifetime. Risk provisions for lending business included additions of EUR 68 million due to

changes in the method used to calculate portfolio valuation allowances.

Additions and reversals 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 affiliated companies and securities treated as fixed assets. The possibility of netting in the income statement in accordance with Article 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 reporting date have been converted into euros at the average spot exchange rate. The bank applies the principal of special cover in accordance with Article 340h HGB in conjunction with Article 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 applied by recognising a provision for anticipated losses from onerous contracts in accordance with Article 340a in conjunction with Article 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 observed. To determine any excess obligation, KfW calculates the net value of all discounted future profits or losses of the banking book for each period. 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 incurred as a result of the persisting low interest rate environment is reported in a separate column under Interest from lending and money-market transactions and Interest expense.

Interest on the silent contribution in KfW IPEX-Bank GmbH has been recorded in Income from profit pooling, profit and loss transfer and partial profit transfer agreements since financial year 2018. As no adjustment was made to the previous year's figure for 2017, it was reported at 0.

Notes to the assets

2) Loans and advances to banks

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
This item includes:		
Loans and advances		
To affiliated companies	21,583	20,593
To companies in which KfW holds a stake	0	0
Without underwriting borne by the on-lending bank	1,349	1,496
Subordinated loans	1,460	1,442
Due		
On demand	7,361	10,507
Within 3 months	18,790	14,489
Between 3 months and 1 year	32,958	31,473
Between 1 year and 5 years	134,071	126,330
In more than 5 years	113,120	116,245
Accrued interest	3,066	2,984
Total	309,366	302,028

An adjusting item in the amount of EUR 1,030 million (2017: EUR 1,185 million) is reported under Loans and advances to banks due to interest rates being below the market rate for promotional loans disbursed with additional promotional support in the form of interest rate reductions impacting KfW's earnings.

3) Loans and advances to customers

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
This item includes:		
Loans and advances		
To affiliated companies	212	131
To companies in which KfW holds a stake	0	0
Subordinated loans	1,859	2,163
Due		
With no fixed maturity	11,413	11,413
Within 3 months	3,649	7,875
Between 3 months and 1 year	5,998	6,613
Between 1 year and 5 years	38,618	35,525
In more than 5 years	40,098	40,546
Accrued interest	285	283
Total	100,060	102,255

An adjusting item in the amount of EUR 84 million (2017: EUR 111 million) is reported under Loans and advances to customers due to interest rates being below the market rate for promotional loans disbursed with additional promotional support in the form of interest rate reductions impacting KfW's earnings.

4) Bonds and other fixed-income securities

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Due within the following year		
Money market paper, bonds and notes	6,304	4,825
<i>Notional amount</i>	6,274	4,787
Own bond issues	138	2,646
<i>Notional amount</i>	136	2,623
Total	6,442	7,471
<i>Notional amount</i>	6,410	7,410
Listed securities	36,426	37,478
Unlisted securities	2,121	1,715
Marketable securities	38,547	39,193
Subordinated assets	501	353
Repurchase agreements	125	11

5) Equity investments

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Listed securities	62	57
Unlisted securities	49	49
Marketable securities	111	105

6) Shares in affiliated companies

As in 2017, this item does not contain any listed securities.

7) Disclosures on shareholdings

Name and domicile of company		Share held	Equity	Profit/loss for the year
		in %	EUR in thousands	EUR in thousands
1	DEG Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne ¹⁾	100.0	2,521,629	59,891
2	KfW Beteiligungsholding GmbH, Bonn ¹⁾	100.0	2,257,375	190,541
3	Interkonnektor GmbH, Frankfurt am Main ¹⁾	100.0	56,884	-12,981
4	KfW Capital GmbH & Co. KG ¹⁾	100.0	24,225	0
5	tbG Technologie-Beteiligungsgesellschaft mbH, Bonn ¹⁾	100.0	60,040	2,102
6	Finanzierungs- und Beratungsgesellschaft mbH, Berlin ¹⁾	100.0	5,001	-93
7	AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co. KG, München ²⁾	47.5	130,807	6,802
8	Deutsche Energie-Agentur GmbH (dena), Berlin ²⁾	26.0	5,140	880
9	Berliner Energieagentur GmbH, Berlin ²⁾	25.0	6,208	601
10	eCapital Technologies Fonds II GmbH & Co. KG, Münster ²⁾	24.8	17,500	-576
11	Coparion GmbH & Co. KG ²⁾	20.0	19,284	2,575

Name and domicile of company where KfW holds at least 5% of voting rights		Share of voting rights	Equity	Profit/loss for the year
		in %	EUR in thousands	EUR in thousands
1	Procredit Holding AG & Co KGaA, Frankfurt am Main ^{2), 4)}	13.2	658,533	48,102
2	Access Microfinance Holding AG, Berlin ^{2), 4)}	12.7	59,996	-14,701
3	Finca Microfinance Holding Company LLC, Washington DC, USA ^{2), 4)}	8.9	210,415	9,511
4	Accessbank Closed Joint-Stock Company, Baku, Azerbaijan ³⁾	8.9	29,772	-46,463
5	AB Microfinance Bank Nigeria Ltd., Lagos, Nigeria ²⁾	5.9	10,909	625

¹⁾ Most recent available financial statements 31 Dec. 2018

²⁾ Most recent available financial statements 31 Dec. 2017

³⁾ Most recent available financial statements 31 Dec. 2016

⁴⁾ Consolidated financial statements of the relevant group.

Shares in investment funds		Shares of total assets	Carrying amounts	Dividend payments	Redeemable daily
		in %	EUR in thousands	EUR in thousands	
1	Global Climate Partnership Fund SA, SICAV-SIF	19.3	65,502	1,972	No
2	Microfinance Enhancement Facility SA, SICAV-SIF	18.8	97,380	3,509	No
3	Africa Agriculture and Trade Investment Fund, SICAV-SIF	18.2	22,583	1,038	No
4	Rural Impulse Fund II S.A., SICAV-SIF	16.5	6,873	0	No
5	Sanad Fund for MSME S.A., SICAV-SIF	14.8	34,911	796	No
6	Europäischer Fonds für Südosteuropa SA, SICAV-SIF	14.6	113,700	8,358	No
7	Fondaco società di gestione del risparmio S.p.A.	14.6	7,690	0	No
8	Advans S.A., SICAR	14.2	9,500	0	No
9	2020 European Fund for Energy, Climate Change and Infrastructure SICAV	14.1	31,749	0	No
10	Green for Growth Fund, Southeast Europe SA, SICAV-SIF	13.8	53,688	1,818	No
11	MIFA Debt Fund S.A., SICAV-SIF	13.1	19,955	1,050	No
12	DWM incl. Finance Equity Fund II	10.0	3,629	0	No

Disclosure was omitted in accordance with Article 286 (3) no. 1 HGB. The list of shareholdings shows significant equity investments with a capital share greater than 20%. The other equity investments are of minor importance.

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 are subject to regular valuation.

8) Assets held in trust

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Loans and advances to banks	891	902
Loans and advances to customers	10,889	11,222
Equity investments	4,798	3,735
Total	16,578	15,859

KfW acquired 20% of the shares in Eurogrid International CVBA from the Belgian Elia System Operator SA on the basis of a mandate by the Federal Government pursuant to Article 2 (4) of the KfW Law, during the reporting year. Eurogrid International CVBA indirectly holds all shares in the German transmission systems operator 50Hertz. The opportunities and risks of the transaction lie with the Federal Government. KfW does not assume any entrepreneurial or strategic responsibility for this transaction. The Federal Government exercises the related participation rights.

9) Fixed assets

Statement of changes in fixed assets as of 31 Dec. 2018

EUR in thousands		Equity invest-ments ¹⁾	Shares in affiliated companies ¹⁾	Securities held as fixed assets ¹⁾	Intangible assets	Property, plant and equipment ⁴⁾	Total
Acquisition costs/production costs as of 1 Jan. 2018 ³⁾					200,152	1,241,352	
Additions 2018					12,280	54,789	
Disposals 2018	Changes ²⁾	54,984	56,128	1,662,873	4,222	15,802	
Transfers 2018					26	26	
Acquisition costs/production costs as of 31 Dec. 2018					208,185	1,280,365	
Accumulated depreciation/amortisation as of 1 Jan. 2018					61,766	369,165	
Depreciation/amortisation 2018 ⁵⁾					41,624	46,522	
Reversal of impairments 2018					0	0	
Depreciation/amortisation of additions 2018					13,153	16,128	
Depreciation/amortisation of disposals 2018					4,101	14,657	
Depreciation/amortisation of transfers 2018					0	0	
Accumulated depreciation/amortisation as of 31 Dec. 2018					99,289	401,030	
Net carrying amount 31 Dec. 2018		1,080,350	3,305,669	30,777,261	108,896	879,335	36,151,511
Net carrying amount 31 Dec. 2017		1,025,365	3,249,541	29,114,388	138,386	872,187	34,399,868

¹⁾ The bank exercised the option under Article 34 (3) RechKredV to consolidate Securities and investments.

²⁾ Including price changes

³⁾ The simplification under Article 31 (3) of the Introductory Act to the German Commercial Code (Einführungsgesetz zum Handelsgesetzbuch - EGHGB) has been applied.

⁴⁾ Of which net carrying amount as of 31 December 2018:

– Total amount of land and buildings used for the bank's activities EUR 807,115 thousand

– Total amount of office furniture and equipment EUR 72,220 thousand

⁵⁾ Depreciation/amortisation 2018 includes impairments of EUR 7,757 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 30,777 million as of 31 December 2018. This includes securities with a carrying amount of EUR 18,251 million, for which an impairment loss of EUR 88 million was not recognised, as they are going to be held to maturity.

10) Other assets

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Main items:		
Amount receivable from the Federal Agency for Special Tasks associated with Unification	612	603

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"*). Technical reserves exist 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 666 million (2017: EUR 603 million).

Notes to the liabilities and equity

12) Liabilities to banks

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
The item includes:		
Liabilities to		
Affiliated companies	45	51
Companies in which KfW holds a stake	0	0
Due		
On demand	5,117	3,586
Within 3 months	1,630	78
Between 3 months and 1 year	204	90
Between 1 year and 5 years	202	1,159
In more than 5 years	1,075	936
Accrued interest	2,111	2,144
Total	10,340	7,991

13) Liabilities to customers

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
The item includes:		
Liabilities to		
Affiliated companies	100	58
Companies in which KfW holds a stake	0	0
Due		
On demand	853	760
Within 3 months	2,769	1,941
Between 3 months and 1 year	2,698	806
Between 1 year and 5 years	967	2,480
In more than 5 years	4,314	3,062
Accrued interest	110	85
Total	11,711	9,134

14) Certificated liabilities

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
The sub-item – Bonds and notes – includes:		
Liabilities to		
Affiliated companies	1,542	2,005
Companies in which KfW holds a stake	0	0
Due within the following year	110,548	110,353

15) Liabilities held in trust

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Liabilities to banks	0	0
Liabilities to customers	16,578	15,859
Total	16,578	15,859

16) Other liabilities

Under Other liabilities, KfW reported a currency adjustment item in the amount of EUR 630 million (2017: EUR 6,225 million). This resulted from the foreign currency valuation of swap transactions concluded to hedge foreign currency risks from receivables and liabilities. The foreign currency derivatives were used in the context of management of the foreign currency exposure.

17) Deferred income

Deferred income includes discounts on receivables totalling EUR 241 million (2017: EUR 330 million).

18) Provisions

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Main items:		
Provisions for pensions and similar obligations	1,356	1,184
Actuarial provisions in connection with the transfer to KfW of the insurance business of SinA	612	603
Early retirement	93	28
Irrevocable loan commitments below market rate	59	40
Provisions for variable compensation components incl. social security payments	57	58
Retransfer obligation with respect to land	53	53
Provisions for credit risks	44	38

One-time pension provisions were recognised in connection with the modernisation measures at KfW in 2018.

There was a difference of EUR 228 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 59 million was reported in financial year 2018 under Other provisions due to interest rates 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.

19) Equity

	31 Dec. 2017	Profit for the period	Other changes	31 Dec. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
KfW's subscribed capital	3,750	0	0	3,750
Uncalled outstanding contributions	-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
Retained earnings				
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	9,207	884	0	10,091
c) Special reserve under Section 17 (4) of the D-Mark Balance Sheet Act	48	0	0	48
Equity	24,068	884	0	24,952

All of the profit for 2018 was allocated to retained earnings. As of year-end 2018, KfW's equity amounted to EUR 24,952 million.

Other required notes to the liabilities and equity

20) Contingent liabilities

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
The item includes:		
Guarantees for special loans	183	202
Guarantees for export financing	158	150
Municipal loans	82	74
Promotional loans for federal states	81	72
Ship and shipyard financing	50	56
Guarantees for aircraft finance	43	70
Guarantees for other financing	97	131
Total	694	755

The risk of guarantees is mitigated by possibilities for recourse to the principal 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 recognises individual provisions; general provisions are made for latent risks. Contingent liabilities are presented net of received cash collateral accounted for as liabilities and provisions.

21) Other commitments

Irrevocable loan commitments	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
The item includes:		
Mittelstandsbank & Private Kunden (<i>SME Bank & Private Clients</i>)	40,726	
Individualfinanzierung & Öffentliche Kunden (<i>Customised Finance & Public Clients</i>)	6,486	
Kommunal- und Privatkundenbank/Kreditinstitute (<i>Municipal and Private Client Bank/Credit Institutions</i>)		35,928
Mittelstandsbank (<i>SME Bank</i>)		11,449
Export and project finance	14,394	13,921
Loans for the promotion of developing countries and emerging economies	12,946	11,840
Guarantees	239	210
Forward forward deposits	0	50
Other loan commitments	1,900	1,000
Total	76,691	74,398

The new business sectors Mittelstandsbank & Private Kunden (*SME Bank & Private Clients*) and Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*) have replaced the previous two business sectors Kommunal- und Privatkundenbank/Kreditinstitute (*Municipal and Private Client Bank/Credit Institutions*) and Mittelstandsbank (*SME Bank*) as part of the reorganisation of the domestic funding department. The products of the former business sectors were fully allocated to the new business sectors. The previous year's figures cannot be transferred to the new organisation.

Irrevocable loan commitments are subject to regular credit risk monitoring. If there are indications that a loss will be incurred from an expected outflow of funds, the bank recognises an individual provision; latent risks are covered through the recognition of portfolio provisions.

Provisions recognised for the interest rate reductions in irrevocable loan commitments granted by KfW in the promotional lending business and negatively impacting its earnings position are deducted.

Notes to the income statement

22) Interest income and Interest expense

The Interest and similar income from loans and advances to banks and customers comprises EUR 196 million (2017: EUR 186 million) in negative interest from lending and money-market transactions as a result of the persisting low interest rate environment. Of this amount, EUR 29 million (2017: EUR 27 million) is attributable to receivables from the Federal Government resulting from the privatisation of Deutsche Telekom AG and Deutsche Post AG, EUR 85 million (2017: EUR 99 million) to money-market transactions, and EUR 65 million (2017: EUR 56 million) to the deposit with the central bank.

The Interest and similar expense from the banking business item comprises EUR 89 million (2017: EUR 80 million) in positive interest. This includes EUR 57 million (2017: EUR 37 million) in positive interest from certificated liabilities and EUR 16 million (2017: EUR 32 million) from money-market transactions. In addition, EUR 11 million (2017: EUR 8 million) is attributable to liabilities from the interim investment of the dividend on the parcels of shares KfW holds in Deutsche Post AG and Deutsche Telekom AG.

23) Other operating income and Other operating expense

In accordance with Articles 277 (5) sentence 2 and 340h HGB, expenditure on and income from currency conversion have been presented as gross figures in Other operating expense (EUR 4 million, 2017: EUR 10 million) and Other operating income (EUR 5 million, 2017: EUR –2 million). Exchange rate-related changes in the value of specific valuation allowances denominated in foreign currencies are also presented in Other operating expense or Other operating income. Other operating income is largely attributable to the fee paid under the agency agreement with KfW IPEX-Bank GmbH of EUR 85 million (2017: EUR 91 million).

24) Auditor's fees

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

25) Geographical markets

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

Other required notes

26) Assets and liabilities in foreign currencies

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Assets in foreign currencies	56,322	52,993
Liabilities in foreign currencies	220,262	224,670

27) Other financial commitments

The bank has remaining payment obligations totalling EUR 563 million in connection with equity finance operations, of which EUR 123 million is to associated companies. Moreover, as of 31 December 2018, it also has remaining payment obligations of EUR 1,064 million to affiliated companies, primarily to KfW Capital GmbH & Co. KG.

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 no effective 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 presentation of derivatives transactions is in accordance with the requirements of Article 285 No. 19 HGB and Article 36 RechKredV. It discloses the positive and negative fair values of the derivatives positions as of 31 December 2018.

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 calculations.

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

Volume

	Notional amount	Notional amount	Positive fair value	Negative fair value
	31 Dec. 2018	31 Dec. 2017	31 Dec. 2018	31 Dec. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Contracts with interest risks				
Interest swaps	460,705	429,867	9,477	12,608
Interest options				
<i>thereof purchases</i>	0	0	0	0
<i>thereof sales</i>	0	0	0	0
Caps and floors ¹⁾	490	110	6	6
Total	461,194	429,977	9,483	12,614
Contracts with currency risks				
Cross-currency swaps	162,346	174,750	7,224	6,437
FX swaps	40,170	31,479	852	171
Currency forwards	160	394	1	1
Spot FX deals	0	1	0	0
Total	202,676	206,624	8,077	6,609
Credit derivatives²⁾				
<i>thereof purchases</i>	10	9	0	0
<i>thereof sales</i>	0	0	0	0
Total	10	9	0	0

¹⁾ Only caps and floors which are traded on a stand-alone basis

²⁾ In this case single name credit default swaps

Remaining life

Notional amounts	Interest risks ¹⁾		Currency risks		Credit derivatives ²⁾	
	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Due						
Within 3 months	13,448	11,197	32,015	31,441	0	0
Between 3 months and 1 year	40,823	49,497	47,586	38,200	0	0
Between 1 year and 5 years	222,984	193,242	94,161	107,458	10	9
In more than 5 years	183,939	176,042	28,914	29,526	0	0
Total	461,194	429,977	202,676	206,624	10	9

¹⁾ Derivative financial instruments are shown without embedded derivatives

²⁾ In this case single name credit default swaps

Counterparties

	Notional amount	Notional amount	Positive fair value	Negative fair value
	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions	31 Dec. 2018 EUR in millions	31 Dec. 2018 EUR in millions
OECD banks	661,046	631,585	17,533	19,052
Banks outside the OECD	441	741	0	14
Other counterparties	138	2,029	26	2
Public authorities	2,255	2,255	0	154
Total	663,880	636,610	17,560	19,222

29) Hedge accounting within the meaning of Article 254 HGB

The following section describes hedge accounting within the meaning of Articles 254 and 285 No. 23 HGB.

The table below 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	23,812	23,318	23,906
Securities held as liquidity reserve			
Bonds and other fixed-income securities	6,092	6,633	7,047
Total	29,904	29,951	30,953

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 primarily interest rate swaps as hedges of fixed-income securities.

Thanks to the identical terms 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 in relation to the hedged risk are expected to continue almost fully until the hedging relationships mature.

In addition to hedging relationships pursuant to Article 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 and for third party account

Loans in the name of third parties and for third party account totalled EUR 10,305 million as of 31 December 2018 (2017: EUR 9,671 million).

31) Personnel

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.

	2018	2017
Female employees	2,434	2,342
Male employees	2,638	2,525
<i>Staff not covered by collective agreements</i>	3,505	3,340
<i>Staff covered by collective agreements</i>	1,567	1,527
Total	5,072	4,867

32) Transactions with related parties and affiliated companies

The conditions and prices between KfW and related parties and affiliated companies reflect market conditions or are concluded in accordance with KfW's general conditions for its loan programmes open to the general public.

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

	Salary	Variable compensation	Other compensation ¹⁾	Total
Annual compensation 2018	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
Dr Günther Bräunig (Chief Executive Officer)	760.4	0.0	30.7	791.1
Dr Ingrid Hengster	544.1	0.0	36.7	580.8
Bernd Loewen	597.6	0.0	39.4	637.0
Prof. Dr Joachim Nagel	526.7	0.0	35.1	561.8
Dr Stefan Peiß	534.6	0.0	26.8	561.4
Total	2,963.4	0.0	168.7	3,132.1

¹⁾ 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 198 thousand. This amount breaks down as follows:

Compensation for the members of the Board of Supervisory Directors is EUR 5 thousand p.a. and members of the Credit, Executive and Audit Committees receive EUR 0.6 thousand p.a., all paid on a pro-rata basis for memberships that commence or end 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 KfW Law was set at EUR 0 for financial year 2018. Moreover, compensation for the Chair of the Board of KfW Supervisory Directors and his deputies was also set at EUR 0.

Provisions in the amount of EUR 61,886 thousand had been recognised as of 31 December 2018 for obligations under pension arrangements for former members of the Executive Board and their surviving dependants. The regular compensation totalled EUR 4,768 thousand.

There were no loans to members of the Executive Board as of 31 December 2018.

34) Responsibilities of the Executive Board members

Dr Günther Bräunig (Chief Executive Officer)

General Secretariat, Group Development and Economics, Legal, Financial Markets, Human Resources, Internal Auditing, Sustainability

Dr Ingrid Hengster

Domestic Marketing and Digital Channels, Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*), Mittelstandsbank & Privatkunden (*SME Bank & Private Clients*), New Business Credit Service and Central Services

Prof. Dr Joachim Nagel

KfW Development Bank, Export and Project Finance

Dr Stefan Peiß

Risk Controlling, Credit Risk Management, Existing Business Credit Service, Transaction Management, Compliance

Bernd Loewen

Accounting, Organisation and Consulting, Information Technology

35) Group affiliation

KfW is included in the consolidated financial statements of KfW Group, Frankfurt am Main, as of 31 December 2018. The consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) and disclosed in German in the electronic Federal Gazette (*Bundesanzeiger*).

36) Events after the end of the financial year

No events of particular significance for the assessment of net assets, financial position and earnings position of KfW have occurred since the end of financial year 2018.

37) Mandates held by executive directors or other employees in supervisory boards of large corporations in accordance with Article 267 (3) HGB

Dr Günther Bräunig (Chief Executive Officer)

Deutsche Post AG, Bonn

Deutsche Telekom AG, Bonn

Deutsche Pfandbriefbank AG, Munich

Dr Ingrid Hengster

Deutsche Bahn AG, Berlin

ThyssenKrupp AG, Essen

Prof. Dr Joachim Nagel

DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne

KfW IPEX-Bank GmbH, Frankfurt am Main

Deutsche Börse AG, Frankfurt am Main

Dr Stefan Peiß

KfW IPEX-Bank GmbH, Frankfurt am Main

Bernd Loewen

DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne

Anna Bihler

Bioceuticals Arzneimittel AG, Bad Vilbel

Dr Lutz-Christian Funke

IKB – Deutsche Industriebank AG, Düsseldorf

Christian Krämer

ProCredit Holding AG & Co. KGaA, Frankfurt am Main

38) The bank's executive bodies

Board of Supervisory Directors

Brigitte Zypries

Federal Minister for Economic Affairs and Energy
Chair
(1 January 2018 – 14 March 2018)

Peter Altmaier

Federal Minister for Economic Affairs and Energy
Chair
(14 March 2018 – 31 December 2018)

Peter Altmaier

Federal Minister of Finance
Deputy Chair
(1 January 2018 – 14 March 2018)

Olaf Scholz

Federal Minister of Finance
Deputy Chair
(14 March 2018 – 31 December 2018)

Doris Ahnen

Minister of State at the Ministry of Finance of the State of Rhineland-Palatinate
Member appointed by the German Bundesrat
(since 1 January 2019)

Sören Bartol

Member of the German Bundestag
Member appointed by the German Bundestag
(since 26 April 2018)

Dr Holger Bingmann

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

Dr Uwe Brandl

President of the Bayerischer Gemeindetag
Representative of municipalities
(until 31 December 2018)

Frank Bsirske

Chair of ver.di
United Services Trade Union
Representative of the trade unions
(until 31 December 2018)

Robert Feiger

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

Klaus-Peter Flosbach

Former member of the German Bundestag
Member appointed by the German Bundestag
(until 31 December 2018)

Sigmar Gabriel

Federal Minister of Foreign Affairs
(until 14 March 2018)

Verena Göppert

Permanent Deputy of the Executive Director of the Association of German Cities
Representative of the municipalities
(since 1 January 2019)

Christian Görke

Deputy Minister President
Minister of Finance of the State of Brandenburg
Member appointed by the German Bundesrat
(until 31 December 2018)

Olav Gutting

Member of the German Bundestag
Member appointed by the German Bundestag
(since 1 January 2019)

Dr Louis Hagen

Chief Executive Officer of Münchener Hypothekenbank eG
Representative of the mortgage banks

Dr Matthias Haß

Saxon State Minister of Finance
Member appointed by the German Bundesrat
(2 March 2018 – 31 December 2018)

Hubertus Heil

Member of the German Bundestag
Member appointed by the German Bundestag
(until 14 March 2018)

Monika Heinold

Minister of Finance of the State of Schleswig-Holstein
Member appointed by the German Bundesrat
(until 31 December 2018)

Dr Barbara Hendricks

Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety
(until 14 March 2018)

Reinhold Hilbers

Minister of Finance of the State of Lower Saxony
Member appointed by the German Bundesrat
(since 2 February 2018)

Reiner Hoffmann

Chair of the Confederation of German Trade Unions (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

Dr Bruno Hollnagel

Member of the German Bundestag
Member appointed by the German Bundestag
(since 1 March 2018)

Andreas Ibel

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

Bartholomäus Kalb

Former member of the German Bundestag
Member appointed by the German Bundestag

Julia Klöckner

Federal Minister of Food and Agriculture
(since 14 March 2018)

Andrea Kocsis

Deputy Chair of ver.di – United Services Trade Union
Representative of the trade unions
(since 1 January 2019)

Stefan Körzell

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

Dr Joachim Lang

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

Lutz Lienenkämper

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

Heiko Maas

Federal Minister of Foreign Affairs
(since 14 March 2018)

Dr Gerd Müller

Federal Minister for Economic Cooperation and Development

Dr Hans-Walter Peters

President of the Association of German Banks (BdB)
Representative of the commercial banks
(since 1 January 2018)

Eckhardt Rehberg

Member of the German Bundestag
Member appointed by the German Bundestag

Dr Johannes-Jörg Riegler

Former President of the Association of German Public Banks (VÖB)
Representative of industrial credit
(since 1 January 2018)

Joachim Rukwied

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

Andreas Scheuer

Federal Minister of Transport and Digital Infrastructure
(since 14 March 2018)

Helmut Schleweis

President of the German Savings Banks Association (DSGV)
Representative of the savings banks
(since 1 January 2018)

Christian Schmidt

Federal Minister of Food and Agriculture
(until 14 March 2018)

Christian Schmidt

Federal Minister of Transport and Digital Infrastructure
(until 14 March 2018)

Carsten Schneider

Member of the German Bundestag
Member appointed by the German Bundestag

Svenja Schulze

Federal Minister for the Environment, Nature Conservation and Nuclear Safety
(since 14 March 2018)

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

Peter Strobel

Minister of Finance and European Affairs of the State of Saarland
Member appointed by the German Bundesrat
(since 1 January 2019)

Heike Taubert

Deputy Minister President
Minister of Finance of the State of Thuringia
Member appointed by the German Bundesrat
(since 1 January 2019)

Dr Florian Toncar

Member of the German Bundestag
Member appointed by the German Bundestag
(since 1 March 2018)

Dr Martin Wansleben

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

Executive Board

Frankfurt am Main, 26 February 2019



Dr Günther Bräunig
(Chief Executive Officer)



Dr Ingrid Hengster



Bernd Loewen



Prof. Dr Joachim Nagel



Dr Stefan Peiß

Independent auditor's report¹⁾

To KfW

Report on the audit of the annual financial statements and of the management report

Opinions

We have audited the annual financial statements of KfW, Frankfurt am Main, which comprise the statement of financial position as at December 31, 2018, the income statement for the fiscal year from January 1, 2018 to December 31, 2018, and notes to the financial statements, the recognition and measurement policies presented therein. In addition, we have audited the management report of KfW for the fiscal year from January 1, 2018 to December 31, 2018. In accordance with the German legal requirements, we have not audited the content of the declaration of compliance.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to business corporations and give a true and fair view of the assets, liabilities and financial position of the Company as at December 31, 2018 and of its financial performance for the fiscal year from January 1, 2018 to December 31, 2018 in compliance with German legally required accounting principles, and
- the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the opinions

We conducted our audit of the annual financial statements and of the management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the annual financial statements and of the management report" section of our auditor's report. We are independent of the Company in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the annual financial statements and on the management report.

¹⁾ Translation of the independent auditors' report issued in German language on the consolidated financial statements prepared in German language by the Executive Board of KfW, Frankfurt am Main. The German language statements are decisive.

Other information

According to Art. 8 KfW Bylaws the Board of Supervisory Directors is responsible for the preparation of the annual Report of the Board of Supervisory Directors. According to Art. 19 KfW Bylaws the Executive Board and the Board of Supervisory Directors are required to annually declare that they recognise the Public Corporate Governance Code and to publish the declaration of compliance as part of the Corporate Governance Report. In all other respects, the Executive Board is responsible for the other information. The other information comprises the Corporate Governance Report, the Declaration of compliance and the non-financial statement, which we obtained prior to the date of this auditor's report, as well as the Letter of the Executive Board, the Report of the Board of Supervisory Directors and the sections "How we work", "Facts and figures" and „Making an Impact“ of the Financial Report 2018, which are expected to be made available to us after that date.

Our opinions on the annual financial statements and on the management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Board and the Board of Supervisory Directors for the annual financial statements and the management report

The Executive Board is responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to business corporations, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German legally required accounting principles. In addition, the Executive Board is responsible for such internal control as they, in accordance with German legally required accounting principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the Executive Board is responsible for assessing the Company's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the Executive Board is responsible for the preparation of the management report that, as a whole, provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the Executive Board is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the management report.

The Board of Supervisory Directors is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

Auditor's responsibilities for the audit of the annual financial statements and of the management report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the annual financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut *der Wirtschaftsprüfer (IDW)* will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and this management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual financial statements and of the management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the annual financial statements and of arrangements and measures (systems) relevant to the audit of the management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the Executive Board and the reasonableness of estimates made by the Executive Board and related disclosures.
- Conclude on the appropriateness of the Executive Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements and in the management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German legally required accounting principles.

- Evaluate the consistency of the management report with the annual financial statements, its conformity with [German] law, and the view of the Company's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the Executive Board as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Eschborn/Frankfurt am Main, 5 March 2019

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Dombek
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