



Financial Report

2018

»»» As a bank committed to responsibility, KfW promotes sustainable prospects for people, companies, the environment and society.

KfW is one of the world's leading promotional banks. It applies its decades of experience to improve economic, social and environmental living conditions across the globe on behalf of the Federal Republic of Germany and the federal states. In 2018 alone, KfW provided promotional funds totalling EUR 75.5 billion. Of this total, 40% was spent on measures aimed at protecting the climate and the environment. KfW has no retail branches and does not hold any customer deposits. It funds its promotional business activities almost entirely through the international capital markets and in 2018 raised EUR 76.1 billion for this purpose. In Germany, KfW Group has offices in Frankfurt am Main, Berlin, Bonn and Cologne. Its global network includes around 80 local and representative offices.

Key figures of KfW Group

Promotional business volume

	2018	2017
	EUR in billions	EUR in billions
	75.5	76.5

Key figures of the income statement

	2018	2017
	EUR in millions	EUR in millions
Net interest income (before promotional expense)	2,413	2,579
Net commissions (before promotional expense)	374	316
Administrative expense (before promotional expense)	1,400	1,234
Operating result before valuation (before promotional expense)	1,387	1,661
Risk provisions for lending business	-3	-209
Net gains/losses from hedge accounting and other financial instruments at fair value through profit or loss	426	194
Net gains/losses from securities and investments and from investments accounted for using the equity method	25	22
Operating result after valuation (before promotional expense)	1,834	1,669
Net other operating income	5	-2
Profit/loss from operating activities (before promotional expense)	1,839	1,667
Promotional expense	216	213
Taxes on income	-13	26
Consolidated profit	1,636	1,427
Consolidated profit before IFRS effects	1,311	1,192
Cost-income ratio before promotional expense ¹⁾	50.2%	42.6%

¹⁾ Administrative expense (before promotional expense) in relation to adjusted income. Adjusted income is calculated from Net interest income and Net commission income (in each case before promotional expense).

Key figures of the statement of financial position

	31 Dec. 2018	31 Dec. 2017
	EUR in billions	EUR in billions
Total assets	485.8	472.2
Volume of lending	483.5	471.7
Volume of business	590.7	572.1
Equity	30.3	28.7
Equity ratio	6.2%	6.1%

Key regulatory figures

	31 Dec. 2018	31 Dec. 2017
	EUR in billions	EUR in billions
Risk position	140.8	133.1
Tier 1 capital	28.3	27.3
Regulatory capital	28.3	27.3
Tier 1 capital ratio	20.1%	20.6%
Total capital ratio	20.1%	20.6%

Employees of KfW Group¹⁾

	2018	2017
	6,376	6,113

¹⁾ The average number of employees including temporary staff but without members of the Executive Board and trainees

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**MAKING
AN IMPACT**

THINKING AHEAD

In 2018 KfW released a total volume of EUR 75.5 billion for projects of particular relevance for the future – in Germany, in Europe and around the globe.



“2018 was a successful year. Thanks to the good economic conditions, we were able to focus on issues of particular relevance for the future – sustainability, digitalisation and Africa. These are also the major challenges of our time.” >>>

Dr Günther Bräunig

Letter from the Executive Board

Dear readers,

The year 2018 has shown us once again the huge challenges in store for society and the economy. The battle against climate change is well underway but we have yet to win it. We should not miss the opportunities presented by digitalisation either.

The pace of change demands that we quickly find practical solutions to secure Germany as a prime location of the future. But we must also look at the bigger picture. Our most sustainable means of addressing the causes of migration is by giving our neighbouring continent Africa prospects for the future.

KfW's role as a promotional bank is to focus on issues of particular relevance for the future. Promotion in the past year therefore focussed on innovation and digitalisation in Germany, as well as on the sustainable improvement of living conditions in Africa and other partner countries of our Financial Cooperation.

Promotional year 2018 was positive and successful.

KfW released a total volume of funding of EUR 75.5 billion (2017: EUR 76.5 billion), with a slight shift in our activities from domestic to international financing. Given the strong economic performance



“Promoting innovation and digitalisation in Germany is one of our core tasks. The speed of change forces us to quickly find practical solutions to preserve Germany’s appeal as a business location of the future.” >>>

Dr Ingrid Hengster

and the sustained positive financing environment for private and commercial investors in Germany, KfW decreased its domestic promotion of commercial, private and public-sector investors to EUR 46.0 billion from EUR 51.8 billion in 2017.

International business volume increased by 20% to EUR 28.3 billion (2017: EUR 23.5 billion).

As German exports rose by another 3%, commitments in our export and project finance business increased as well, in concrete terms by 29% to EUR 17.7 billion (2017: EUR 13.8 billion).

Financial Cooperation continued its structural growth trend. In 2018, KfW Development Bank provided around EUR 8.7 billion in financing to developing countries and emerging economies on behalf of the German Federal Government (2017: EUR 8.2 billion). Around 58% was earmarked for climate change mitigation and environmental protection projects.

Nearly 13% of new commitments are allocated for directly supporting refugees in developing countries.

Development projects in Africa and the Middle East are financed with nearly 48% of all new commitments; 71% of the German Federal Government’s budget funds were channelled to this region. DEG commitments in 2018 reached a record level of around EUR 1.9 billion for investments of private companies in developing countries and emerging economies (2017: EUR 1.6 billion).

As in the preceding years, KfW focused its promotional activities on qualitative targets such as supporting climate and environmental protection in 2018. “Green finance” projects received 40% of financing (2017: 43%).

KfW also consequently continues to foster sustainability on the capital market, for example, through its increased involvement in the green bond sector or the even stricter orientation of its sustainable investment approach in its liquidity portfolio.

With issues of EUR 1.6 billion in 2018, the outstanding volume of “Green Bonds – Made by KfW” rose to a total of EUR 14.5 billion.



STRENGTHENING THE SME SECTOR

SME QUOTA

KfW financing related to small and medium-sized enterprises in 2018 amounted to 41%.



CREATING PROSPECTS

AFRICAN

At EUR 4 billion, KfW's commitments for Africa reached a new record high in 2018. The overall portfolio now amounts to around EUR 18 billion.



“Although reducing poverty remains a major task, Africa also offers opportunities with its expanding middle class and high potential for economic development.” >>>

Prof. Dr Joachim Nagel

In order to fund its promotional business, KfW raised funds of EUR 76.1 billion on the international capital markets in 2018.

As in the previous year, the Financial markets business sector invested a total of around EUR 1.5 billion in the promotional business via the capital markets in 2018. Around EUR 1.1 billion of this total was used in securitisation transactions to promote SMEs. KfW supported climate change mitigation and environmental protection by investing EUR 0.4 billion in green bonds.

Just as important as “green finance” for KfW is support for small and medium-sized enterprises in investment finance. Overall, the ratio of KfW financing related to SMEs in Germany was 41% (2017: 44%).

Annual result 2018

With a consolidated profit of EUR 1.6 billion, KfW’s earnings position developed very well overall in 2018, significantly exceeding expectations. The operating result before valuation (before promo-

tional expense) however, declined to EUR 1.4 billion due to falling interest income and rising administrative costs (2017: EUR 1.7 billion).

The valuation result was up on the previous year due to the low net risk provisioning charge and a positive contribution from the equity investment portfolio. This result was reinforced also due to the positive IFRS-induced effects from hedging and income from deferred taxes.

KfW’s domestic promotional expense, which had a negative impact on KfW Group’s earnings position, remained below expectations at EUR 216 million (2017: EUR 213 million) in the continuing low interest rate environment.

Consolidated total assets rose by EUR 13.6 billion to EUR 485.8 billion in 2018 (2017: EUR 472.2 billion). This increase was particularly attributable to an increase of EUR 7.9 billion in net loans and advances and an increase of EUR 2.3 billion in liquidity held.



“We are continuously adjusting our promotional offering to the societal challenges. Agile working methods in our company foster self-responsibility, open-mindedness and focusing on the essential.” >>>

Bernd Loewen

Outlook 2019

We have strategically defined three key future issues for the years ahead: sustainability, digitalisation and Africa.

Sustainability:

The focus on sustainability has always been one of KfW's key features – in business, in its operations and as an employer. KfW takes account of the highest environmental and social standards in its financing, not least to set an example for the market. KfW acknowledges its responsibility for social issues and the environment, and is in intensive dialogue with its stakeholders in this regard. But we want to go further and assume a pioneering role in the market.

To this end, we have made sustainability a core component of our corporate strategy and integrated sustainability ratings as one of our strategic objectives. We have launched the “Sustainable Finance Roadmap” project in order to manage our business in line with the Paris Agreement

on climate change and the Sustainable Development Goals (SDGs) and to take account of ESG and climate risks in our risk management. Our aim is to implement this comprehensive multi-dimensional project by 2020.

Digitalisation:

As a promotional bank, we see digitalisation as an opportunity and aim to provide support and help shape digitalisation in the economy and society. We are therefore gradually adapting our promotional offering to its requirements. We see supporting SMEs in digitalisation as a core issue in this process. Moreover, we want to participate in expanding the digital infrastructure.

At an international level, digitalisation is considered a factor facilitating achievement of the SDGs. Therefore we also want to focus on the expansion of blockchain technology, for example. The first pilot projects are underway in the Financial Cooperation.



**2018 SUCCESSFULLY
CONCLUDED**

ANNUAL STATEMENTS

With a consolidated profit of EUR 1.6 billion, KfW's earnings position developed very well overall in 2018, significantly exceeding expectations.



MAKING USE OF TECHNOLOGICAL PROGRESS

DIGITAL ISATION

To support digital change, KfW is promoting the expansion of the necessary infrastructure and is pushing ahead with digitalisation in its own operations.



“KfW is responding to the continuous increase in security and regulatory requirements for banks by comprehensively modernising its IT system. At the same time, KfW is reinventing itself as a digital promotional bank.” >>>

Melanie Kehr

At the same time, however, we are pushing ahead with digitalisation at KfW. KfW, like other companies, must also undergo a digital reorientation. At the heart of our digitalisation process are projects such as digitalising application and work processes to improve our client focus and efficiency, as well as establishing agile working methods.

Africa:

Our neighbouring continent faces major challenges. Its population is set to double by 2050, and the investment gap is estimated to reach USD 3.3 trillion by 2040. Efforts to mitigate climate change and achieve the two-degree climate target are most important in Africa. Although reducing poverty remains a major task, Africa also offers great opportunities with its expanding middle class and high potential for economic development.

On behalf of the German Federal Government, KfW is committed to ensuring new prospects for the continent.

KfW set a new record of EUR 4 billion in new commitments for Africa last year. Our Africa portfolio therefore already totals EUR 18 billion.

We will support the German Federal Government in its Africa initiatives in the years ahead – such as improving the general framework for private investments and promoting countries with ambitious reform agendas.

Moreover, we will provide additional growth capital in Africa through the Africa Grow development investment fund. We will continue to develop the reform partnerships with African countries and drive the “training and employment special initiative”. In this way we are promoting stable development and partnership and addressing challenges and opportunities.



“KfW pursues a holistic management approach in order to be able to comprehensively identify and assess effects of current and new regulatory projects. We made major advances in our “Regulation Roadmap” in 2018.” >>>

Dr Stefan Peiß

Regulation:

KfW has launched a modernisation programme to ensure its long-term promotional capacity. In addition to digitalisation, this also includes implementing bank supervision regulations. In so doing, KfW pursues a holistic management approach in order to be able to comprehensively identify and assess effects of current and new regulatory projects. We made major advances in our “Regulation Roadmap” in 2018.

KfW continued to demonstrate in 2018 the important role it assumes for environmental protection, business and society

as a modern, efficient and customer-oriented promotional bank. It has made sustainable promotion its strategic objective and helps to ensure that the challenges of our time can be mastered successfully, while strictly adhering to the subsidiarity principle. KfW takes responsibility as a reliable partner – in Germany, Europe and around the world.

This strength is also due above all to the bank’s staff, whom we as the management team would like to thank very much for their dedication and passionate commitment.

Dr Günther Bräunig
(Chief Executive Officer)

Dr Ingrid Hengster

Melanie Kehr

Bernd Loewen

Prof. Dr Joachim Nagel

Dr Stefan Peiß



**IMPLEMENT
REGULATIONS**

BANKING SUPERVISION

KfW in 2018 established the “Regulation Roadmap” as a central steering instrument for regulatory issues.

Executive Board

Dr Günther Bräunig (Chief Executive Officer) | **Dr Ingrid Hengster**
Melanie Kehr (since 1 March 2019) | **Prof. Dr Joachim Nagel**
Bernd Loewen | **Dr Stefan Peiß**

General Manager

Melanie Kehr (1 September 2018 – 28 February 2019)

Directors

Dr Stefan Breuer
Jörg Brombach
Dr Frank Czichowski
Andreas Fichelscher
Eberhard Fuchs
(interim until 31/3/2018)
Dr Lutz-Christian Funke
Helmut Gauges
Werner Genter

Dr Karsten Hardraht
Detlev Kalischer
Dirk Kuhmann
Dr Stephan Lauer (since 1/8/2018)
Dr Katrin Leonhardt
Dr Velibor Marjanovic
Andreas Müller
Klaus Neumann (until 1/10/2018)
Stephan Opitz

Dr Ralf Prinzler
Wolfgang Reuß
Dr Wolfgang Richter
Matthias Schwenk
Roland Siller
Birgit Spors
Robert Szwedó
Klaus Weirich

Members of the Management Board of KfW IPEX-Bank GmbH

Klaus R. Michalak (CEO) | **Markus Scheer**
Claudia Schneider | **Andreas Ufer**

KfW IPEX-Bank is responsible for the Export and project finance business sector. Since the beginning of 2008, it has been a legally independent subsidiary of KfW which is subject to the German Banking Act (Kreditwesengesetz – KWG) and banking supervisory regulations.

Members of the Management Board of DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH

Bruno Wenn (Chair until 30 June 2018) | **Monika Beck** (since 1 July 2018)
Philipp Kreutz | **Christiane Laibach** (Chair since 1 July 2018)

DEG was founded in 1962 and has been a wholly-owned subsidiary of KfW Group since 2001. DEG is one of the largest European development finance institutions for long-term project and corporate financing. It has been financing and structuring investments by private companies in developing and emerging market countries for more than 50 years.

Report of the Board of Supervisory Directors



Olaf Scholz, Federal Minister of Finance

Meetings of the Board of Supervisory Directors

The Board of Supervisory Directors and its committees constantly monitored the conduct of KfW's business activities and the management of its assets. It has taken the necessary decisions on the provision of financing and the conduct of other business in accordance with the conditions set forth in the KfW Law and Bylaws. The Board of Supervisory Directors, the Audit Committee, the Presidial and Nomination Committee, and the Remuneration Committee each met three times for this purpose in 2018; the Risk and Credit Committee six times.

At the meetings, the Board of Supervisory Directors acknowledged the information provided by the Executive Board on

- KfW's 2017 annual and consolidated financial statements,
- the business activities and current developments in each of KfW's business sectors, including KfW IPEX-Bank and DEG,
- the group's net assets, earnings position and risk situation in general, particularly sensitive areas such as political risks, as well as any potential impacts of the United Kingdom's exit from the EU,
- the significance of digitalisation for KfW and its activities to harness the arising opportunities,
- banking supervisory issues relating to KfW, current consultations with the banking supervisory authorities, on compliance with regulatory capital requirements, audits completed and ongoing, the resulting measures, as well as potential effects of future regulatory changes,
- the current status of the major project portfolio, the modernisation and reorientation of the IT landscape as well as of Internal Auditing,
- commencement of the operating activities of the subsidiary KfW Capital to expand venture capital and equity financing,
- business and risk strategies, the group IT strategy, and KfW's IT strategy for 2019.

In addition, the Board of Supervisory Directors addressed the following key issues at its meetings based on the reports submitted by the Executive Board on the individual business sectors:

- As regards **domestic promotional business**, the Board of Supervisory Directors discussed the positive impact of promotion, innovation promotion relating to digitalisation, the launch of new products such as the "Baukindergeld" scheme, the reorganisation of the promotional sector, and the specifics of expanding equity finance.
- With a view to the business sector **Promotion of developing countries and emerging economies**, the Board of Supervisory Directors discussed key issues of Financial Cooperation as well as DEG's business orientation and results. In particular, the commitment in Africa shall be expanded.

- As for KfW IPEX-Bank GmbH, i.e. the **Export and project finance** business sector, the focus was on the support the bank provides to German and European investors and exporters.
- The Board of Supervisory Directors received regular reports on capital market development and KfW's funding status. KfW's activities on the green bond market make a key contribution to the development of the "sustainable finance" market segment.
- The Board of Supervisory Directors also monitored KfW Group's environmental and sustainability commitment and was informed about the sustainable finance roadmap, which KfW follows in developing a stringent, multi-dimensional sustainability concept.

The Board of Supervisory Directors was informed at the meetings as well as, in writing, quarterly of the group's net assets, earnings position and risk situation, the development of its promotional business, and Internal Auditing's activity. The Executive Board also kept the Chair of the Board of Supervisory Directors/his deputy informed of key developments at the bank between meetings.

The Board of Supervisory Directors discussed key aspects of the business strategy and approved the planning for 2019. It acknowledged the multi-year business strategy, the risk strategy and the IT strategies for the group and the individual group companies.

Each member of the Board of Supervisory Directors is obliged to inform the Chair of the Board of Supervisory Directors or the relevant committee about potential conflicts of interest before a resolution is made. Consequently, on some occasions during the reporting year, members of the Risk and Credit Committee abstained from voting or refrained from participating in resolutions.

Seven members of the Board of Supervisory Directors attended fewer than half of the board meetings in the reporting year. One member attended fewer than half of the meetings of the Presidial and Nomination Committee. The same applies to the Remuneration Committee. Three members attended fewer than half of the Audit Committee meetings and four members fewer than half of the Risk and Credit Committee meetings.

Members of the Board of Supervisory Directors attended six training events and four individual training sessions in 2018 to gain and maintain the expertise required in accordance with the KWG. Two training sessions were also conducted for employees of Supervisory Board members.

Committees of the Board of Supervisory Directors

In exercising its responsibilities prescribed in the bylaws, the **Presidial and Nomination Committee** discussed Executive Board matters and made a recommendation to the Board of Supervisory Directors on the reappointment of Bernd Loewen. It resolved on details of the basic business policy strategy underlying KfW's strategic guidelines for 2019. The committee also acknowledged a temporary redistribution of Executive Board

responsibilities resulting from Dr Bräunig's appointment as Chief Executive Officer until a sixth member responsible for information technology and transaction management is added to complete the Executive Board. It was also informed about banking supervisory issues, KfW Stiftung and legal disputes. It conducted an evaluation of the KfW bodies, making relevant recommendations to the Board of Supervisory Directors. Moreover, it received information about construction projects and adopted a resolution in this regard.

The **Remuneration Committee** discussed compensation issues and the implementation of the Remuneration Regulation for Institutions (*Institutsvergütungsverordnung – "IVV"*) and resolved the annual cycle for preparing a remuneration report. It was informed, among other matters, about the remuneration system and the newly planned pension scheme for KfW employees, as well as the risk analysis to identify risk takers. As part of this risk analysis, KfW, both as an individual institution and at group level, has to identify staff members whose work could have a material impact on the risk profile of the institution/the group. The group-wide remuneration strategy and the assessment base for variable remuneration 2018 and 2019 were also discussed.

The **Risk and Credit Committee** reviewed the commitments, equity investments, and loans to members of senior management that must be presented to it under the KfW Law and KfW Bylaws, as well as the scope of borrowings required by KfW for its funding, and the related swap transactions necessary for hedging, and addressed the risk situation and the effectiveness of the risk management system. It also dealt with KfW's exposure in different countries and regions, the development and assessment of political risks, including the United Kingdom's exit from the EU, measures to further develop the risk culture, details of market price risks and their management, KfW funding in local currencies, the potential effects of regulatory measures currently under discussion, and the risk profile of the business sector Export and project finance. The results of Bundesbank assessments, along with the resulting measures and projects, the talks with the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht – "BaFin"*) and the regulatory capital requirements to KfW were also discussed. And lastly, the committee discussed the risk strategy, including capital planning for the next few financial years.

The **Audit Committee** addressed the accounting process, KfW's net assets, financial position and earnings position, the reports by Internal Auditing and Compliance and the annual financial statements of KfW Group 2017. It made corresponding recommendations to the Board of Supervisory Directors for the approval of the annual financial statements 2017 and the appointment of the auditor for 2019. Based on information supplied by the Executive Board, it evaluated the efficiency of the risk management system, the internal control system (ICS) and the internal audit system. In addition, it addressed auditor independence and certain focal points of the 2018 annual audit and discussed the initial results of the 2018 annual audit in detail (audit report part I). The committee approved the audit

plan of the Internal Auditing department for 2019. It monitored the ongoing major projects, as well as banking supervisory issues and reviewed in detail the Bundesbank assessments, along with the resulting measures and projects. In particular, the committee dealt with the results of the supervisory assessment of Internal Auditing as well as with the measures taken to remedy findings of the Internal Auditing reorientation project. The committee also intensively discussed the implementation of the action plan KfW developed together with an auditor to optimise KfW's IT and payment transaction systems.

The committee chairpersons reported to the Board of Supervisory Directors regularly on the work of the committees.

Changes on the boards

During the reporting period, the Board of Supervisory Directors reappointed Bernd Loewen to the Executive Board with effect from 1 July 2019. Melanie Kehr joined KfW as Managing Director with effect from 1 September 2018 and was appointed to the Executive Board after the reporting period, with effect from 1 March 2019. She is responsible for information technology and transaction management.

Dr Schröder, who at his own request stepped down from KfW Executive Board with effect from 31 December 2017, died on 25 March 2018 at the age of 66 following a serious illness.

Dr Schröder always applied a great deal of energy, discipline and care in his work for the good of KfW. The Board of Supervisory Directors is grateful for his almost nine years of commitment as Chief Executive Officer.

In accordance with Article 7 (1) no. 1 of the KfW Law, in my capacity as Federal Minister of Finance, I assumed the position of Chair of the Board of Supervisory Directors for 2019 from my colleague Peter Altmaier, Federal Minister for Economic Affairs and Energy.

New members of the Board of Supervisory Directors with effect from 1 January 2018 are Dr Hans-Walter Peters, Dr Johannes-Jörg Riegler and Helmut Schleweis; Reinhold Hilbers with effect from 2 February 2018; Dr Bruno Hollnagel and Dr Florian Toncar with effect from 1 March 2018; Dr Matthias Hass with effect from 2 March 2018; Julia Klöckner, Heiko Maas, Andreas Scheuer, Olaf Scholz and Svenja Schulze with effect from 14 March 2018; and Sören Bartol with effect from 26 April 2018. Dr Uwe Brandl, Frank Bsirske, Klaus-Peter Flosbach, Sigmar Gabriel, Christian Görke, Dr Matthias Hass, Hubertus Heil, Monika Heinold, Dr Barbara Hendricks, Christian Schmidt and Brigitte Zypries stepped down from the Board of Supervisory Directors in 2018. The Board of Supervisory Directors would like to thank the members stepping down in 2018 for their work.

Sören Bartol, Dr Holger Bingmann, Holger Schwannecke and Dr Martin Wansleben stepped down with effect from 31 December 2018 and were reappointed according to schedule with effect from 1 January 2019. Doris Ahnen, Verena Göppert, Olav Gutting, Andrea Kocsis, Peter Strobel and Heike Taubert

joined the Board of Supervisory Directors after the reporting period with effect from 1 January 2019.

Annual financial statements

Ernst & Young GmbH, which was appointed auditor for the 2018 financial year, has audited the annual financial statements and the management report of KfW as well as the consolidated financial statements and the group management report of KfW Group, all of which were prepared as of 31 December 2018 by the Executive Board, and issued an unqualified auditor's report thereon. The financial statements and the management report were prepared in accordance with the provisions of the German Commercial Code (HGB), and the consolidated financial statements and the group management report were prepared in accordance with International Financial Reporting Standards (IFRS) as applicable within the European Union.

At its meeting on 8 April 2019, the Board of Supervisory Directors approved the financial statements and the consolidated financial statements, both of which were prepared by the Executive Board, as stipulated in Article 9 (2) of the KfW Law, following a recommendation by the Audit Committee.

Frankfurt am Main, 8 April 2019

THE BOARD OF SUPERVISORY DIRECTORS



Chair

Members and tasks of the Board of Supervisory Directors

The Board of Supervisory Directors supervises the conduct of KfW's business and the administration of its assets. It approves, among other things, the annual financial statements. The Board of Supervisory Directors consists of 37 members. In the year under review, the Chair was held by the Federal Minister for Economic Affairs and Energy, and the Deputy Chair by the Federal Minister of Finance.

Olaf Scholz

Federal Minister of Finance
Deputy Chair
(14 March 2018 – 31 December 2018)
Chair
(since 1 January 2019)

Peter Altmaier

Federal Minister for Economic Affairs and Energy
Chair
(14 March 2018 – 31 December 2018)
Deputy Chair
(since 1 January 2019)

Brigitte Zypries

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

Peter Altmaier

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

Corporate Governance Report

As the promotional bank of the Federal Republic of Germany, KfW has committed itself to making responsible and transparent action comprehensible. The Executive Board and the Board of Supervisory Directors of KfW recognise the Public Corporate Governance Code (Public Corporate Governance Kodex – “PCGK”) of the Federal Republic of Germany. A declaration of compliance with the recommendations of the PCGK was issued for the first time on 6 April 2011. Since then any potential deviations are disclosed and explained on an annual basis.

KfW is a public law institution under the Law Concerning KfW (KfW Law). The Law sets out KfW’s main structural features. For example, KfW does not have a general shareholders’ meeting. The shareholders are represented on the Board of Supervisory Directors of KfW and exercise control and shareholder functions (e.g. approval of the financial statements and adopting resolutions concerning the KfW Bylaws). The number of members, composition and duties of the Board of Supervisory Directors are set out in the KfW Law. The KfW Law also provides that the Board of Supervisory Directors is subject to legal supervision by the Federal Ministry of Finance in consultation with the Federal Ministry for Economic Affairs and Energy as well as direct control of the Federal Audit Office (*Bundesrechnungshof*). The KfW Law in conjunction with the Regulation concerning key banking supervision standards under the German Banking Act (*Gesetz über das Kreditwesen – “KWG”*) to be declared applicable by analogy to KfW and supervision of compliance to these standards to be assigned to the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht – “BaFin”*) (*KfW Regulation*), dated 20 September 2013, further stipulates that KfW is subject to supervision by BaFin in collaboration with the Bundesbank.

Declaration of compliance

The Executive Board and Board of Supervisory Directors of KfW hereby declare: “Since the last declaration of compliance issued on 11 April 2018, the recommendations of the PCGK, as adopted by the Federal Government on 1 July 2009, were and will be fulfilled to the extent applicable to KfW as a public law institution with the exception of the following recommendations.”

D&O insurance excess

KfW has taken out D&O insurance for members of the Board of Supervisory Directors, which – in derogation of clause 3.3.2 of the PCGK – only contains the option of including a policy excess. Exercise of the option is decided on in consultation with the Chair of the Board of Supervisory Directors and his or her deputy.

Delegation to committees

The KfW Law sets out the size of the Board of Supervisory Directors at 37 members. To ease the work of the Board of Supervisory Directors, committees more specialised in the subject matter and flexible in terms of time are in place, whose establishment is prescribed by law. In some cases, the committees not only prepare the decisions of the Board of Supervisory Directors but also – in derogation of clause 5.1.8 of the PCGK – make final decisions. This is done for reasons of practicality and efficiency.

- The **Presidial and Nomination Committee** takes final decisions in the following cases: It adopts measures dealing with important legal and administrative matters and can make urgent decisions in pressing matters. It also draws up job descriptions with candidate profiles for Executive Board positions and for appointments to the Board of Supervisory Directors. It grants approval for the distribution of responsibilities within the Executive Board and significant changes thereto, resolves the compensation system for the Executive Board, with the decision on the basic structure of the compensation system nonetheless remaining the responsibility of the Board of Supervisory Directors. In derogation of clause 4.4.3 of the PCGK, the Chair of the Presidial and Nomination Committee also accepts information on Executive Board member conflicts of interest, in lieu of the Board of Supervisory Directors. The Chair of the Presidial and Nomination Committee approves secondary employment of Executive Board members instead of the Chair of the Board of Supervisory Directors, in derogation of clause 4.4.4 of the PCGK.
- The **Risk and Credit Committee** takes final decisions on all financing requiring approval pursuant to the KfW Bylaws as well as on funding through the issue of bonds or taking out loans in foreign currencies and via swap transactions. It is standard procedure at banks for the final decision in such matters to be taken by a committee. It serves to accelerate and bundle committee expertise.

Loans to board members

Pursuant to its bylaws, KfW may not grant individual loans to members of the Executive Board or Board of Supervisory Directors. For equal treatment reasons, this does not apply – in derogation of clause 3.4 of the PCGK – to utilisation of promotional loans made available under the KfW programmes. Due to standardisation of lending and the principle of onlending through applicants’ own banks, there is no danger of conflicts of interests concerning programme loans. The Board of Supervisory Directors must, however, be informed of programme loans

granted to members of the Executive Board and Board of Supervisory Directors.

Cooperation between Executive Board and Board of Supervisory Directors

The Executive Board and Board of Supervisory Directors work closely together for the benefit of KfW. The Executive Board maintains regular contact with the Chair and Deputy Chair of the Board of Supervisory Directors and discusses important issues concerning the management of the bank and strategy with them. The Chair of the Board of Supervisory Directors informs the Board of Supervisory Directors of serious issues and, if necessary, convenes an extraordinary meeting.

During the reporting year, the Executive Board informed the Board of Supervisory Directors about all relevant matters regarding the bank's planning, results of operations, risk situation, strategy and management, IT strategy, compensation strategy and financial position.

Executive Board

The Executive Board is responsible for managing the activities of KfW pursuant to the KfW Law, the KfW Regulation, the KfW Bylaws and the procedural rules for the Executive Board. A schedule of responsibilities stipulates business responsibilities within the Executive Board. As of 1 August 2014, the Executive Board requires prior approval of the Presidial and Nomination Committee regarding significant changes to responsibility within the Executive Board.

The KfW Executive Board member department responsibilities were as follows in the reporting year:

- Dr Günther Bräunig – Chief Executive Officer, General Secretariat, Group Development and Economics, Legal, Financial Markets, Human Resources, Internal Auditing and also Sustainability;
- Prof. Dr Joachim Nagel – International Finance, including KfW Development Bank, DEG, and KfW IPEX Bank GmbH;
- Bernd Loewen – Accounting, Information Technology, and Organisation and Consulting;
- Dr Ingrid Hengster – Domestic Finance, including the Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*) and Mittelstandsbank & Privatkunden (*SME Bank & Private Clients*) business sectors newly structured as of 1 April 2018, New Business Credit Service, Domestic Marketing and Digital Channels, KfW Capital GmbH & Co. KG (since October 2018), and Central Services;

- Dr Stefan Peiß – Chief Risk Officer/Head of Risk Controlling, Credit Risk Management, Transaction Management, Compliance and Portfolio Credit Service.

After Dr Ulrich Schröder stepped down with effect from 31 December 2017, the Executive Board adjusted the distribution of responsibilities resolved by the Presidial and Nomination Committee resulting in the temporary distribution of responsibilities outlined above and informed the Presidial and Nomination Committee.

Melanie Kehr joined KfW Group as new Managing Director with effect from 1 September 2018. After having completed the qualification period as managing director, she is due to join the Executive Board, which will also cause a redistribution of responsibilities on the Executive Board.

The Board of Supervisory Directors reappointed Bernd Loewen to the Executive Board for an additional five years from 1 July 2019 to 30 June 2024, in a written procedure in July 2018.

Executive Board members are obliged to act in the best interests of KfW, may not consider personal interests in their decisions, and are subject to a comprehensive non-competition clause during their employment with KfW. Executive Board members must inform their Board colleagues of any conflicts of interests prior to adopting resolutions and disclose them to the Chair of the Presidial and Nomination Committee without delay.

Board of Supervisory Directors

The Board of Supervisory Directors supervises and advises the Executive Board in the management of the bank.

In accordance with the KfW Law, the Board of Supervisory Directors consists of 37 members. In accordance with the law, seven Federal Ministers are members of the Board of Supervisory Directors. In addition, the German Bundestag and Bundesrat appoint seven members each. The remaining members of the Board of Supervisory Directors are appointed by the Federal Government after consultation with stakeholder groups. The Federal Minister of Finance and the Federal Minister for Economic Affairs and Energy alternate on a yearly basis as Chair of the Board of Supervisory Directors. The Chairs of the Board of Supervisory Directors in the reporting year were Federal Minister Brigitte Zypries (until 14 March 2018) and Federal Minister Peter Altmaier (from 14 March 2018). There were six female members on the Board of Supervisory Directors during the reporting year (two of them from 1 January 2018 to 14 March 2018, and two of them from 14 March 2018 to 31 December 2018).

No member of the Board of Supervisory Directors may have business or private dealings with KfW or its Executive Board members which are based on a substantial and more than temporary conflict of interests. Each member of the Board of Supervisory Directors informs the Chair of the Board of Supervisory Directors or the relevant committee about conflicts of interest before a resolution is adopted. There were occasions during the reporting year when members of the Board of Supervisory Directors and its committees refrained from participating in resolutions due to conflicts of interest.

Seven members of the Board of Supervisory Directors attended fewer than half of the board meetings in the reporting year.

Committees of the Board of Supervisory Directors

The Board of Supervisory Directors has created four committees in accordance with Section 25d KWG in order to increase efficiency in performance of its duties. The committees are listed below.

The **Presidial and Nomination Committee** is responsible for all legal and administrative matters, as well as the bank's business and corporate policy matters; it also makes urgent decisions in pressing matters. The Presidial and Nomination Committee is also responsible for handling nominations. The Presidial and Nomination Committee's tasks include advising and adopting resolutions on the compensation system for the Executive Board, including in respect of contract components and their regular review, notwithstanding the tasks of the Remuneration Committee. The Board of Supervisory Directors decides on the basic structure of the Executive Board compensation system. The Presidial and Nomination Committee draws up job descriptions with candidate profiles for Executive Board positions and for appointments to the Board of Supervisory Directors. It identifies candidates to fill positions on the Executive Board and thus ensures with the Executive Board that long-term succession planning is in place for it. It can support the government bodies which make the appointments in selecting the individuals to be appointed to the Board of Supervisory Directors.

The **Remuneration Committee** deals with remuneration matters. It deals in particular with the appropriate structure of the compensation system for the KfW Executive Board and employees and advises the Presidial and Nomination Committee on remuneration of the Executive Board members.

The **Risk and Credit Committee** is responsible for advising the Board of Supervisory Directors on risk issues, such as, in particular, the group's overall risk tolerance and strategy. The Risk and Credit Committee is also in charge of handling credit matters and the approval of KfW's fundraising and swap transactions.

The **Audit Committee** is responsible for accounting and risk management issues. In particular, it deals with monitoring the accounting process, the effectiveness of the internal controlling system, the internal audit system and risk management system, auditing the annual and consolidated financial statements, the required independence of the auditor, determining the focus

areas of the audit, and monitoring the prompt elimination by the Executive Board of any deficiencies found by the auditor.

The chairs of the committees report to the Board of Supervisory Directors on a regular basis.

The Board of Supervisory Directors provides information about its work and that of its committees during the reporting year in its report. An overview of the members of the Board of Supervisory Directors and its committees is available on KfW's website.

Shareholders

The Federal Government owns 80% of KfW's share capital, the German federal states 20%. In accordance with Article 1a of the KfW Law, the Federal Republic of Germany is liable for certain of KfW's liabilities. There is no profit distribution. The KfW Law does not require a general shareholders' meeting; the Board of Supervisory Directors performs the function of a general shareholders' meeting.

Supervision

In accordance with Article 12 of the KfW Law, KfW is subject to legal supervision by the Federal Ministry of Finance in consultation with the Federal Ministry for Economic Affairs and Energy. The supervising authority has the power to take all measures necessary to ensure that KfW operates its business activities in accordance with the law, the KfW Bylaws and other rules and regulations.

KfW is not considered a credit institution within the meaning of Section 2 (1) no. 2 KWG and is thus generally exempt from direct application of banking supervision regulations with the exception of a few individual provisions.

However, the KfW Regulation dated 20 September 2013 declares central banking supervision regulations henceforth applicable by analogy to KfW, and subjects KfW to supervision by the German Federal Financial Supervisory Authority (BaFin) in collaboration with the Bundesbank regarding KfW's compliance with these regulations.

The group companies KfW IPEX-Bank GmbH and DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG) are, on the other hand, credit institutions within the meaning of the KWG. KfW IPEX-Bank GmbH is subject to the provisions of the KWG in full, while DEG is only subject to it with certain restrictions.

Transparency

KfW provides all important information about the bank's annual and consolidated financial statements, the quarterly and semi-annual reports and the financial calendar on its website. Investor relations activities and corporate communications also involve regular announcements on the latest company developments. The annual corporate governance reports of KfW and the group companies KfW IPEX-Bank GmbH, KfW Capital GmbH & Co. KG and DEG including the declaration of compliance with the PCGK are always available on KfW's website.

Risk Management

Risk management and risk control are primary responsibilities of overall bank management at KfW. In its risk strategy the Executive Board defines the framework for the bank's business activities regarding risk tolerance and risk-bearing capacity. This ensures that KfW fulfils its particular responsibilities with an appropriate risk profile effectively and for the long term. The bank's overall risk situation is subject to comprehensive analysis in monthly risk reports to the Executive Board. The Board of Supervisory Directors regularly receives detailed information on the bank's risk situation at least once a quarter.

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. Compliance at KfW includes, in particular, measures for data protection and securities compliance, and for financial sanctions, as well as for the prevention of money laundering, terrorist financing and other criminal activities and to achieve adequate information security. 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. Compliance's responsibilities also include collaboration with financial regulators BaFin and Bundesbank as well as the central function for compliance in accordance with MaRisk. Regular training sessions on all compliance issues are held for KfW's employees. E-learning programmes are available in addition to classroom seminars.

Accounting and auditing

As the supervisory authority, the Federal Ministry of Finance in consultation with the Federal Audit Office appointed Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft as auditor for financial year 2018 on 2 February 2018. The appointment was based on the proposal made by KfW's Board of Supervisory Directors on 7 December 2017. The Audit Committee prepared this recommendation. The bank and the auditor agreed that the Chair of the Audit Committee would be informed without delay of any findings and incidents discovered during the audit that are significant to the duties of the Board of Supervisory Directors. It was furthermore agreed that the auditor would inform the Audit Committee Chair or remark in the auditor's report if it noticed any facts in performing the audit that represent mis-statements in the Declaration of Compliance with the PCGK.

Efficiency review of the Board of Supervisory Directors

Since Section 25d (11) KWG became applicable as of 1 July 2014, the Presidial and Nomination Committee has been required to evaluate the efficiency of both the Board of Supervisory Directors and the Executive Board on an annual basis. Both evaluations are performed on a yearly basis, for the first time in mid-2015 and most recently in June 2018.

Remuneration Report

The remuneration report describes the basic structure of the remuneration plan for members of the Executive Board and Board of Supervisory Directors; it also discloses their remuneration on an individual basis. The remuneration report is an integral part of the notes to the consolidated financial statements.

Frankfurt am Main, 8 April 2019

The Executive Board

The Board of Supervisory Directors



Group manage- ment report

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Basic information on KfW Group

Overview

KfW Group consists of KfW and five consolidated subsidiaries. As the promotional bank of the Federal Republic of Germany – which owns 80% of KfW while the German Federal States own 20% – KfW is one of the world's leading promotional banks. The institutional framework for the promotional mandate including the Federal Republic of Germany's liability for KfW's obligations is defined in the Law Concerning KfW (KfW Law).

KfW supports sustainable improvement of economic, social and environmental conditions around the world, with an emphasis on promotion of the German economy. In its promotional activities, KfW focuses on societal megatrends. A variety of different financing products and services address in particular the areas small and medium-sized enterprises (SMEs), start-ups, digitalisation & innovation, climate change and environmental protection, the housing sector, infrastructure, education, export and project finance, and development cooperation. The domestic promotional lending business services both enterprises and pri-

ivate individuals is characterised by the proven and successful strategy of on-lending, in which KfW extends loans to commercial banks, which, in turn, lend the funds to the ultimate borrowers at favourable rates. This strategy eliminates any need for KfW to have its own network of branch offices. Business activities are funded almost entirely through the international capital markets; KfW is one of the most active and largest bond issuers worldwide. In addition to KfW, the group's main operating subsidiaries are (i) KfW IPEX-Bank, which provides export and project finance, and (ii) DEG, which is active in promoting the private sector in developing countries and emerging economies. KfW's new subsidiary, KfW Capital, invests in German and European venture capital and venture debt funds, thus strengthening venture capital and early growth financing in Germany.

In accordance with the business sector structure for KfW Group, the sectors and their main products and services can be presented as follows:

Mittelstandsbank & Private Kunden (SME Bank & Private Clients)	<ul style="list-style-type: none"> – Start-up financing – Financing of general corporate investments and investments in innovation, energy and environmental protection – Education financing – Financing for housing construction, conversion and refurbishment
Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)	<ul style="list-style-type: none"> – Financing of municipal and social infrastructure – Customised corporate financing with equity and debt capital – Customised financing of banks and promotional institutions of the federal states
KfW Capital	<ul style="list-style-type: none"> – Investments in German and European venture capital and venture debt funds (as of 1 January 2019 transfer of KfW's existing VC business to KfW Capital GmbH & Co. KG)
Export and project finance	<ul style="list-style-type: none"> – Financing of German and European export activities – Financing of projects and investments which are of special interest for Germany and Europe
Promotion of developing countries and emerging economies	<ul style="list-style-type: none"> – Promotion of developing countries and emerging economies on behalf of the Federal Government through budget funds and complementary market funds raised by KfW – Financing provided by DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH (private sector promotion)
Financial markets	<ul style="list-style-type: none"> – Securities and money market investments – Holding arrangements for the Federal Republic of Germany – Transactions mandated by the Federal Government, loan granted to Greece – Funding
Head office	<ul style="list-style-type: none"> – Central interest rate and currency management – Strategic equity investments

Composition of the KfW Group Total assets (IFRS, before consolidation¹⁾)

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
KfW, Frankfurt am Main, Germany	483,453	470,645
Subsidiaries		
KfW IPEX-Bank GmbH, Frankfurt am Main (KfW IPEX-Bank), Germany	27,969	26,362
DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne (DEG), Germany	6,274	5,707
KfW Beteiligungsholding GmbH, Bonn, Germany	3,215	2,951
KfW Capital GmbH & Co. KG, Frankfurt am Main ¹⁾	25	0
Interkonnektor GmbH, Frankfurt am Main, Germany	292	182
Investments accounted for using the equity method		
Microfinance Enhancement Facility S.A., Luxembourg (18.5%), Luxembourg	592	552
DC Nordseekabel GmbH & Co. KG, Bayreuth (50.0%), Germany	745	542
Green for Growth Fund, Southeast Europe S.A., Luxembourg (14.5%), Luxembourg	470	414
AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co KG, Munich (47.5%), Germany	115	174
coparion GmbH & Co. KG, Cologne (20.0%), Germany	45	14

¹⁾ First-time consolidation of KfW Capital GmbH & Co. KG in financial year 2018

The development of the group's operating income is largely determined by KfW.

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

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.

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 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

Alternative key financial figures used

The KfW Group Management Report contains key financial figures that are not defined in the IFRSs. In its strategic objectives, KfW uses typical market financial indicators and key financial figures that are geared to promotion as the core business activity. It also uses key figures in which the temporary effects on results determined and reported in the consolidated financial statements in accordance with IFRS and which KfW does not consider representative are adjusted.

KfW has defined the following alternative key financial figures:

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 structured 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.

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.

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).

Consolidated profit before IFRS effects

Consolidated profit before IFRS effects from hedging is another key financial figure based on Consolidated profit in accordance with IFRS. Derivative financial instruments are entered into for hedging purposes. Under IFRS, the requirements for the recognition and valuation of derivatives and hedges nevertheless give rise to temporary net gains or losses. In KfW's opinion, such net gains or losses do not sufficiently reflect economically effective hedges in financial terms.

As a result, the following reconciliations are performed by eliminating temporary contributions to profit and loss as follows:

- Valuation results from micro and macro hedge accounting. All hedging relationships are economically effective and do not give rise to any net gain or loss over the entire life of the hedge.
- Net gains or losses from the use of the fair value option to avoid an accounting mismatch in the case of funding including related hedging derivatives. Accumulated over the entire life of the hedge, the economically effective hedges do not give rise to any net gain or loss.
- Net gains or losses from the fair value accounting of hedges with high economic effectiveness but not qualifying for hedge accounting. These hedges do not give rise to any net gain or loss over the entire period to maturity.
- Net gains or losses from foreign currency translation of foreign currency positions, in accordance with recognition and valuation requirements for derivatives and hedging relationships.

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 eurozone 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.

Development of KfW Group

All in all, 2018 was a challenging financial year for KfW. KfW achieved a **total promotional business volume** of EUR 75.5 billion in 2018 (2017: EUR 76.5 billion), thus remaining stable at the previous year's level. KfW aligned its promotional activities with qualitative targets in 2018, as in the preceding years. The favourable overall economic environment allowed KfW to focus on issues of particular relevance to the future. Promotion was focussed on innovation and digitalisation in Germany, as well as on the sustainable improvement of living conditions in Africa and other partner countries.

The **earnings position** remained satisfactory in financial year 2018. Despite the difficult interest environment and ongoing modernisation measures, consolidated profit still exceeded the previous year's level due to very high valuation effects. It thus considerably exceeded expectations and remains well above the long-term earnings potential. At EUR 1.4 billion, the Operating result before valuation (before promotional expense) was down on the previous year (2017: EUR 1.7 billion). The Cost-income ratio (before promotional expense) increased to 50.2% (2017: 42.6%) due to declining interest income and increasing administrative costs, which continued to be attributable to the expenses for the modernisation of KfW Group, including pension provisioning and measures addressing regulatory requirements, such as KfW's mandatory application, by analogy, of the German Banking Act (*Gesetz über das Kreditwesen – "KWG"*). The valuation result made a positive and larger-than-expected contribution to consoli-

dated profit. In net terms, this amount was significantly higher year on year. This was due in part to the very low net charges from risk provisions for the lending business, which benefited, among other things, from a robust economic environment and the high quality of the KfW portfolio. The equity investment portfolio also performed positively again. Overall, KfW generated a healthy consolidated profit of EUR 1.6 billion (2017: EUR 1.4 billion), which was overstated due to purely IFRS-induced effects from hedge accounting and income from deferred taxes. This result shows that KfW is stabilising its capital base, thereby safeguarding its promotional capacity in the long term and ensuring it can meet regulatory requirements. In its current consolidated income projections for 2019, KfW expects consolidated profit before IFRS effects of around EUR 0.8 billion, which is at the lower end of the range of strategic projections.

Consolidated total assets rose by EUR 13.6 billion to EUR 485.8 billion in 2018. This increase was mainly attributable to an increase of EUR 7.9 billion in Net loans and advances to EUR 384.9 billion, and an increase of EUR 2.3 billion in liquidity holdings to EUR 36.1 billion. KfW's promotional business is primarily refinanced on the international capital markets. The volume of own issues reported under certificated liabilities amounted to EUR 418.6 billion (year-end 2017: EUR 406.3 billion). The EUR 1.6 billion increase in equity to EUR 30.3 billion was especially due to consolidated comprehensive income.

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

A. Continued high demand for KfW products

With a promotional volume of EUR 75.5 billion in financial year 2018 (2017: EUR 76.5 billion), the group was just under its projected new business volume of EUR 77.5 billion.

In the domestic promotional business, financing commitments of EUR 46.0 billion were made. Given the robust economic performance and the positive financing conditions for commercial and private investors, KfW reduced its domestic promotion (2017: EUR 51.8 billion). Areas providing impetus for the future, such as loans for digitalisation and innovation, were expanded nonetheless. KfW's subsidiary KfW Capital, which will substantially expand venture capital and equity financing activities, got off to a suc-

cessful start in financial year 2018. A very high level of demand was recorded for the "Baukindergeld" scheme newly introduced in September 2018.

International business volume increased by 20% to EUR 28.3 billion (2017: EUR 23.5 billion). It was characterised by an increase in commitments in Export and project finance, from EUR 13.8 billion to EUR 17.7 billion, with the Power, Renewables and Water sector department accounting for the largest share at EUR 3.4 billion, following EUR 2.6 billion the previous year. Promotion of developing countries and emerging economies expanded by 8% to EUR 10.6 billion (2017: EUR 9.7 billion).

KfW raised EUR 76.1 billion in the international capital markets to fund its business activities (2017: EUR 78.2 billion).

Promotional business volume of KfW Group

	2018 EUR in billions	2017 EUR in billions
Domestic business	46.0	51.8
Mittelstandsbank & Private Kunden (SME Bank & Private Clients)	36.3	42.4
Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)	9.5	9.3
KfW Capital	0.1	0.1
Financial markets	1.5	1.5
International business	28.3	23.5
Export and project finance	17.7	13.8
Promotion of developing countries and emerging economies	10.6	9.8
Volume of new commitments¹⁾	75.5	76.5

¹⁾ Adjusted for export and project financing refinanced through KfW programme loans

B. Operating result below expectations

At EUR 1,387 million (2017: EUR 1,661 million), the Operating result before valuation (before promotional expense) was considerably below the prior-year level. Net interest income (before promotional expense) based on continued favourable funding conditions for KfW remained the main source of income. It declined to EUR 2,413 million (2017: EUR 2,579 million).

Net commission income (before promotional expense) stood at EUR 374 million, which was higher than the previous year's level (2017: EUR 316 million).

At EUR 1,400 million (2017: EUR 1,234 million), Administrative expense (before promotional expense) increased and thus exceeded targets. Key factors in this development were in particular the extensive investment in modernising the group and meeting regulatory requirements as well as creation of one-off provisions in the Human Resources department.

C. Valuation result benefits from very low risk provisions and positive equity investment result

Due to the positive economic performance and recoveries of previously written-off loans, the risk provision in the lending business had a very low impact on earnings in 2018 (EUR 3 million). This figure was still significantly below that of projected standard risk costs of EUR 527 million and below the prior-year figure (2017: EUR 209 million). KfW benefited from a stable economic environment and the high quality of its loan portfolio.

The purely IFRS-related effects from the valuation of derivatives used for hedging purposes increased to EUR 325 million (2017: EUR 235 million). The EUR 128 million contribution to earnings caused by the equity investment portfolio (2017: EUR 19 million reduction in earnings) largely resulted from the Promotion of developing countries and emerging economies business sector. In the DEG portfolio, exchange rate-induced effects strengthened the positive performance by EUR 53 million, producing a total result of EUR 87 million.

Despite observable fluctuations on the capital markets, the result of the securities portfolio remained stable at EUR 8 million.

D. Scope for reductions remains limited in the low interest rate environment

KfW's domestic promotional expense, which has a negative impact on KfW Group's earnings position, remained at EUR 216 million in financial year 2018, almost unchanged from the previous year (2017: EUR 213 million), and thus

remained considerably lower than projected. This was due to a slight decline in interest rate reductions (EUR 185 million; 2017: EUR 186 million), in particular due to the limited need in the low-interest environment for interest rate reductions to achieve our promotional business volume target.

The following key figures provide an overview of key financial figure development in 2018:

Key financial figures of KfW Group

	2018	2017
	EUR in millions	EUR in millions
Key figures of the income statement		
Operating result before valuation (before promotional expense)	1,387	1,661
Operating result after valuation (before promotional expense)	1,834	1,669
Promotional expense	216	213
Consolidated profit	1,636	1,427
Cost-income ratio (before promotional expense) ¹⁾	50.2%	42.6%
Key economic figures		
Consolidated profit before IFRS effects	1,311	1,192
Key figures of the statement of financial position		
	31 Dec. 2018	31 Dec. 2017
	EUR in billions	EUR in billions
Total assets	485.8	472.2
Volume of lending	483.5	471.7
Volume of business	590.7	572.1
Equity	30.3	28.7
Equity ratio	6.2%	6.1%

¹⁾ Administrative expense (before promotional expense) in relation to adjusted income. Adjusted income is calculated from Net interest income and Net commission income (in each case before promotional expense).

Development of earnings position

The earnings position remained positive in 2018, characterised by a year-on-year decline in the operating result combined with a positive valuation result. This resulted in a Consolidated profit

of EUR 1.6 billion, which is above the prior year figure and clearly exceeds the target.

Reconciliation of internal earnings position (before promotional expense) with external earnings position (after promotional expense) for financial year 2018

	EUR in millions	Promotional expense EUR in millions	EUR in millions	
Net interest income (before promotional expense)	2,413	-185	2,228	Net interest income
Net commission income (before promotional expense)	374	-12	362	Net commission income
Administrative expense (before promotional expense)	1,400	18	1,418	Administrative expense
Operating result before valuation (before promotional expense)	1,387	-216	1,171	Operating result before valuation
Risk provisions for lending business	-3		-3	Risk provisions for lending business
Net gains/losses from hedge accounting	480		480	Net gains/losses from hedge accounting
Other financial instruments at fair value through profit or loss	-54		-54	Net gains/losses from other financial instruments at fair value through profit or loss
Net gains/losses from securities and investments	2		2	Net gains/losses from the disposal of financial instruments measured at amortised cost
Net gains/losses from investments accounted for using the equity method	22		22	Net gains/losses from investments accounted for using the equity method
Operating result after valuation (before promotional expense)	1,834	-216	1,618	Operating result after valuation
Net other operating income	5		5	Net other operating income or loss
Profit/loss from operating activities (before promotional expense)	1,839	-216	1,623	Profit/loss from operating activities
Promotional expense	216	-216	0	-
Taxes on income	-13		-13	Taxes on income
Consolidated profit	1,636		1,636	Consolidated profit
Temporary net gains/losses from hedge accounting	325		325	Temporary net gains/losses from hedge accounting
Consolidated profit before IFRS effects	1,311		1,311	Consolidated profit before IFRS effects

**Reconciliation of internal earnings position (before promotional expense)
with external earnings position (after promotional expense) for financial year 2017**

	EUR in millions	Promotional expense EUR in millions	EUR in millions	
Net interest income (before promotional expense)	2,579	-186	2,393	Net interest income
Net commission income (before promotional expense)	316	-14	303	Net commission income
Administrative expense (before promotional expense)	1,234	14	1,247	Administrative expense
Operating result before valuation (before promotional expense)	1,661	-213	1,448	Operating result before valuation
Risk provisions for lending business	-209		-209	Risk provisions for lending business
Net gains/losses from hedge accounting	591		591	Net gains/losses from hedge accounting
Other financial instruments at fair value through profit or loss	-397		-397	Net gains/losses from other financial instruments at fair value through profit or loss
Net gains/losses from securities and investments	0		0	Net gains/losses from securities and investments
Net gains/losses from investments accounted for using the equity method	22		22	Net gains/losses from investments accounted for using the equity method
Operating result after valuation (before promotional expense)	1,669	-213	1,456	Operating result after valuation
Net other operating income	-2		-2	Net other operating income
Profit/loss from operating activities (before promotional expense)	1,667	-213	1,453	Profit/loss from operating activities
Promotional expense	213	-213	0	-
Taxes on income	26		26	Taxes on income
Consolidated profit	1,427		1,427	Consolidated profit
Temporary net gains/losses from hedge accounting	-235		-235	Temporary net gains/losses from hedge accounting
Consolidated profit before IFRS effects	1,192		1,192	Consolidated profit before IFRS effects

At EUR 1,387 million (2017: EUR 1,661 million), the **Operating result before valuation (before promotional expense)** was considerably below the prior-year level and the target.

At EUR 2,413 million, **Net interest income (before promotional expense)** decreased compared to the 2017 figure (EUR 2,579 million). This was primarily due to the decline in interest margin income and lower income from early repayment penalties of EUR 90 million (2017: EUR 123 million) and changes to the contractual terms of the Energy-efficient Construction and Refurbishment promotional programmes in 2017, which led to a change in the recognition of remuneration from net interest income to net commission income as of 1 July 2017. For the first half of 2017, income of EUR 57 million was still reported under Net interest income. In addition, interest margins in the lending business slightly declined. Irrespective of this, KfW's funding conditions on the capital and money markets remained very good and made a positive contribution to Net interest income due to the bank's top-notch credit rating. Overall, Net interest income remained the main source of income.

Net commission income (before promotional expense) was EUR 374 million, which is higher than the 2017 figure of EUR 316 million. The increase was mainly due to remuneration of EUR 143 million (2017: EUR 90 million) for the promotional programmes, which was received primarily under the Energy-efficient Construction and Refurbishment programmes. KfW also generated commission income totalling EUR 186 million (2017: EUR 180 million) from the administration of German Financial Cooperation in the business sector Promotion of developing countries and emerging economies. This remuneration from the Federal Government was offset by related administrative expense.

The increase in **Administrative expense (before promotional expense)** to EUR 1,400 million (2017: EUR 1,234 million) was above expectations. Measures to meet regulatory requirements, ongoing modernisation and investments in new market trends continued to drive costs. Personnel expense increased by EUR 103 million to EUR 771 million (2017: EUR 668 million). In addition to the higher number of employees, this was also due to negotiated pay increases. In addition, the creation of pension

provisions in connection with modernisation measures to increase efficiency at KfW contributed to the increase in personnel expense. Non-personnel expense (before promotional expense) amounted to EUR 629 million (2017: EUR 566 million). The increase of EUR 63 million was in particular due to the use of consultancy and support services and an increase in amortisation of intangible assets resulting from software rolled out for use as part of KfW's modernisation. These related, in particular, to the necessary fulfilment of regulatory requirements and the comprehensive modernisation of KfW's information technology architecture.

The cost-income ratio before promotional expense rose to 50.2% (2017: 42.6%), mainly due to the overall decline in operating income and increased expenditure. After adjusting for income and expense from products for which a cost-based compensation has been agreed upon with the German Federal Government, and for expenses resulting from the recognition of provisions for pensions in connection with modernisation measures at KfW, the cost-income ratio amounted to 39.0% for financial year 2018.

KfW Group's **Risk provisions for lending business** created in accordance with IFRS 9 resulted in a very low impact on earnings in 2018 of EUR 3 million (2017: EUR 209 million), which were down year on year and significantly below the projected standard risk costs. The expenses resulting from risk provisions for lending business largely related to education financing in the business sector Mittelstandsbank & Private Kunden (SME Bank & Private Clients).

At EUR 96 million, net additions to the provision for imminent credit risks (stage 3) including direct write-offs declined year-on-year (2017: EUR 316 million) and primarily related to the business sector Mittelstandsbank & Private Kunden (SME Bank & Private Clients) with additions of EUR 64 million. Thereof, EUR 45 million were attributable to education financing (2017: EUR 63 million). The business sector Promotion of developing countries and emerging economies needed a further addition of EUR 40 million (2017: EUR 42 million), almost all of which was attributable to DEG. The business sector Export and project finance recorded net reversals of EUR 9 million in 2018 (2017: additions of EUR 147 million).

At EUR 77 million, income from recoveries of loans previously written off was below that of the previous year (2017: EUR 107 million). Thereof, EUR 39 million was attributable to the business sector Mittelstandsbank & Private Kunden and EUR 13 million to the business sector Export and project finance. The risk provisions remained virtually unchanged at EUR 1.0 billion in financial year 2018. Of this total, EUR 0.6 billion was attributable to the Export and project finance business sector and EUR 0.3 billion to the Promotion of developing countries and emerging economies business sector.

In 2018, risk provisions for loan portfolio risks that cannot be allocated (stages 1 and 2) remained unchanged at EUR 0.6 billion. EUR 0.4 billion were related to stage 1 and EUR 0.2 billion to stage 2.

Risk provisions for lending business cover all imminent and latent risks, reflecting the consistent implementation of KfW Group's conservative risk policy.

Net gains/losses from hedge accounting and other financial instruments at fair value through profit or loss stood at EUR 426 million in financial year 2018 (2017: EUR 194 million) and were primarily driven by positive effects from the equity investment portfolio and high positive purely IFRS-related effects from the valuation of derivatives used for hedging purposes.

The equity investment portfolio measured at fair value through profit or loss was influenced by both the positive performance of investments and exchange rate-induced increases in value, particularly due to the appreciation of the US dollar. Overall, it generated an income of EUR 105 million (2017: expense of EUR 32 million). This development was primarily attributable to the business activities of DEG in promoting developing countries and emerging economies.

The result from foreign currency translation had a slight negative effect, with net expense of EUR 24 million (2017: net income of EUR 4 million) resulting from exchange rate changes, particularly in the US dollar, combined with the corresponding foreign currency items in the consolidated statement of financial position.

Hedge accounting and borrowings recognised at fair value, including derivatives used for hedging purposes resulted in net earnings of EUR 325 million (2017: EUR 235 million). The market-to-market derivatives are part of economically hedged positions. However, if the other part of the hedging relationship cannot be carried at fair value or different valuation methods and parameters have to be applied, this inevitably results in temporary fluctuations in income that are fully offset over the term of the transactions.

Securities carried at fair value through profit or loss made a positive earnings contribution of EUR 8 million (2017: EUR 9 million). In the case of securities not carried at fair value, the general development on the financial markets combined with offsetting effects from the first-time application of IFRS 9 (EUR +112 million) resulted in a net negative difference of EUR 9 million between the carrying amount and the fair value (2017: positive difference of EUR 67 million). This development is partly attributable to decreases in value of covered bonds.

Net gains from securities and investments accounted for using the equity method remained unchanged at EUR 22 million. The performance of DC Nordseekabel GmbH & Co. KG in the business sector Export and project finance made a particularly strong contribution to earnings.

Net other operating income was EUR +5 million, slightly up on the previous year's figure (2017: EUR –2 million).

KfW's domestic **Promotional expense**, which has a negative impact on KfW Group's earnings position, was slightly above the prior-year level (2017: EUR 213 million) and substantially below projections at EUR 216 million in 2018.

Interest rate reductions are the key component of KfW's promotional expense. KfW grants these for certain domestic promotional loans during the first fixed interest rate period, in addition to passing on KfW's favourable funding conditions, thus affecting its earnings position. The volume of interest rate reductions remained almost unchanged at EUR 185 million in 2018 (2017: EUR 186 million) and also below the target. This was partly due to the low demand for interest rate-reduced promotional loans. Also, due to the persistently low level of interest rates, no additional stimulus in the promotional business was necessary in order to achieve the promotional objectives.

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.

Accounting for the positive net income tax result of EUR 13 million (EUR 2017: EUR –26 million), **Consolidated profit** of EUR 1,636 million was higher than in the previous year (EUR 1,427 million) and well above expectations.

Development of net assets

Lending to banks and customers remains KfW Group's core business. As of 31 December 2018, a total of 79% of KfW Group's assets was attributable to its lending business.

Consolidated profit before IFRS effects from hedging is another key financial figure based on consolidated profit in accordance with IFRS to reflect the fact that derivative financial instruments are entered into for hedging purposes. Under IFRS, the requirements for the recognition and valuation of derivatives and hedges nevertheless give rise to temporary net gains or losses. In KfW's opinion, such net gains or losses do not sufficiently reflect economically effective hedges in financial terms.

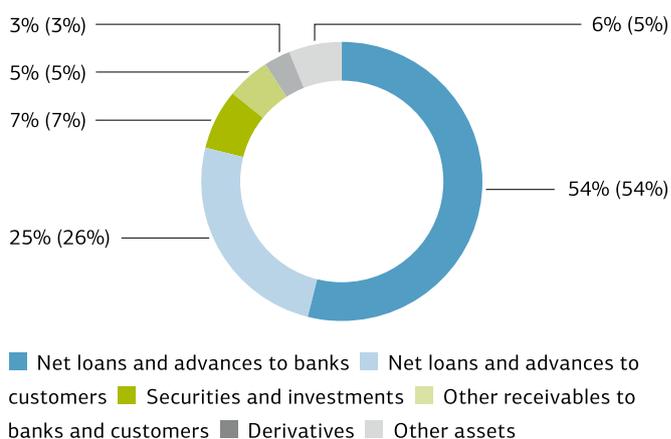
As a result, the following reconciliations were performed by eliminating temporary contributions to income in the amount of EUR 325 million (2017: EUR 235 million) as follows:

- Valuation results from micro and macro hedge accounting. All hedging relationships are economically effective and do not give rise to any net gain or loss over the entire life of the hedge.
- Net gains or losses from the use of the fair value option to avoid an accounting mismatch in the case of funding including related hedging derivatives. Accumulated over the entire life of the hedge, the economically effective hedges do not give rise to any net gain or loss.
- Net gains or losses from the fair value accounting of hedges with high economic effectiveness but not qualifying for hedge accounting. These hedges do not give rise to any net gain or loss over the entire period to maturity.
- Net gains or losses from foreign currency translation of foreign currency positions, in accordance with recognition and valuation requirements for derivatives and hedging relationships.

The reconciled earnings position amounted to a profit of EUR 1,311 million (2017: EUR 1,192 million). KfW Group achieved a very good result in financial year 2018 that again exceeded its sustainable earnings potential.

Assets

31 Dec. 2018 (31 Dec. 2017)



The **volume of lending** is up on the previous year, at EUR 483.5 billion.

Volume of lending

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Loans and advances	386,453	378,439
Risk provisions for lending business	-1,545	-1,457
Net loans and advances	384,908	376,982
Contingent liabilities from financial guarantees	2,312	2,229
Irrevocable loan commitments	84,116	80,032
Loans and advances held in trust	12,209	12,433
Total	483,545	471,676

Loans and advances increased by EUR 8.0 billion in 2018 due to various effects. Increased disbursements in new lending business and exchange rate effects, in particular from the stronger US dollar, more than offset unscheduled loan repayments of EUR 12.7 billion (2017: EUR 13.4 billion). The increase in loan disbursements resulted primarily from the Energy-efficient Construction and Refurbishment programmes. At EUR 384.9 billion, Net loans and advances still accounted for 80% of lending volume.

Contingent liabilities from financial guarantees increased slightly from EUR 2.2 billion to EUR 2.3 billion. At EUR 84.1 billion, irrevocable loan commitments were above the previous year's level. An amount of EUR 2.7 billion of the increase of

EUR 4.1 billion relates to the Export and project finance business sector. Within assets held in trust, the volume of loans and advances held in trust, which mainly comprise loans to promote developing countries financed by budget funds provided by the Federal Republic of Germany, decreased slightly by EUR 0.2 billion to EUR 12.2 billion.

At EUR 20.9 billion, other loans and advances to banks and customers were considerably below the previous year's level of EUR 23.8 billion. This includes, in particular, short-term secured and unsecured investments held for general liquidity management purposes and in connection with collateral management in the derivatives business. The decline mainly affected short-term, collateralised investments.

The total amount of **Securities and investments** at EUR 35.7 billion was at the previous year's level.

Securities and investments

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Bonds and other fixed-income securities	32,867	30,900
Shares and other non-fixed income securities	0	0
Equity investments	2,818	2,672
Shares in non-consolidated subsidiaries	43	43
Total	35,729	33,615

The securities portfolio, which increased by 6% in financial year 2018, accounted for significant items in securities and investments. The increase in the portfolio was almost completely due to the increase of EUR 1.7 billion to EUR 31.2 billion in bonds and other debt securities, while the volume of money market securities rose by EUR 0.3 billion to EUR 1.6 billion. In addition, equity investments increased by EUR 0.1 billion to EUR 2.8 billion.

Derivatives with positive fair values, which were primarily used to hedge refinancing transactions, remained almost unchanged at EUR 14.8 billion, compared to EUR 14.2 billion in the previous year. Value adjustments from macro hedging related to the underlying asset portfolios decreased from EUR 9.6 billion to EUR 9.1 billion.

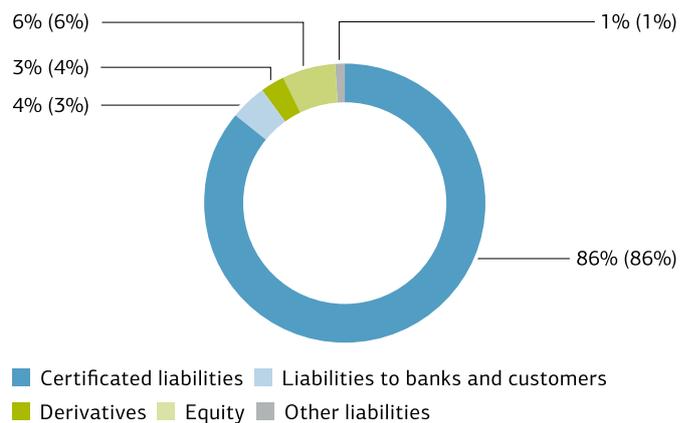
There were only minor changes in the other asset line items in the statement of financial position.

Development of financial position

KfW Group's funding strategy in the international capital markets is based on three pillars: "benchmark bonds in euros and US dollars", "other public bonds" and "private placements". Funds raised in the form of Certificated liabilities continued to play a significant role, and remained unchanged at 86% of total assets compared to the previous year.

Financial position

31 Dec. 2018 (31 Dec. 2017)



Borrowings decreased by EUR 16.9 billion, to EUR 439.1 billion.

Borrowings

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Short-term funds	44,051	40,481
Bonds and notes	376,842	366,105
Other funding	18,211	15,580
Total	439,104	422,165

KfW Group's principal sources of funding were medium and long-term bonds and notes issued by KfW. At year-end 2018, such funds amounted to EUR 376.8 billion (31 Dec. 2017: EUR 366.1 billion) and accounted for 86% of borrowings. Short-term issues of commercial paper increased by EUR 1.6 billion to EUR 41.7 billion. Total short-term funds, including demand deposits and term deposits, amounted to EUR 44.1 billion. Other funding for KfW, in addition to promissory notes from banks and customers (*Schuld-scheindarlehen*), which decreased by EUR 0.6 billion to EUR 6.4 billion year on year, consisted mainly of liabilities to the Federal Republic of Germany and cash collateral received primarily to reduce

counterparty risk from the derivatives business of EUR 6.2 billion (year-end 2017: EUR 4.2 billion).

The carrying amounts of derivatives with negative fair values, which were primarily used to hedge loans, decreased by EUR 5.0 billion from EUR 17.4 billion, primarily due to changes in market parameters, and amounted to EUR 12.4 billion at year-end 2018.

There were only minor changes in the other liability line items in the statement of financial position.

At EUR 30.3 billion, **Equity** was significantly greater than the 2017 year-end figure of EUR 28.7 billion, taking into account the negative effects of the first-time adoption of IFRS 9 of EUR 0.2 billion. The increase resulted in particular from con-

solidated profit (EUR 1.6 billion). As a result of the equity increase, the equity ratio improved slightly from 6.1% at the end of 2017 to 6.2% as of 31 December 2018, despite the increase in total assets.

Equity

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Paid-in subscribed capital	3,300	3,300
Capital reserve	8,447	8,447
<i>of which promotional reserves from the ERP Special Fund</i>	7,150	7,150
Reserve from the ERP Special Fund	1,191	1,191
Retained earnings	17,371	15,500
Fund for general banking risks	600	600
Revaluation reserves	-594	-295
Total	30,315	28,742

The consolidated profit was allocated to retained earnings.

Risk report

Overview of key indicators

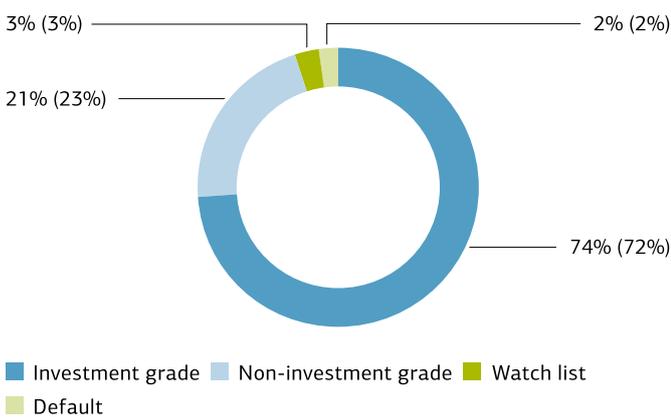
Risks are reported in accordance with KfW Group's internal risk management. The key risk indicators are presented below:

Regulatory capital ratios remain at a good level



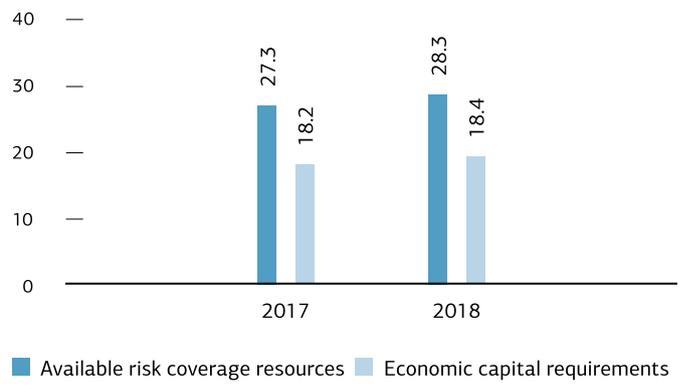
The slight decline in capital ratios is primarily due to changes in methods, exchange rates and some rating downgrades.

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).

Economic risk-bearing capacity: Clearly secured EUR in billions



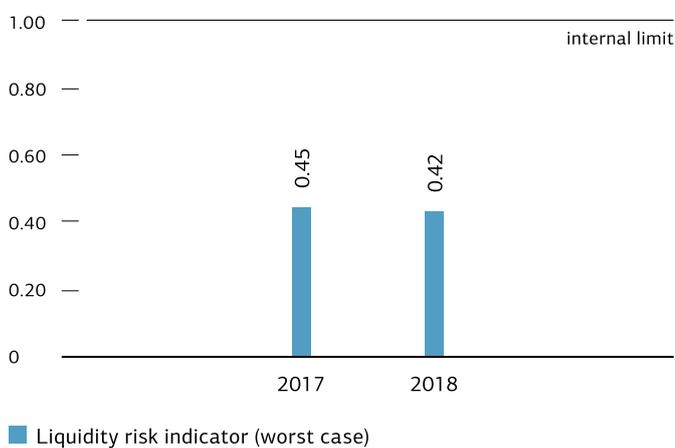
The excess coverage was extended in 2018. Risk-bearing capacity is clearly secured at a solvency level of 99.99%.

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

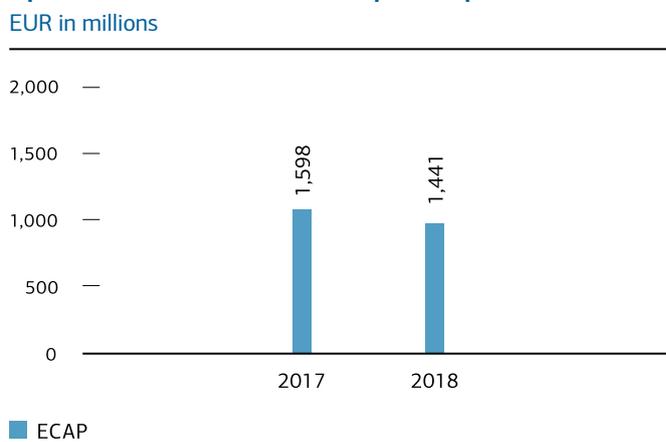


The liquidity risk indicators remained considerably below the internal limit throughout 2018.

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



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		
		Risk committees			
		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
Processes/Instruments	Risk culture		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 	<ul style="list-style-type: none"> – Internal control system (process-integrated) – Compliance function – Internal auditing
				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

Additional internal monitoring procedures

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 standard

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.

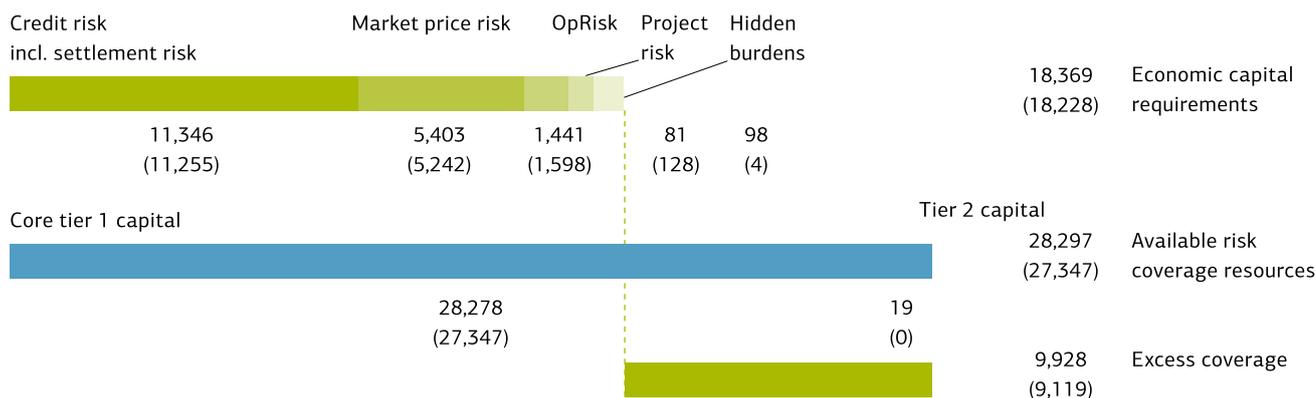
The Group manages **liquidity risks** primarily on the basis of appropriate internal risk indicators. In addition, maximum liquidity gap limits (outflows on a monthly and yearly basis), available liquidity (liquidity potential) and the difference between the average residual maturity of inflows and outflows (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.

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.

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.

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.

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-

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
	Exposure at default			
Business level	Loss given default			
Portfolio level	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.

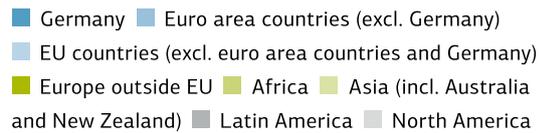
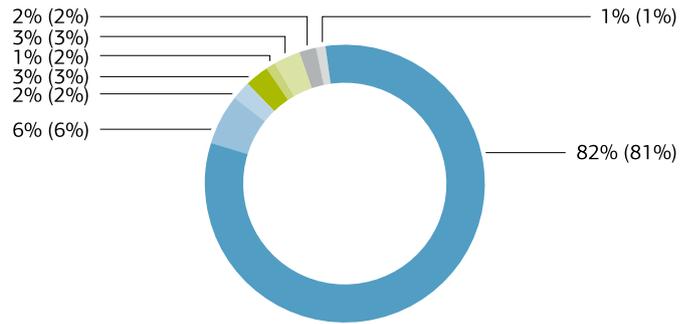
⁵⁾ The loan portfolio includes loans as well as securities and investments in performing business. The non-performing portfolio is only included in the presentation of credit quality.

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)

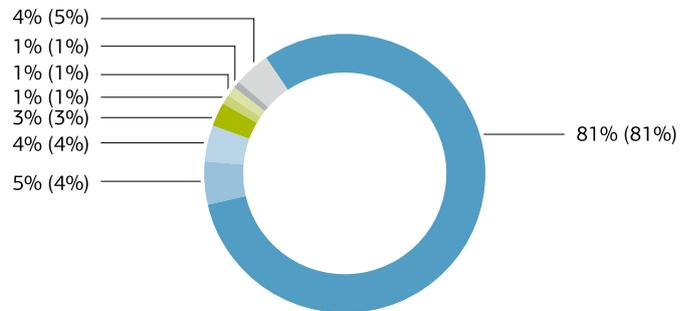


Sectors

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)

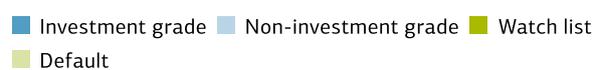
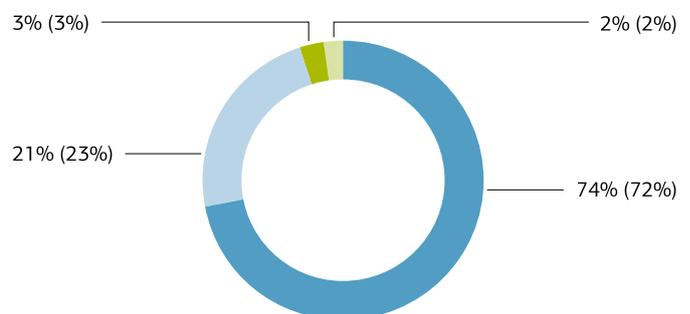


Credit quality

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)



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				
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

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).

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

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 (*Bundshaushaltsordnung* – "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

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 port-

folio 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 financing (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.

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

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.

Economic growth in the developing countries and emerging markets where **DEG** pursues its commitment presents a mixed overall picture for 2019, affected by slowing global economic growth. DEG's business strategy is aimed at profitable and effective promotion of the private sector in developing countries and emerging economies, with a comprehensive offering for German SMEs. Sustainable earnings ensure risk-bearing capacity and organic growth. Profits are retained, thereby supporting DEG's capital base and enabling new investments. The current financing and promotional offerings for German companies have been expanded to support the German economy in developing countries and emerging economies. The aim is to improve access to local financing for German clients and their business partners and enhance mobilisation of German private funds. This included opening five German Desks (in Kenya, Nigeria, Peru, Indonesia and Bangladesh). Financing private companies promotes the private sector as an indispensable factor in the global partnership to achieve the sustainable development goals (SDGs). Private companies create jobs, generate local income and innovatively develop markets and sectors with their investments and activities. With its markets in Africa, Asia, Latin America and (eastern) Europe, DEG is one of the most regionally diversified Development Finance Institutions. Africa is and remains a DEG focus region, in which DEG is increasingly involved in cooperation with the German Federal Government as part of the Compact with Africa initiatives. DEG focuses on continuous development of its "Financing +" approach, which offers clients individual financing and comprehensive advisory services. Its Business Support Service, in particular, distinguishes DEG from its peers, creating added value for customers and demonstrably improving the developmental effectiveness of the investments.

As of 31 December 2018, DEG's portfolio amounted to around EUR 8.1 billion; DEG plans a new commitment volume of around EUR 2 billion for 2019.

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

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

increasingly 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



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Consolidated statement of comprehensive income

Income statement

	Notes	2018 EUR in millions	2017 EUR in millions
Interest income from the effective interest method		2,836	n/a
Other interest income		851	n/a
Interest income, total	(27)	3,687	3,213¹⁾
Interest expense	(27)	1,459	821 ¹⁾
Net interest income		2,228	2,393
Risk provisions for lending business ²⁾	(7), (13), (28)	-3	-209
Net interest income after risk provisions		2,225	2,184
Commission income	(29)	387	331
Commission expense	(29)	25	29
Net commission income		362	303
Net gains/losses from hedge accounting	(8), (30)	480	591
Net gains/losses from other financial instruments at fair value through profit or loss	(31)	-54	-397
Net gains/losses from securities and investments	(32)	n/a	0
Net gains/losses from risk provisions in the securities business	(7), (33)	0	n/a
Net gains/losses from disposal of financial instruments measured at amortised cost	(34)	2	n/a
Net gains/losses from investments accounted for using the equity method	(6), (35)	22	22
Administrative expense	(36)	1,418	1,247
Net other operating income or loss	(37)	5	-2
Profit/loss from operating activities		1,623	1,453
Taxes on income	(38)	-13	26
Consolidated profit		1,636	1,427

¹⁾ Adjustments to prior-year figures as detailed under "Changes to significant accounting policies and estimates" in the Notes.

²⁾ Net gains/losses from non-substantial contractual modifications are reported under Risk provisions for lending business.

Consolidated statement of comprehensive income

	Notes	2018 EUR in millions	2017 EUR in millions
Consolidated profit		1,636	1,427
Amounts reclassifiable to the income statement		n/a	202
Financial instruments	(39)	n/a	208
Deferred taxes on financial instruments	(39)	n/a	-6
Amounts not reclassified to the income statement		155	79
Net gains/losses from the change in own credit risk of liabilities designated at fair value through profit or loss	(39)	157	n/a
Defined benefit pension obligations	(39)	0	82
Deferred taxes on defined benefit pension obligations	(39)	-1	-3
Other comprehensive income, total		155	281
Consolidated comprehensive income		1,791	1,708

Other comprehensive income comprises amounts recognised directly in equity under Revaluation reserves. These amounts include income and expense from the change in own credit risk of liabilities designated at fair value through profit or loss, from financial instruments classified as available-for-sale financial assets (financial year 2017), changes in actuarial gains and losses for defined benefit pension obligations, and changes in deferred taxes reported depending on the underlying transaction.

Presentation of reclassification amounts included in the income statement

	2018 EUR in millions	2017 EUR in millions
Amounts relating to the reclassification of financial instruments	n/a	6
Amounts relating to the reclassification of deferred taxes on financial instruments	n/a	0
Total	0	6

In the previous year, Amounts relating to the reclassification of financial instruments also included amortisation of revaluation reserves related to the reclassification of securities and investments from the measurement category available-for-sale financial assets to the loans and receivables measurement category. Income recognised in the income statement was reported in the previous year with a negative sign preceding the amount, and expense with a positive sign.

Consolidated statement of financial position

Assets

	Notes	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Cash reserves	(42)	17,465	11,087
Loans and advances to banks	(7), (11), (12), (43), (71)	280,413	274,491 ¹⁾
Loans and advances to customers	(7), (11), (12), (44), (71)	126,878	127,759 ¹⁾
Risk provisions for lending business	(7), (13), (45)	-1,545	-1,457
Value adjustments from macro fair value hedge accounting	(8), (47), (71)	9,071	9,648
Derivatives designated for hedge accounting	(8), (48), (70), (71), (72)	9,512	9,074
Other derivatives	(7), (8), (49), (72)	5,274	5,145
Securities and investments	(7), (14), (15), (50), (70)	35,729	33,615
Investments accounted for using the equity method	(6), (51)	514	415
Property, plant and equipment	(16), (52)	958	950
Intangible assets	(17), (53)	225	252
Income tax assets	(54)	579	498
Other assets	(10), (55)	716	704 ¹⁾
Total		485,790	472,183

¹⁾ Adjustments to prior-year figures as detailed under "Changes to significant accounting policies and estimates" in the Notes.

Liabilities and equity

	Notes	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Liabilities to banks	(7), (18), (56), (70), (71)	8,220	5,990 ¹⁾
Liabilities to customers	(7), (18), (57), (70), (71)	12,303	9,886 ¹⁾
Certificated liabilities	(7), (18), (58), (70)	418,581	406,290
Value adjustments from macro fair value hedge accounting	(8), (59), (71)	98	119
Derivatives designated for hedge accounting	(8), (60), (70), (71), (72)	9,891	14,488
Other derivatives	(7), (8), (61), (72)	2,529	2,902
Provisions	(13), (19), (62)	3,028	2,877
Income tax liabilities	(63)	284	272
Other liabilities	(10), (64)	540	617 ¹⁾
Equity	(20), (65)	30,315	28,742
Paid-in subscribed capital		3,300	3,300
Capital reserve		8,447	8,447
Reserve from the ERP Special Fund		1,191	1,191
Retained earnings		17,371	15,500
Fund for general banking risks		600	600
Revaluation reserves	(7), (20)	-594	-295
Total		485,790	472,183

¹⁾ Adjustments to prior-year figures as detailed under "Changes to significant accounting policies and estimates" in the Notes.

Consolidated statement of changes in equity

Consolidated statement of changes in equity in the financial year 2018

	As of 31 Dec. 2017	IFRS 9 tran- sition effects	As of 1 Jan. 2018	Changes in consolidated group	Appropriation of consolidated comprehensive income 2018	As of 31 Dec. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Subscribed capital	3,750	0	3,750	0	0	3,750
less uncalled outstanding contributions	-450	0	-450	0	0	-450
Capital reserve	8,447	0	8,447	0	0	8,447
<i>of which promotional reserves from the ERP Special Fund</i>	7,150	0	7,150	0	0	7,150
Reserve from the ERP Special Fund	1,191	0	1,191	0	0	1,191
Retained earnings	15,500	236	15,735	0	1,636	17,371
Statutory reserve under Article 10 (2) KfW Law	1,875	0	1,875	0	0	1,875
Special reserve under Article 10 (3) KfW Law	9,207	0	9,207	0	884	10,092
Special reserve less the special loss account from provisioning pursuant to Section 17 (4) of the D-Mark Balance Sheet Law	21	0	21	0	0	21
Other retained earnings	4,396	236	4,632	0	751	5,383
Fund for general banking risks	600	0	600	0	0	600
Revaluation reserves	-295	-454	-749	0	155	-594
Valuation results from financial instruments (after tax)	277	-277	0	0	0	0
Valuation result from the change in own credit risk of liabilities designated at fair value through profit or loss	0	-178	-178	0	157	-21
Actuarial gains and losses from defined-benefit plan pension obligations (after tax)	-572	0	-572	0	-1	-573
Equity	28,742	-218	28,524	0	1,791	30,315

KfW's net income amounting to EUR 884 million was used to increase the special reserve under Article 10 (3) of the KfW Law.

The difference to the consolidated comprehensive income is allocated to Other retained earnings or – if recognised directly in equity – to Revaluation reserves.

The following tables as well as Notes 20 and 65 provide details on the Consolidated statement of changes in equity.

Statement of changes in revaluation reserves in financial year 2018

	Securities and investments	Liabilities to banks FVD (share of own credit risk)	Liabilities to customers FVD (share of own credit risk)	Own bonds and promissory note loans in the FVD category (share of own credit risk)	Actuarial gains and losses from defined benefit pension obligations	Effects of deferred taxes	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 31 Dec. 2017	277	0	0	0	-603	32	-295
IFRS 9 initial implementation effects	-277	-7	-42	-128	0	0	-454
As of 1 Jan. 2018	0	-7	-42	-128	-603	32	-749
Changes recognised directly in equity							
Change in own credit risk for liabilities designated at fair value through profit or loss	n/a	2	14	140	0	0	157
Changes in revaluation reserves due to changes in actuarial valuation parameters	n/a	0	0	0	0	-1	-1
Total changes recognised directly in equity	n/a	2	14	140	0	-1	155
As of 31 Dec. 2018	n/a	-5	-29	12	-603	30	-594

Consolidated statement of changes in equity in financial year 2017

	As of 1 Jan. 2017	Changes in consolidated group	Appropriation of comprehensive income 2017	Total as of 31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Subscribed capital	3,750	0	0	3,750
less uncalled outstanding contributions	-450	0	0	-450
Capital reserve	8,447	0	0	8,447
<i>of which promotional reserves from 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	14,092	-20	1,427	15,500
Statutory reserve under Article 10 (2) KfW Law	1,875	0	0	1,875
Special reserve under Article 10 (3) KfW Law	8,312	0	895	9,207
Special reserve less the special loss account from provisioning pursuant to Section 17 (4) of the D-Mark Balance Sheet Law	21	0	0	21
Other retained earnings	3,885	-20	532	4,396
Fund for general banking risks	600	0	0	600
Revaluation reserves	-576	0	281	-295
Valuation results from financial instruments (after tax)	75	0	202	277
Actuarial gains and losses from defined-benefit plan pension obligations (after tax)	-650	0	79	-572
Equity	27,055	-20	1,708	28,742

Change in the revaluation reserves from financial instruments including the related deferred taxes and in the investments accounted for using the equity method in the financial year 2017

	Bonds and other fixed-income securities	Shares and other non-fixed income securities	Equity investments	Effects of deferred taxes	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	75	0	0	0	75
A. Changes recognised in the income statement					
Decrease due to disposals	0	0	0	0	0
Increase due to disposals	0	0	0	0	0
Decrease due to impairments	0	0	0	0	0
Amortisation after reclassification	6	0	0	0	6
Changes in consolidated group	0	0	0	0	0
Total changes recognised in the income statement	6	0	0	0	6
B. Changes recognised directly in equity					
Changes in revaluation reserves due to impairment reversal only for equity instruments	0	0	0	0	0
Changes in revaluation reserves due to fair value changes	38	0	165	-6	196
Total changes recognised directly in equity	38	0	165	-6	196
As of 31 Dec. 2017	118	0	165	-6	277

Change in the revaluation reserves from actuarial gains and losses for defined benefit pension obligations including the related deferred taxes in the financial year 2018

	Actuarial gains and losses for defined benefit pension obligations	Effects of deferred taxes	Total
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	-603	32	-572
Changes recognised directly in equity	0	-1	-1
Changes in revaluation reserves due to changes in actuarial valuation parameters	0	-1	-1
As of 31 Dec. 2018	-603	30	-573

Change in the revaluation reserves from actuarial gains and losses for defined benefit pension obligations including the related deferred taxes in the financial year 2017

	Actuarial gains and losses for defined benefit pension obligations	Effects of deferred taxes	Total
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	-685	35	-650
Changes recognised directly in equity	82	-3	79
Changes in revaluation reserves due to changes in actuarial valuation parameters	82	-3	79
As of 31 Dec. 2017	-603	32	-572

Consolidated statement of cash flows

	2018	2017
	EUR in millions	EUR in millions
Consolidated profit	1,636	1,427
Non-cash items included in consolidated profit and reconciliation to cash flow from operating activities:		
Depreciation, amortisation, impairment and reversal of impairment losses (loans and advances, property, plant and equipment, securities and investments) and changes in risk provisions for lending business	-190	401
Changes in other provisions	200	190
Other non-cash expenses and income	112	0
Profit/loss from the disposal of securities and investments and property, plant and equipment	0	-16
Other adjustments	-2,176	-2,941 ¹⁾
Subtotal	-418	-940¹⁾
Changes in assets and liabilities from operating activities after adjustment for non-cash items:		
Loans and advances to banks	-5,924	1,603 ¹⁾
Loans and advances to customers	912	8,625 ¹⁾
Securities	-2,098	-704
Other assets relating to operating activities	-134	25,605 ¹⁾
Liabilities to banks	2,247	-13,847 ¹⁾
Liabilities to customers	2,405	-1,748 ¹⁾
Certificated liabilities	12,292	-16,285
Other liabilities relating to operating activities	-5,066	-4,510 ¹⁾
Interest and dividends received	3,687	2,820
Interest paid	-1,459	-634
Income tax paid	-81	-56
Cash flow from operating activities	6,363	-71¹⁾
Property, plant and equipment:		
Cash proceeds from disposals	1	2
Cash payments for acquisition	-104	-131
Securities and investments (equity investments):		
Cash proceeds from disposals/Cash payments for acquisitions	118	-86
Cash flow from investing activities	15	-215
Cash proceeds from/ Cash payments for capital increases/decreases	0	0
Changes from other financing activities	0	-200
Cash flow from financing activities	0	-200
Cash and cash equivalents as of the end of the previous period	11,087	11,573
Cash flow from operating activities	6,363	-71 ¹⁾
Cash flow from investing activities	15	-215
Cash flow from financing activities	0	-200
Cash and cash equivalents as of the end of the period	17,465	11,087

¹⁾ Adjustments to corresponding prior-year figures as detailed under "Changes to significant accounting policies and estimates" in the Notes.

The balance of Cash and cash equivalents reported in the statement of cash flows in accordance with IAS 7 is identical to the statement of financial position item Cash reserves and thus comprises cash on hand and balances with central banks.

The Statement of cash flows shows the changes in Cash and cash equivalents in the financial year classified as the Cash flows from operating activities, investing activities and financing activities. Other adjustments largely comprise the adjustments for net interest income in the amount of EUR –2,228 million (2017: EUR –2,393 million) as well as for valuation results amounting to EUR 158 million (2017: EUR –525 million).

For more information on KfW Group’s liquidity risk management, see “Risk report – Liquidity risk”.



Notes

Accounting policies

(1) Basis of presentation

KfW is the promotional bank of the Federal Republic of Germany and was founded in 1948 as a public law institution based in Frankfurt am Main.

The Executive Board of KfW is responsible for the preparation of the consolidated financial statements and the group management report. After the recommendation of the Audit Committee, the consolidated financial statements and the group management report are submitted to KfW's Board of Supervisory Directors for approval. As of 5 March 2019¹⁾, no significant events have occurred since the reporting date (31 December 2018).

As of the reporting date, KfW Group comprises KfW and five subsidiaries that are fully consolidated. The first-time consolidation of KfW Capital GmbH & Co. KG in the financial year 2018 increased the number of subsidiaries compared with the previous year by one. As in the previous year, one joint venture and four associated companies are accounted for using the equity method.

Pursuant to Section 315e (1) of the German Commercial Code (Handelsgesetzbuch – "HGB"), the consolidated financial statements as of 31 December 2018 have been prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU), and with the interpretations set out by the IFRS Interpretations Committee (IFRS IC), as mandatory consolidated accounts in accordance with Article 4 of Regulation (EC) No. 1606/2002 (IAS Regulation) of the European Parliament and of the Council of 19 July 2002, as well as further regulations on the adoption of certain international accounting standards. The standards and interpretations that apply are those that have been published and endorsed by the European Union as of the reporting date.

The supplementary provisions of the German Commercial Code that also apply to IFRS consolidated financial statements have been taken into account. The group management report prepared in accordance with Section 315 of the German Commercial Code includes the risk report with risk-oriented information on financial instruments as set out in IFRS 7, as well as information on capital and capital management as set out in IAS 1.134.

The consolidated financial statements were prepared in accordance with accounting policies that are consistent across KfW Group and are prepared on a going concern basis. The companies included in the consolidated financial statements have prepared their annual financial statements as of 31 December 2018, except for some associated companies accounted for using the equity method, where financial statements as of 30 September 2018 were used. Material events for the latter companies as of the reporting date were also taken into account.

The accounting policies in the consolidated financial statements were applied consistently.

The reporting currency is the euro. Unless otherwise specified, all amounts are stated in millions of euros (EUR in millions).

¹⁾ Date of Executive Board approval of publication.

(2) Accounting standards that are new, amended or to be adopted for the first time

A. Impact of new or amended IFRS/IFRIC interpretations adopted for the first time in financial year 2018

In July 2014, the IASB published IFRS 9 “Financial Instruments”, which will replace IAS 39 “Financial Instruments: Recognition and Measurement”. The standard – implemented into European law in November 2016 – is effective for financial years beginning on or after 1 January 2018. IFRS 9 contains new rules for classification and measurement of financial instruments and for impairment and hedge accounting. Detailed information on first-time application of IFRS 9 can be found in the “IFRS 9 Transition report”.

The IASB published “Prepayment Features with Negative Compensation (Amendments to IFRS 9)” in October 2017. This enables instruments with negative compensation payments to be measured at amortised cost or fair value with changes reported in Other comprehensive income. The amendment also contains clarification on the modification of financial liabilities that does not result in derecognition. The amendment to IFRS 9 is to be applied for financial years beginning on or after 1 January 2019. KfW has exercised the option of already applying this amendment for the 2018 reporting year.

In May 2014, the IASB published IFRS 15 “Revenue from Contracts with Customers”, replacing standards IAS 11 “Construction Contracts”, IAS 18 “Revenue”, IFRIC 13 “Customer Loyalty Programmes”, IFRIC 15 “Agreements for the Construction of Real Estate”, IFRIC 18 “Transfers of Assets from Customers” and SIC 31 “Revenue – Barter Transactions Involving Advertising Services”. Furthermore, in April 2016, the IASB published “Clarifications to IFRS 15 Revenue from Contracts with Customers”. Application of the standard is mandatory for financial years beginning on or after 1 January 2018.

Applying IFRS 15 will not result in any major changes for KfW compared to IAS 18 and consequently will not have any material impact on the group’s net assets, financial position and results of operations. Detailed information on first-time application of IFRS 15 can be found in Note 10 “Revenue from Contracts with Customers”.

The amendments to IFRS 2 “Share-based Payment” (June 2016, Classification and Measurement of Share-based Payment Transactions), applied for the first time, did not have any impact on the group’s net assets, financial position and results of operations.

The amendments to IFRS 4 “Insurance Contracts” (September 2016, application of IFRS 9 “Financial Instruments” together with IFRS 4 “Insurance Contracts”) applied for the first time, did not have any impact on the group’s net assets, financial position and results of operations.

The interpretation IFRIC 22 “Foreign Currency Transactions and Advance Consideration”, applied for the first time, did not have any impact on the group’s net assets, financial position and results of operations.

The “Transfers of Investment Property (Amendments to IAS 40)” published in December 2016 and applied for the first time, did not have any impact on the group’s net assets, financial position and results of operations.

The amendments to various standards to be applied for the first time due to the annual improvements to IFRSs 2014–2016 cycle (December 2014) did not have any impact on the group’s net assets, financial position and results of operations.

B. Impact of new or amended IFRS/IFRIC interpretations to be adopted in the future that were endorsed by the EU into European law before the reporting date

In January 2016, the IASB published the new IFRS 16 “Leases” standard, replacing IAS 17 “Leases”, IFRIC 4 “Determining Whether an Arrangement Contains a Lease”, SIC 15 “Operating Leases – Incentives” and SIC 27 “Evaluating the Substance of Transactions in the Legal Form of a Lease”. The standard is to be applied for financial years beginning on or after 1 January 2019.

KfW Group will apply IFRS 16 “Leases” beginning 1 January 2019. Implementation of the new accounting model means that for leases in future, KfW as lessee must recognise each right of use as an asset and the associated lease obligation as a liability in the statement of financial position. IFRS 16 grants the option for leases of low value assets or with a short term (lease term of 12 months or less) of accounting for the lease payments as an expense and thus continuing to recognise them off the balance sheet. KfW has elected to apply these simplifications for leases with a lease term of less than 12 months.

The initial implementation of IFRS 16 does not have any significant effects on net assets, financial position and earnings position. Minor effects arise primarily from leasing buildings, as the respective rights of use amounting to around EUR 82 million will be recognised on the balance sheet in the future. These assets are matched by lease liabilities of the same amount. At present these cases concern an operating lease pursuant to IAS 17. The associated lease expenses are currently recognised in the income statement.

KfW will apply the modified retrospective approach in transitioning to IFRS 16 and not adjust the corresponding prior-year figures.

The interpretation IFRIC 23 “Uncertainty over Income Tax Treatments” under IAS 12 “Income Taxes” was published in June 2017. It clarifies accounting for uncertainties relating to income taxes. The interpretation is to be applied for financial years beginning on or after 1 January 2019. Its application will have no impact on the group’s net assets, financial position earnings position.

C. New or amended IFRS/IFRIC interpretations to be applied in the future that were published by the EU before reporting date but have not yet been endorsed into European law:

Amendments were made in December 2017 to IFRS 3 “Business Combinations”, IFRS 11 “Joint Arrangements”, IAS 12 “Income Taxes” and IAS 23 “Borrowing Costs” as part of the Annual Improvements to IFRSs 2015–2017 Cycle. The aim of the Annual Improvements is to improve the quality of the standards by clarifying requirements or wording. Amendments from the 2015–2017 cycle are to be applied for financial years beginning on or after 1 January 2019. Implementation into European law is expected in 2019.

The IASB published “Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)” in October 2017. The amendments contain clarifications to delimit the application scope of IAS 28 “Long-term Interests in Associates and Joint Ventures” and IFRS 9 “Financial Instruments”. It includes in the application scope of IFRS 9 long-term interests in an associate or joint venture that form part of a net investment in the associate or joint venture but to which the equity method is not applied. The amendments to IAS 28 are to be applied for financial years beginning on or after 1 January 2019. Implementation into European law is expected in 2019.

“Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)” was published in February 2018. The amendments relate to the accounting treatment of amendments, curtailments or settlements of a defined benefit plan. The amendments are to be applied for financial years beginning on or after 1 January 2019. Implementation into European law is expected in 2019.

The IASB published “Definition of a Business (Amendments to IFRS 3)” in October 2018. The amendments are aimed at resolving the difficulties for an entity in determining whether it has acquired a business or a group of assets. The amendments are relevant for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after 1 January 2020. Implementation into European law is expected in 2019.

IFRS 17 “Insurance Contracts” was issued in May 2017. This standard is intended to replace IFRS 4 “Insurance Contracts” in the future. IFRS 17 sets out principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the standard. IFRS 17 is likely to be applied for financial years beginning on or after 1 January 2021.

The IASB issued “Definition of Material (Amendments to IAS 1 and IAS 8)” in October 2018. The amendments are aimed at standardising the definition of ‘material’. IAS 1 “Presentation of Financial Statements” now contains a standard definition of ‘material’ as well as the corresponding text numbers; the definition in IAS 8 “Accounting Policies, Changes in Accounting Estimates and Errors” will be replaced by a reference to IAS 1 in future. The amendments are to be applied for financial years beginning on or after 1 January 2020. Implementation into European law is expected in 2019.

(3) Changes to significant accounting policies and estimates

A. Adjustments due to changes in methods

The implementation of new financial architecture has resulted in structural changes in reporting:

In the **statement of comprehensive income**, these are largely changes in reporting interest income/expenses that do not affect net interest income. Interest income from macro hedge derivatives is no longer recognised gross, but rather net through profit or loss under Interest income, corresponding to the hedged asset item. There is no net effect on group interest income.

Moreover, negative interest from assets is recognised under Interest income and negative interest from liabilities under Interest expenses.

In the **statement of financial position**, negative interest on financial assets is recognised under Receivables and negative interest on financial liabilities under Liabilities. This results in a lower balance sheet total.

The use of a new sector classification results in individual cases in changes in the counterparty allocation of loan receivables with an asset swap from Loans and advances to customers to Loans and advances to banks.

The supplemental agreements concluded as part of export and project finance for the purpose of settling payment with customers were previously reported under Other assets and Other liabilities. With the transition to the new financial architecture, these supplemental (loan) agreements are now consistently reported together with the loan agreement under Loans and advances to customers.

The changes in reporting do not affect consolidated profit.

In the **Notes**, the business sector structure was retrospectively adapted to the changed organisational structure and product responsibility in domestic business in line with segment reporting by business sector. The new business sectors Mittelstandsbank & Private Kunden (SME Bank & Private Clients), Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) and KfW Capital replace the previous two business sectors Mittelstandsbank (SME Bank) and Kommunal- und Privatkundenbank/Kreditinstitute (Municipal and Private Client Bank/Credit Institutions).

Moreover, financial guarantees are retrospectively reported separately from contingent liabilities in the Notes.

Summary of the adjustments to corresponding prior-year figures

The following table shows the effects of changes in methods on the items affected in the statement of comprehensive income for 2017:

Consolidated statement of comprehensive income

	Before adjustment 1 Jan. 2017 to 31 Dec. 2017	Adjustment	After adjustment 1 Jan. 2017 to 31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions
Interest income	7,296	-4,082	3,213
Interest expense	4,903	-4,082	821
Net interest income	2,393	0	2,393

The following table shows the effects of changes in methods on the carrying amounts of the items in the statement of financial position affected as of 31 December 2017:

Consolidated statement of financial position

	Before adjustment 31 Dec. 2017	Adjustment	After adjustment 31 Dec. 2017
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	274,296	195	274,491
Loans and advances to customers	127,951	-192	127,759
Other assets	872	-168	704
Assets		-164	
Liabilities to banks	6,002	-13	5,990
Liabilities to customers	9,889	-4	9,886
Other liabilities	765	-148	617
Liabilities and equity		-164	

B. Adjustments due to changes in estimates

HEUBECK AG published the new Heubeck 2018 G actuarial tables for calculation of pension scheme liabilities as of 5 October 2018. The tables contain new estimates and thus take account of current mortality, disability, marital status and fluctuation probabilities.

KfW has applied the new tables as a basis for measuring pension scheme liabilities effective 31 December 2018. Application of the new tables does not have any significant impact on the amount of the provisions.

(4) Judgements and accounting estimates

The consolidated financial statements include amounts based on management's judgements and/or estimates and assumptions which are determined to the best of our ability and in accordance with the applicable accounting standard. Actual results realised in a future period may differ from these estimates. Material judgements, estimates and assumptions are required, in particular, for calculating risk provisions (including risk provisions for contingent liabilities and irrevocable loan commitments), recognising and measuring provisions (primarily for pension liabilities and legal risks), measuring the fair value of financial instruments based on valuation models (including determining the existence of an active market), assessing and measuring impairment of assets, and assessing the utilisation of deferred tax assets. The estimates and the assumptions underlying these estimates are reviewed on an ongoing basis and are based, among other things, on historical experience or expected future events that appear likely given the particular circumstances. Where judgements as well as estimates and their underlying assumptions were required, the assumptions made are explained in the relevant notes.

KfW does not expect any deviations from its assumptions and does not foresee any uncertainties in its estimates that could result in a material adjustment to the related assets and liabilities within the next financial year. Given the strong dependency on the development of the economy and financial markets, however, such deviations and uncertainties cannot be fully ruled out. These risks are nevertheless low because valuation models – especially those involving the use of inputs not based on observable market data – are employed to measure only small parts of receivables, securities, investments and borrowings measured at fair value, on the one hand, and only a small portion of financial derivatives used to economically hedge risk, on the other hand.

(5) Group of consolidated companies

All significant subsidiaries, joint ventures and associated companies are included in the consolidated financial statements.

Subsidiaries are all business units (including structured entities) over which the group exercises control. Control exists when a group is exposed or entitled to variable cash flows through its relationship and has the opportunity to use its power of disposal to influence the amount of such cash flows. Subsidiaries are included in the consolidated financial statements (full consolidation) from the point at which control is transferred to the group. They are deconsolidated when control is lost.

Joint ventures and associated companies are included in the consolidated financial statements in accordance with IFRS 11/IAS 28 if a joint agreement is in place or the group has significant influence. Significant influence exists when KfW can participate in financial and business policy decisions regarding the associated company even if it does not have sole or joint control.

The composition of the consolidated group is presented in the Notes under “List of KfW Group shareholdings”.

(6) Basis of consolidation

Consolidation involves revaluing the total assets and liabilities of the subsidiaries at the acquisition date, irrespective of the equity interest held, and incorporating them into the consolidated statement of financial position. The resulting adjustments from hidden reserves and hidden burdens are treated in accordance with the applicable standards. If the revaluation adjustments result in an excess compared to acquisition cost, this excess amount is capitalised as goodwill. No goodwill is currently recognised.

Any intercompany assets and liabilities as well as expenses and revenues from transactions between group companies are eliminated. Intercompany profits between the fully consolidated companies are also eliminated.

Investments in associates are accounted for using the equity method. The group's share of the profits or losses of associates is recognised as a separate line item in the income statement.

There are no minority interests within KfW Group.

(7) Financial instruments

A. Classification and measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The rules under IFRS 9 serve as the basis for recognition and measurement of financial instruments. In the Commission Regulation of 22 March 2018, IFRS 9 was amended such that termination rights with negative compensation do not need to be measured at fair value. KfW has exercised the option of early application of this amendment for the 2018 reporting year.

Initial recognition is as of the settlement date for non-derivative financial instruments and as of the trade date for derivatives. On this date, financial instruments (financial assets and financial liabilities, and derivatives) must be assigned to a category that determines their subsequent measurement.

The classification and subsequent measurement of debt instruments is based on the business model and characteristics of the contractual cash flows (solely payments of principal and interest, or SPPI criterion). Equity instruments, on the other hand, must always be measured at fair value.

IFRS 9 distinguishes between four categories of measurement:

1. At amortised cost
2. At fair value through profit or loss ("FVTPL"), with the two sub-categories:
mandatory and designated
3. At fair value through other comprehensive income ("FVTOCI")
with no recycling into profit or loss
(not used at KfW)
4. At fair value through other comprehensive income ("FVTOCI") with recycling into
profit or loss
(not used at KfW)

Instruments are assigned to business models on a portfolio basis. IFRS 9 provides for three business models to manage financial assets:

1. Hold to collect – financial assets are held with the objective of collecting contractual cash flows.
2. Hold to collect and sell – financial assets are held with the objective of both collecting the contractual cash flows and selling the financial assets.
(not used at KfW)
3. Hold to sell – financial assets held with the objective of selling, or which do not fulfil the "hold to collect" or "hold to collect and sell" criteria.

The cash flows of financial instruments are then to be assessed for each individual financial asset as to whether they are consistent with a basic lending arrangement and thus consist solely of payments of principal and interest (SPPI) on the outstanding loan balance. If payments contain payments beyond solely payments of principal and interest, they must be measured at fair value. IFRS 9 defines interest as compensation for the time value of money and credit risk assumed, although it can also include a premium for liquidity risk. As is customary for the sector, compensation (e.g. for equity or administrative costs), and a profit margin may also be included. KfW employs group-wide rules and a standardised classification of contractual ancillary agreements in assessing the SPPI criterion.

A financial asset must have been allocated to a portfolio with the “hold to collect” business model and meet the cash flow criterion for measurement at amortised cost. The KfW business model is focused on a long-term sustainability approach. As KfW does not enter any transactions with the intention of generating a short-term profit, the Executive Board has decided on the “hold to collect” business model for all credit portfolios (except for the two cases mentioned below). Moreover, the group’s lending business is largely consistent with the definition of a basic lending arrangement and fulfils the SPPI criterion. The two exceptions to the “hold to collect” business model in the lending business are as follows:

- Holding arrangements for the Federal Republic of Germany: Holdings KfW maintains by mandate for the Federal Republic of Germany are not subject to KfW management. Sales are to be executed upon the Federal Government’s instruction. As KfW cannot assume that these positions will remain in the portfolio for the long term, it cannot assume a “hold to collect” intention.
- KfW IPEX-Bank’s syndication business: This business focuses on short-term sale and does not pursue the objective of holding and selling the assets in equal measure.

Both cases are assigned to the “hold to sell” business model and are measured at FVTPL.

Securities portfolios are also assigned to the “hold to collect” business model. This applies to KfW’s liquidity portfolio as well. As KfW places minimum requirements on the ECB-eligibility of securities with regard to its liquidity portfolio, liquidity is secured by means of repo transactions. This therefore means that sales from the liquidity portfolio are unnecessary. The ancillary agreements are recorded and evaluated in the system to check the SPPI criterion. Securitisations are checked on a case-by-case basis to address the special rules for “contractually linked instruments”. Consequently, KfW securities portfolios are largely measured at amortised cost using the effective interest method, as is its lending business.

KfW’s investments from equity finance are accounted for at fair value through profit or loss, as these are either equity instruments or debt instruments with no fixed interest or principal payments. KfW does not exercise the option of FVTOCI for equity instruments.

Consequently, KfW only applies the first two categories for financial assets: amortised cost and fair value through profit and loss.

IFRS 9 only provides for two categories for financial liabilities: amortised cost and fair value through profit and loss. Financial liabilities are accounted for at fair value through profit or loss if they are classified as held for trading or assigned to this measurement category at initial recognition through application of the fair value option; otherwise they are accounted for at amortised cost. The classification must be irrevocably determined at initial recognition. Reclassification is not permitted.

All non-derivative financial liabilities are held for non-trading purposes at KfW. The financial liabilities for which the fair value option has not been exercised are classified as liabilities at amortised cost. These are thus measured at amortised cost using the effective interest method. This category is used group wide for borrowings reported in Liabilities to banks and customers as well as Certificated liabilities. The fair value option is exercised for some structured liabilities such as promissory note

loans (*Schuldscheindarlehen*) and certificated liabilities. This concerns liabilities with bifurcated structures as well as liabilities with non-bifurcated structures for which there is an accounting mismatch unless they meet the requirements for application of hedge accounting. In exercising the fair value option, valuation effects resulting from changes in own credit risk are recognised directly in equity in the revaluation reserve.

Derivatives are concluded at KfW solely for hedging purposes and measured at fair value through profit or loss.

Derivatives are recognised as of the trade date; all other financial assets are recognised as of the settlement date. They are derecognised when the contractual rights from the assets have expired, the power of disposal or control has been transferred, or a substantial portion of the risks and rewards has been transferred to a third party unrelated to KfW Group. Financial liabilities are derecognised if the obligations specified in the contract have been discharged or cancelled, or have expired.

For transactions mandated by the German Federal Government in accordance with Article 2 (4) of the KfW Law, the group's general recognition procedures for the relevant financial instruments are applied. Measurement is based on the relevant individual contractual terms and conditions concerning risk allocation.

Financial instruments are initially recognised at fair value.

Financial instruments subsequently measured at amortised cost are measured based on the fair value at initial recognition, taking into account any principal repayments, impairments, and where applicable, contractual amendments. The amortisation of premiums and discounts, transaction costs and fees is performed in accordance with the effective interest method on the basis of the contractual cash flows. Discounts are amortised in the promotional lending business until the end of the first fixed interest rate period (generally five to ten years).

Subsequent measurement at fair value for recognition in the financial statements or for the disclosure of financial instruments in the Notes is presented in section D. Fair value.

Classes for financial instruments have been largely defined in agreement with the group's business model, which is focused on the lending business – carried at (amortised) cost – and are based on products (e.g. Loans and advances to banks broken down into money-market transactions and loans and advances) or on the line items of the statement of financial position comprising these products. The balance sheet items thus generally reflect a view based on the material risks encompassed by each against the backdrop of interest rate and currency risk management at the overall bank level (interaction between non-derivative financial instruments and derivative hedging transactions). Information about the type and extent of risks associated with financial instruments is also provided in the risk report section of the group management report.

B. Impairments

At KfW Group, provisions for loan losses are accounted for in accordance with IFRS 9 requirements and applied to the following assets:

- Loans and receivables as well as third-party securities measured at amortised cost
- Loan commitments not measured at fair value through profit or loss
- Financial guarantees not measured at fair value through profit or loss

Impairments are calculated based on a three-stage model. All assets are assigned to stage 1 at initial recognition and an impairment is calculated that is equivalent to the 12-month expected credit loss (“ECL”).

Subsequently, expected credit losses are calculated based on changes in a financial instrument’s credit risk since initial recognition. If there has been a significant deterioration of the credit risk (stage 2) or objective evidence of impairment is identified (stage 3), expected credit losses are to be calculated over the remaining lifetime (lifetime ECLs). If, in contrast, there has been no significant increase in credit risk, the financial instrument is still assigned to stage 1 and only the ECLs for the term of the instrument resulting within the next 12 months from potential loss events are taken into account.

A lifetime ECL is recognised for financial instruments in stage 2 as risk provisioning. This is based on risk parameters oriented to regulatory and internal credit risk models for parameterisation of probability of default (“PD”), loss given default (“LGD”) and exposure at default (“EAD”). Interest income for financial instruments in stage 2 continues to be recorded using the effective interest method based on the gross carrying amount.

A lifetime ECL is also recognised for financial instruments in stage 3 as risk provisioning. Assignment to stage 3 and thus classification as impaired is undertaken in line with the group-wide default definition, which reflects the definition of “default of an obligor” in accordance with Article 178 of the Capital Requirements Directive (“CRR”). The definition distinguishes between the 90 days past due and unlikely to pay criteria. A distinction is made in calculating impairment in stage 3 between significant (non-retail) and non-significant (retail) financial instruments. Impairment for retail business in stage 3 is calculated based on risk parameters and applying a PD of 1. Individual impairment is recognised for incurred losses and is computed on the basis of individual loans for significant portfolios in the lending business. The amount of the impairment loss equals the difference between the carrying amount of the loan and the present value of expected future cash flows from interest, redemption payments and collateral cash flows. Any reversals of individual impairment losses are accounted for through profit or loss. Interest income for these financial instruments is recognised based on the net carrying amount.

In contrast to the lending business, expected losses for defaulted securities are not calculated based on cash flow but instead on market values in stage 3. This is due to the assumption that the market value in the case of impairment is primarily influenced by credit rating factors.

Purchased or originated credit-impaired financial assets (“POCI”) are not significant due to KfW’s business model. The bank has therefore decided not to separately disclose these special requirements. If there are individual cases that meet the POCI definition, such assets are therefore assigned to stage 3 based on the default rating.

KfW takes a nuanced approach to assignment to stages that takes both rating and qualitative information into account.

The bank uses the rating at initial recognition, taking account of the migration expected until the time of measurement (initial forward rating) to assess whether a transaction can migrate from stage 1 to stage 2. This rating, which is relevant for pricing, is compared with the rating at the time of measurement. This ensures that only transactions for which there is a significant deviation from the originally expected migration are transferred to stage 2. Concessions (contractual modifications) made to the obligor for economic or legal reasons (forbearance), are also considered as a factor in transfer to a subsequent stage.

As there is no individual rating specific to an obligor in the retail business, transfers from stage 1 to stage 2 are based on other credit deterioration indicators, such as 30 days past due status or forbearance information.

KfW does not exercise the option of waiving assessment on whether there has been a significant increase in credit risk, if the instrument is determined to have a 'low credit risk' at the reporting date (low credit risk exemption).

The IFRS 9 impairment model takes a symmetrical approach to migration, meaning that forward migration to stage 2 or stage 3 as well as reversion back from stages 2 and 3 are possible. Periods of good conduct are taken into account in backward migration.

Expected credit losses for stage 1 and stage 2 and the retail business in stage 3 are calculated based on individual transactions using statistical risk parameters. The regulatory and internal credit risk models for parametrisation of PD, EAD and LGD that KfW uses in risk management serve as the basis for this calculation. These parameters are adequately adjusted to determine expected credit losses in accordance with IFRS 9. This enables uniform credit risk modelling in line with supervisory law, risk management and IFRS requirements even though they may individually differ somewhat in scope.

Calculation of 1-year PD is based on the internal rating system, in which every exposure is assigned a PD score that corresponds to a rating scale of 18 levels for non-defaulted transactions ("PL") and 2 levels for defaulted transactions ("NPL"). The lifetime PDs are derived from the 1-year PD via migration matrices. For IFRS 9-compliant PD modelling, the internal credit risk parameters are adjusted by placing a greater weight on macroeconomic factors from a point-in-time ("PIT") perspective. They are adjusted through segment and rating-specific modelling of PD premiums and discounts on regulatory PD (through-the-cycle PD). This is based on expert estimates of the economic situation of sectors and countries, with assessment of expected effects, taking into account forward-looking information. This approach differs for the retail business, for which premiums and discounts are calculated applying an expert model based on econometric factors.

LGD is the loss ratio that results in the event of default after taking collateral into account. In accordance with IFRS 9 impairment requirements, a multi-year view without taking internal costs into account and without any downturn components is generally required. The regulatory LGD parameters are adjusted accordingly so that internal costs and downturn components for IFRS 9 are not included in the calculation of expected credit losses and a multi-year perspective is enabled.

The EAD per time bucket corresponds to the loan drawdown expected at the time of default, taking into account additional drawings on open lines of credit. For the off-balance sheet portion, the expected drawdown is calculated based on credit conversion factors (“CCFs”).

An asset is written off in the event that it or a portion thereof is estimated as irrecoverable. In the non-retail business, this is not performed until there is no longer a realistic prospect of recovery, as, for instance, all collateral has been realised or, in the event of insolvency, creditor quotas have been distributed or insolvency proceedings have been discontinued for lack of assets. Write-offs in the retail business are performed pursuant to defined criteria such as insolvency or a fixed default period, which are both related to termination of the loan. Recovery is pursued as long as it is economically viable.

In the case of a write-off, the gross carrying amount is reduced by the amount of the write-off. Current provisions for loan losses are utilised first, and any remaining amount is written off directly.

Levels were assigned retrospectively for all relevant assets and off-balance sheet transactions at initial recognition. The option of determining the lifetime expected credit losses of all existing financial instruments unless they are low credit risk at initial recognition and at each subsequent reporting date, was therefore not utilised.

C. Contractual modifications

IFRS 9 defines contractual modifications as an amendment of contractual cash flows due to market developments or financial difficulties. These can be indexed to the market rate or credit rating. In contrast, an adjustment of contractual payments agreed at the time the contract was concluded and, thus, intrinsic to the contract, is not deemed a contractual modification.

For modification of contractual payments of a financial asset measured at amortised cost, an assessment is first made as to whether the asset is subject to partial or full derecognition. Partial derecognition is defined as owing to an event that affects the nominal value of the financial asset, such as, (partial) waivers and unscheduled (partial) principal repayments, in particular. Where a financial asset is derecognised, the new financial asset recognised is treated as new business. The following rules are applied to all other contractual modifications.

Substantial contractual modifications result in derecognition of financial assets even if the same or the modified contract legally remains valid. The modified financial instrument is treated according to IFRS 9 as a new contract and reclassified on the basis of general IFRS 9 classification criteria. Derecognition resulting from substantial modification is not relevant for the “hold to collect” business model. In the case of substantial modification of credit-impaired financial assets (non-performing loans – “NPLs”), the impairment loss is adjusted at derecognition. The amount of adjustment is the difference between the previous net carrying amount of the derecognised asset and the fair value of the newly recorded asset. The reduction in loan loss provisions is then recorded as utilisation at the time of derecognition. There are no further gains or losses resulting from the derecognition.

There is no derecognition for non-substantial contractual modifications. A revaluation of the gross carrying amount of the modified financial instrument is performed instead. The resulting valuation difference is recognised in profit or loss as a modification gain or loss. The modification gain or loss reflects the effects on net present value of the contractually agreed upon change in cash flows. The original effective interest rate is applied for discounting cash flows. Then, on subsequent reporting dates, the original effective interest rate is applied to what is at that time the current (modified) cash flow for discounting. An amortisation result is calculated as the delta to the amortised costs of the previous reporting date on the basis of the amortised costs calculated using this method. This result is reported as a component of Net interest income. This therefore yields an amortisation amount that partially represents the original premium/discount but also includes amortisation of the modification gain/loss.

The modification list serves as the group-wide basis for identification of relevant contractual modifications. Differentiation between substantial and non-substantial modifications is made by means of qualitative analysis based on the cash flow criterion:

- If a contract modification does not fulfil the cash flow criterion, it is classified as substantial. This includes contractual modifications such as agreement on performance-related interest payments or performance-related payments after successful restructuring. Such contractual modifications are typically made in the context of complex restructuring.
- Changes in borrowers and currency without a contractual currency change option are also deemed substantial modifications.
- Any other contractual modifications that fulfil the cash flow criterion are not deemed substantial. These include less complex contractual modifications, such as interest rate adjustments, principal repayment deferrals, interest and repayment forbearance (interest rate unchanged).

Since a substantial modification usually means a failure to fulfil the cash flow criterion, the newly recorded financial assets are subsequently measured at fair value.

In the event of a non-substantial modification, an assessment must be made of whether the credit risk has increased significantly and whether a stage transfer may consequently be necessary. A credit risk-related contractual modification triggers an ad hoc rating as an early warning signal or at least a documented review of the need for an ad hoc rating in accordance with requirements for early detection of risks.

At KfW Group, modification gains and losses with no related derecognitions are reported net in a separate sub-item under "Risk provisions for lending business".

D. Fair value

Subsequent measurement at fair value, which, depending on the measurement category, is regularly determined either for recognition in the statement of financial position or for the disclosure of financial instruments in the Notes, is based on the following hierarchy at KfW Group:

Active market (allocation to the “Quoted market price” level)

The best objective evidence of fair value is provided by published price quotations in an active market. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available and those prices represent current – i.e. traded on the reporting date or shortly before – and regularly occurring market transactions on an arm’s length basis. Together with the traded nominal volumes, the contract sizes and the number of contracts, this assessment takes into account in particular the bid-ask spreads observed which in the event of a significant increase indicate the absence of an active market.

No active market – valuation techniques (allocation to “Valuation methods based on observable market data [model]” or “Valuation methods based in part on data not observable in a market”)

If the financial instrument is not quoted in an active market, valuation techniques are used. The valuation techniques applied include, in particular, the discounted cash flow (DCF) method and option pricing models, as well as a comparison to the fair value of a financial instrument with almost identical characteristics (e.g. multiple-based models). The valuation techniques take account of all input parameters that the market participants would include in the pricing of that financial instrument, e.g. market interest rates, risk-free interest rates, credit spreads or swap curves. As these input parameters can generally be observed in the market and are usually the only significant parameters for measuring financial instruments using valuation techniques, the level for the financial instruments measured at fair value using valuation methods is usually “Valuation methods based on observable market data (model)”. This allocation also generally applies for prices quoted on inactive markets published by price service agencies.

If significant input parameters that are not observable on the market, such as expected risk-free customer margins or capital costs, are used in valuation techniques, the financial instrument is allocated to the “Valuation methods based in part on data not observable in a market” level.

If, at the date of initial recognition, differences arise between the market-based transaction price and the model price resulting from a valuation technique that makes significant use of unobservable parameters, an analysis is performed to determine whether there are economic reasons for these initial differences (e.g. conclusion of a transaction on a market that is not the main market for this transaction). These economic reasons only apply to a small part of the derivative portfolio of KfW Group, which comprises a hedging instrument for customers with respect to the export and project financing business. In relation to this, OTC (over the counter) derivatives in line with the market are not concluded on the main market (OTC interbank market) relevant to valuation. The initial differences determined upon conclusion of these derivatives are amortised through profit or loss over the life of the financial instruments, as the valuation parameters unobservable on the market are relevant to the valuation procedure. The reliability of this valuation technique is ensured via regular model validations.

This (valuation) hierarchy is applied in the group as follows:

Fair values are derived from active markets, in particular, for bonds and other fixed-income securities – unless there are inactive markets, and valuation techniques or prices quoted on inactive markets published by price service agencies are therefore used – as well as own issues reported on the liabilities side. However, fair values are derived from valuation techniques for non-derivative financial instruments recognised in Loans and advances to banks and customers, Equity investments, Liabilities to banks and customers, and some of the products recognised under Certificated liabilities. Valuation techniques are also used for OTC derivatives.

The steps detailed below are taken for certain product groups:

For securities in the Securities and investments line item, the group examines whether a financial instrument is quoted on an active market on the basis of homogeneous portfolios. Market activity is assessed based on the following criteria:

- There is more than one market maker.
- Prices are set on a regular basis.
- Prices deviate only slightly between market makers.
- The bid-ask spread is narrow.

Prices on active markets are used to determine the fair value of the group's asset securities as of the reporting date. In addition, for parts of the portfolio, prices from price service agencies are used that do not qualify as prices quoted on active markets. Should these not be available in individual cases, valuation techniques are used to determine fair value taking into account observable market parameters. The input parameters include, in particular, changes in creditworthiness and risk-free interest rates, but they also take into account general and financial instrument-specific tightening of the market due to lower liquidity.

In the case of OTC derivatives, valuation techniques are used that pay special attention to counterparty-specific default risks, taking into account available collateral. Default risks are not calculated separately for each transaction but for the portfolio of transactions on which a framework agreement is based. The resulting credit risk adjustment amounts are very low as KfW generally pledges collateral for positive market values in accordance with the collateral agreements concluded. In accordance with market practices, risk-free overnight interest rates are used for the valuation of a major part of the derivatives portfolio with collateralisation agreements.

The fair value of Loans to banks and customers is calculated using the discounted cash flow (DCF) method based on the discounting of the risk-adjusted cash flows. The expected loss calculated for the respective reporting date is used to correct the contractual cash flows.

The holding arrangements for the Federal Republic of Germany are accounted for as receivables from the Federal Government. The receivables comprise the KfW-funded purchase price of the items held for the Federal Republic of Germany as well as an additional benefit from the sales proceeds of the items. The receivables are measured at fair value, with the additional benefit being accounted for as a key value driver using current market prices of the items held.

Valuation methods based on net asset value are also used in addition to the discounted cash flow method for valuation of equity investments.

The Federal Republic of Germany's liability for specific KfW liabilities in accordance with Article 1a of the KfW Law has an advantageous effect on KfW's ability to fund itself. In determining the fair value of KfW's liabilities, the effect of this explicit direct state guarantee is also taken into account. The state guarantee does not represent an independent unit of account.

The fair value of financial instruments due on demand, such as Cash reserves or receivables and liabilities due on demand, is their carrying amount.

When no prices from liquid markets are available and prices on inactive markets cannot be provided by price service agencies, recognised valuation models and methods are used. The DCF method is used for securities, swaps, and currency and money market transactions with no embedded options and no complex coupons. Stand-alone options, as well as derivatives with embedded options, triggers, guaranteed interest rates and/or complex coupon agreements, are measured using recognised models (e.g. Hull & White) unless they are listed on a stock exchange.

The aforementioned models are calibrated, if possible, on the basis of observable market data for instruments that are similar in terms of the type of transaction, maturity, and credit quality.

E. Financial guarantee contracts

A financial guarantee contract is a contract that requires the guarantor to make specified payments that compensate the holder for a loss it incurs because a specified debtor fails to meet its contractual payment obligations. At initial recognition, a financial guarantee contract is to be measured at fair value, which is zero at contract conclusion, as the value of the premium on fair value contracts is equal to the value of the guarantee obligation. If a financial guarantee contract was not designated for measurement at fair value at initial recognition, a provision for expected losses is to be recognized as part of subsequent measurement according to IFRS 9 requirements. KfW Group does not voluntarily designate financial guarantee contracts for measurement at fair value.

The respective provisions are reported under Provisions for credit risks.

(8) Derivatives and hedging relationships

A. Hedging transactions/hedge accounting

KfW Group enters into financial derivatives to economically hedge interest rate fluctuation and currency risks, particularly those related to funding, lending and securities activities. Interest-rate swaps, interest rate/currency swaps and base currency swaps are mainly used for this purpose. Interest rate swaps are used to convert fixed rate interest payments of issues or lending transactions into variable payments. In the case of refinancing in a foreign currency, payments are also converted into the functional currency (EUR). The hedge ratio for the issues is normally 1:1. Ineffectiveness therefore results exclusively from unhedged risks such as counterparty risk or tenor or basis spread risks.

Economic hedging relationships are designated as hedge accounting relationships or designated as fair value through profit or loss by using the fair value option when the IFRS requirements are met. Economic hedging relationships can also be recognised in the financial statements through bifurcation of separable embedded derivatives on the liabilities side that are accounted for through profit or loss. In these cases, if the hedges are economically effective, the impact on the financial statements, with respect to the hedged risks, from the instruments used for hedging purposes and the hedged transactions will substantially offset each other, so that the group's income statement substantially reflects the risk-mitigating impact of these hedging relationships.

However, as not all derivatives are subject to hedge accounting or the fair value option, some economic hedging derivatives are reflected in the accounts even though their risk-mitigating impact is not reflected in the accounts because the hedged risk associated with the underlying transactions is not recognised in profit or loss under IFRS. The applicable recognition and measurement requirements may therefore lead to one-sided valuation results from the derivatives used for hedging purposes in the group's income statement – as well as volatility in profit or loss – despite an economically effective hedging relationship.

Hedge accounting in the group is used solely in the form of fair value hedges to recognise economic hedging relationships. The hedging relationship is designated, firstly, at individual transaction and group level in the form of micro fair value hedge accounting, and, secondly, at portfolio level in the form of macro fair value hedge accounting. KfW has exercised the option of applying IAS 39 rules for hedge accounting. If risk-free overnight interest rates are used in the valuation of the derivatives, this market practice is also subject to micro fair value hedge accounting for the measurement of the hedged risk related to the hedged item. The hedged risk in macro fair value hedge accounting relates to the variable interest rates of the derivative portfolio. The effectiveness of the hedging relationships is assessed using the dollar offset method and a regression analysis (80%–125% range for assessing effectiveness).

In micro fair value hedge accounting, interest and currency risks from bonds allocated to Securities and investments (*amortised cost category*) and, above all, from borrowings (*amortised cost category*) are hedged. In micro fair value hedging relationships at individual transaction level, the fair values attributable to the hedged risks are reported as an adjustment of the carrying amount of the hedged items with the corresponding gain or loss recognised in Net gains/losses from hedge accounting. The hedging instruments used for this purpose are recognised at fair value in Derivatives designated for hedge accounting. Changes in the value of the hedging instruments are also recognised in Net gains/losses from hedge accounting, largely compensating the profit or loss effects of the hedged items.

In macro fair value hedge accounting, interest risks primarily from bonds allocated to Securities and investments (amortised cost) that are hedged against interest risks as part of dynamic asset liability management, are hedged. The fair values attributable to the hedged risks in the hedged portfolios in the amortised cost category are accounted for in Value adjustments from macro fair value hedge accounting on the assets side. Fair value changes attributable to the hedged risks from the hedged portfolios are shown in Net gains/losses from hedge accounting.

The hedging instruments are reported at fair value in Derivatives designated for hedge accounting. Changes in the value of these instruments are also recognised in Net gains/losses from hedge accounting, with the effect that they almost fully offset the earnings effects from the valuation of the hedged portfolios.

The portfolio of hedged items is updated monthly in the context of a dynamic hedge de-designation and designation process. The resulting fair value adjustments are amortised over the residual term of the maturity period in Net gains/losses from hedge accounting. Disposals from the hedged portfolios result in a proportional amortisation of the related fair value adjustments in Net gains/losses from hedge accounting. When cash flows from hedging instruments are derecognised while the economic hedge based on non-derivative financial instruments remains, the related fair value adjustments from the hedged portfolios are amortised in Net interest income.

If the strict hedge accounting requirements for the designation of hedging relationships between derivatives and financial assets/liabilities are not fulfilled within KfW Group, the fair value option is used in certain circumstances. The fair values of the corresponding hedging instruments are presented in Other derivatives and fair value changes – if not due to changes in KfW's own credit risk – and recognised in Net gains/losses from other financial instruments at fair value through profit or loss. These are largely offset by valuation effects from the hedged transactions. Fair value changes resulting from changes in KfW's own credit risk are directly recognised in Other comprehensive income.

Further derivative financial instruments are used to hedge risks, but their economic effects cannot be reflected in the accounts. The fair values of these hedging instruments are also recognised in the Other derivatives item, with changes in fair value being recognised in Net gains/losses from other financial instruments at fair value through profit or loss.

KfW Group neither uses derivatives for trading purposes nor does it enter into derivatives acting as a broker or intermediary on behalf of third parties.

B. Embedded derivatives

Derivative financial instruments can be part of a hybrid (combined) financial liability as embedded derivatives. Under certain conditions, they are accounted for separately from the host contract, similar to stand-alone derivatives. They must be bifurcated if the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract. The host contract will be accounted for according to its classification at inception.

KfW Group enters into contracts with separable embedded derivatives particularly with respect to its own funding. In the case of these products, the embedded derivatives must be bifurcated. Changes in fair value are then recognised in Net gains/losses from other financial instruments at fair value through profit or loss in the sub-line item Financial derivatives not qualifying for hedge accounting, where they have a compensatory effect on the valuation of the economic hedging derivatives.

The fair value option was selected for certificated liabilities with bifurcated (embedded) derivatives recorded prior to bifurcation.

(9) Foreign currency translation

The functional currency of KfW and its consolidated subsidiaries is the euro. Monetary assets and liabilities denominated in a foreign currency are converted at the spot rate as of the reporting date.

Non-monetary assets and liabilities denominated in a foreign currency are normally converted at historical rates if they are measured at (amortised) cost. Translation is made using the European Central Bank reference rates.

The changes in value resulting from foreign currency translation are reported in the income statement under Net gains/losses from other financial instruments at fair value through profit or loss.

(10) Revenue from contracts with customers

IFRS 15 defines the nature, amount and timing of revenue arising from contracts with customers. Such revenue includes fees which are not an integral part of the effective interest rate and which are reported under Commission income. In this context, a five-step principle-based model is to be applied to relevant customer contracts. Moreover, the Notes are to include comprehensive detailed quantitative and qualitative information. IFRS 15 does not apply to fees and charges that are an integral part of the effective interest rate as they fall under the scope of IFRS 9.

There are primarily mandate contractual arrangements with the Federal Government as contracting authority within the meaning of IFRS 15. This includes fees for the administration of German Financial Cooperation with the Promotion of developing countries and emerging economies business sector, fees for the administration of certain programmes subsidised by the Federal Government, and fees for debt collection on certain loans. KfW also charges fees for administrative services for other mandate agreements as well as for processing services and to a limited extent for services for lending and trust activities. Individual services may be grouped together into a bundle of services that qualifies as a separate performance obligation within the meaning of IFRS 15. The value of the transaction is therefore not broken down.

As performance obligations are mostly satisfied over time, revenue from customer contracts is recognised according to the measure of progress and is thus normally recognised over time.

KfW exercises the transitional rule option under IFRS 15.C3(b) for application, and therefore applies a partial retrospective adjustment. IFRS 15 is applied for the first time in 2018, with the adjustment amount as of the date of initial application recognised with cumulative effect as an adjustment to Retained earnings on the opening statement of financial position. An adjustment to comparative figures is therefore not made.

The initial application of IFRS 15 as of 1 January 2018 will not result in any major changes for KfW compared to IAS 18 and consequently will not require any adjustment to Retained earnings. KfW Group has no items that require recognising customer acquisition or contract costs as assets. One-time advance payments to be allocated are deferred and recognised as contract liabilities in the statement of financial position under Other liabilities.

If the service has already been performed but fees have not yet been paid or if there is not yet any claim to payment, a contract asset is to be recognised in the statement of financial position under Other assets. If the claim is unconditional, the contract asset is to be reclassified as a Trade receivable adjusting the carrying amount where applicable. This rule is applied to fees for administration of certain programmes subsidised by the Federal Government.

Based on the credit rating and short remaining life, no expected credit loss is calculated.

(11) Promotional lending business at KfW

The general promotional loans market, which distinguishes itself from the market for general lending business, is relevant for KfW's promotional lending business conducted as part of its legal promotional mandate. This market is characterised by the fact that promotional banks, as part of their legal mandate, pass on all advantages of funding projects eligible for promotion to the ultimate borrowers. In setting the terms and conditions of the corresponding promotional loans, KfW uses its current term-differentiated refinancing rates.

At initial recognition of such loans, the fair value is thus equivalent to the transaction value.

KfW also grants promotional loans which include additional subsidies granted during the first fixed interest rate period, in the form of interest rate reductions impacting KfW's earnings position. The fair value of these promotional loans – measured using the parameters of the general promotional loan market – is thus not equivalent to the transaction value at initial recognition as in this case the interest rate is below the market rate.

The difference that normally results from such loan commitments – present value of the nominal scheduled interest rate reductions during the first fixed interest rate period – is recognised in profit or loss as an interest expense and accounted for as an adjustment to the carrying amount in loans and advances under the items Loans and advances to banks or Loans and advances to customers. The adjustment to the carrying amount is amortised in Net interest income using the effective interest rate method. In the event of unscheduled repayment in full, it is recognised in profit or loss under Interest income.

Differences that relate to irrevocable loan commitments are reported in Provisions. Changes to the portfolio are offset via the adjustments to the carrying amounts of already disbursed promotional loans recognised on the assets side.

(12) Loans and advances to banks and customers

Loans and advances to banks primarily consists of the promotional lending business, in which loans are typically granted to the final borrowers through accredited commercial banks and insurance companies. These assets are presented under this item when the commercial banks underwrite part of the liability. Promotional loans that the commercial banks on-lend without underwriting of liability are recognised in Loans and advances to customers.

Loans and advances to banks and customers also include loans with a subsidy (interest rate reductions) granted by KfW under the ERP economic promotion programme. The promotional grants awarded annually to KfW through the ERP Special Fund based on the ERP Economic Planning Act (ERP-Wirtschaftsplangesetz) for the purpose of executing the ERP economic promotion programme are recognised as deferred income in Other liabilities and are amortised in profit or loss under Interest income as the underlying funding expenses occur.

Current interest and similar income are generally recorded under Interest income. If, due to the low interest environment, negative interest rates arise from a financial asset, these are also recorded in Interest income, with a minus sign. Premiums, discounts, processing fees and charges are amortised in Interest income using the effective interest method. Processing fees that are not part of the effective interest method are recognised under Commission income.

(13) Risk provisions for lending business

The risk provisions for lending business include the provisions for losses on loans and advances and money market investments, including reverse repurchase agreements (reverse repos), as a separate line item on the assets side of the statement of financial position, as well as the provisions for credit risks accounted for on the liabilities side as Provisions.

The credit risks resulting from on and off-balance sheet lending business are accounted for through impairments recognised in profit or loss in the amount of the 1-year expected credit loss (stage 1) or the lifetime expected credit loss (stages 2 and stage 3). Additions to and reversals of risk provisions are recognised in Risk provisions for lending business in the income statement.

If the loans are deemed uncollectible, they are written off against the impairment allowance account. Uncollectible loans, for which no individual impairments have been recorded, are written off directly. Recoveries on loans already written off as well as write-offs are recognised as income in Risk provisions for lending business.

(14) Securities and investments

Securities and investments mainly comprises bonds and other fixed-income securities held in securities portfolios that belong to KfW and its subsidiaries, along with equity investments.

The securities portfolios mainly serve to support KfW's liquidity position and to stabilise and ensure the group's promotional capacity in the long term.

To achieve the same accounting treatment for equity investments with and without significant influence, individual group business areas that provide equity finance as part of their promotional mandate are considered as venture capital organisations for accounting purposes provided they meet the respective requirements. These equity investments, like other equity investments, are recognised in Securities and investments.

Due to the comparatively low proportion of risk provisions in the securities business, financial assets are reported on a net basis, i.e. the gross carrying amount is reported after reduction as of the reporting date by the amount of risk provisions in the securities business created.

Any fair value changes of financial assets at fair value through profit or loss are recognised in Net gains/losses from other financial instruments at fair value through profit or loss.

Current interest payments and dividends are recognised in Interest income.

(15) Repurchase agreements

KfW Group enters into repurchase agreements as standardised repos or reverse repos. These are combinations of simultaneous spot and forward transactions on securities with the same counterparty. The terms and modalities of collateral and its use follow common market practice. Credit claims are also an eligible type of collateral for open-market transactions.

The securities sold under repo transactions (spot sales) continue to be recognised and measured as securities. The repayment obligation towards the counterparty is carried as a liability to banks or customers for the amount of cash consideration received. Interest is recorded in Interest expense in accordance with the respective term of the repurchase agreements.

A repayment claim is recognised and measured as a loan or advance to banks or customers for the amount of cash outflow generated by reverse repos. The securities received (spot purchases) are not recognised or measured. Interest is recorded in Interest income in accordance with the respective conditions of the reverse repurchase agreements.

(16) Property, plant and equipment

The land and buildings and the plant and equipment reported by KfW Group are carried at cost less depreciation on a straight-line basis and any impairment, both recognised in Administrative expense. In accordance with the requirements in IAS 36, an impairment is recognised if there are indications of impairment and the carrying amount of the asset exceeds the recoverable amount, i.e. the lower of fair value less costs of disposal and value in use. The useful life is determined based on expected wear and tear. KfW Group assumes an estimated useful life of 40 to 50 years for buildings, four years for workstation computer equipment and five to 15 years for other property, plant and equipment. Gains and losses from the sale of property, plant and equipment are recognised in Net other operating income.

Payments in advance and assets under construction are recognised in Other property, plant and equipment and are not subject to depreciation.

(17) Intangible assets

Under Intangible assets, KfW Group reports purchased and internally generated software at cost, less straight-line amortisation and impairments, both recognised in Administrative expense. The useful life is determined based on expected wear and tear. KfW Group assumes a useful life of five years.

Assets are impaired when the carrying amount of an asset exceeds the recoverable amount. An impairment is recorded when no future economic benefits can be identified.

Internally generated software under development is reported under Other intangible assets and is not subject to amortisation.

(18) Liabilities to banks and customers and Certificated liabilities

Liabilities to banks and customers primarily include funding carried at amortised cost and KfW Group's money-market transactions. Certificated liabilities contain issued bonds, notes and money-market instruments. Own issues repurchased in the open market are deducted from the liabilities as of the repurchase date.

Fair value changes of liabilities designated at fair value are recognised in profit or loss under Net gains/losses from other financial instruments at fair value through profit or loss, where they have an offsetting effect with the fair value changes from economic hedging derivatives.

Current interest arising from a financial liability is recorded in Interest expense. This also applies in the case of negative interest resulting from a low interest rate environment. Premiums and discounts are amortised in Interest rate expense using the effective interest method over the expected life.

Results from the repurchase of own issues categorised as liabilities measured at amortised cost are recognised at the repurchase date in Net other operating income.

(19) Provisions

Provisions include provisions for pensions and similar commitments, credit risks, interest rate reductions in irrevocable loan commitments granted by KfW in the promotional lending business and negatively impacting its earnings position, as well as other obligations of uncertain amount and timing involving a probable outflow of funds.

The employees of KfW Group participate in a company pension plan that pays retirement, long-term disability and survivor benefits. KfW Group has various pension plans, consisting exclusively of defined-benefit schemes. The benefits largely depend on the length of company service and salary. The pension plan that was applied for new hires until 1985 offered a full pension (*Totalversorgung*), in which a certain portion of the income paid before the benefits were due was allocated as a benefit after deducting the state pension. Apart from employer-financed pension plans there are also plans in place involving contributions by employees.

KfW Group pension plans are subject to the following risks in particular: longevity, interest rate fluctuation, pension adjustment risk as well as the risk of future changes to the assessment bases.

Longevity risk is the risk that higher expenses will be incurred for the company pension plan if the pensioners live longer than projected. In general, this risk is balanced out across all pensioners and would only have an impact if life expectancy were to rise faster in the future than anticipated.

Due to the long term of the company pension plan, provisions for pension obligations are subject to general interest rate fluctuation risks.

Pension adjustment risk largely relates to the pension plan offering a full pension (*Totalversorgung*). In this scheme, benefits are recalculated as soon as there is a change in the base income eligible for pension or the state pension to be offset. Another pension plan must be examined regularly in terms of forecast and actual pension adjustments, undertaking such adjustments if necessary.

The amount of the benefits promised under the existing pension plans at KfW Group depends, among other things, on development of the income eligible for benefits and the social security contribution ceiling (*Beitragsbemessungsgrenze*). There is a risk that the basis of assessment will develop differently than was assumed.

Pension obligations are calculated by an independent qualified actuary in accordance with the projected unit credit method on the basis of group-wide uniform parameters such as age, length of company service and salary. The pension provision is recognised at the present value of the defined-benefit obligations as of the reporting date. The discount factor is based on current market conditions for a portfolio of high quality corporate bonds/bonds from supranational issuers with a maturity matching that of the obligations. The definition of the portfolio takes into account actual market conditions. Additional demographic factors (including the 2018 G Heubeck actuarial tables) and actuarial assumptions (rate of salary and pension increases, rate of staff turnover, etc.) are taken into account.

No plan assets were defined for the pension obligations of KfW Group, so the related special accounting rules do not apply. Provisions for pensions and similar obligations are financed in-house with sufficient assets with corresponding maturities.

Actuarial gains and losses are immediately recognised at the time they occur. They occur as a result of remeasurement of pension obligations as of the reporting date compared to the figures forecast at the beginning of the year.

Additions to pension provisions distinguish between service cost and interest expense. Service cost is reported under Administrative expense; interest expense is reported under Other interest expense. The pension provision changes recognised directly in equity comprise the actuarial gains and losses reported in Revaluation reserves; these are reported in Other comprehensive income.

Pension-like obligations include commitments for deferred compensation, early retirement and partial retirement. Actuarial reports are prepared and a provision is recognised accordingly for these types of commitments as well. No actuarial gains or losses are incurred.

Other provisions, including those for obligations to employees and for audit and consultancy services, are recognised at the estimated expenditure. Long-term provisions are discounted where the effect is material. Added to this are obligations arising from the assumption of the tasks of the State Insurance Company of the German Democratic Republic in liquidation (*Staatliche Versicherung der Deutschen Demokratischen Republik in Abwicklung* – “SinA” institution under public law), which are offset by receivables in the same amount from the Federal Agency for Special Tasks Arising from Unification (*Bundesanstalt für vereinigungsbedingte Sonderaufgaben* – “BvS”) reported under Other assets.

(20) Equity

The equity structure is, in particular, determined by the KfW Law and the requirements of IFRS.

Pursuant to Article 10 (2) and (3) of the KfW Law, KfW’s net income for the period determined in accordance with the German Commercial Code is transferred to reserves and is included in group equity under IFRS.

KfW Group has created a fund for general banking risks. Additions to or reductions of the fund are shown under IFRS as appropriation of consolidated profit/loss.

Under IFRS, any remaining consolidated net income is allocated to Other retained earnings in the same period.

Revaluation reserves comprise transactions to be recognised directly in equity in accordance with IFRS. These include valuation results from the change in own credit risk of liabilities measured at fair value through profit or loss and actuarial gains or losses in the case of defined-benefit plan pension commitments. They also may include deferred taxes, depending on the underlying transaction.

(21) Trust activities

Assets and liabilities held by KfW Group in its own name but for the account of third parties are not recognised. This applies in particular to loans granted under German Financial Cooperation to support developing countries. The related funds are granted and underwritten by the German federal budget. The fees earned associated with these transactions are recognised under Commission income.

IFRS 9 Transition report

(22) Introduction

The initial implementation of IFRS 9 requirements for the classification and measurement of financial instruments and the new guidelines for the recognition of impairment both affect the statement of financial position. Additionally new quantitative and qualitative disclosure requirements under IFRS 7 as well as changes in the minimum requirements for the content of the statements of financial position and comprehensive income in accordance with IAS 1 lead to further changes in the consolidated financial statements for 2018.

It should be noted with regard to the disclosed reference figures that some items are not identical in content due to new measurement bases and reclassification. This affects, for example, the fair value measurement result as well as the risk provisions for the lending business. The result from non-substantial contractual modifications is also reported in the provisions for the lending business in the financial year 2018. Interest income from the effective interest method will be reported separately from other interest income. Net gains/losses from securities and investments no longer apply as of 2018 as the realised earnings effect from financial instruments measured at amortised cost is reported in a separate item in the statement of comprehensive income, and the realisation results from the previous measurement category of available for sale instruments no longer apply. Risk provisions in the securities business are not shown separately due to immateriality; they are reported instead under Securities and investments in the statement of financial position. It should be noted with regard to revaluation reserves that the available for sale reserve no longer applies with the implementation of IFRS 9. Revaluation reserves for own credit risk effects from liabilities designated to be measured at fair value through profit or loss have been added for this purpose.

KfW has chosen not to determine any reference figures and does therefore not undertake any retrospective adjustments of previous year figures, as allowed by the exemption in IFRS 9. A complete comparison with 2017 figures is not possible as a result of these adjustments.

(23) Reconciliation of equity

The initial implementation of IFRS 9 results in changes in consolidated equity. This means that certain receivables previously carried at amortised cost are to be accounted for at fair value. This is mainly the case for receivables that were subject to restructuring measures. In addition, the reclassification of securities from “available-for-sale” to “amortised cost” reduces reported equity.

There are also effects from changes in impairment requirements. Moving from the incurred loss model to an expected loss model where risk provisions are measured on the basis of the change in credit risk since the initial recognition of the financial instrument is expected to incur changes in provisions.

Through the implementation of IFRS 9 requirements and taking into account deferred taxes, group equity is reduced by EUR 218 million. The change in equity is composed of an increase in Retained earnings of EUR 236 million and a decrease in Revaluation reserves of EUR 454 million, as shown in the following table.

Reconciliation of Retained earnings and Revaluation reserves from IAS 39 to IFRS 9 at the date of initial application

	Measurement category under IAS 39 ¹⁾	Measurement category under IFRS 9 ²⁾	Retained earnings EUR in millions	Revaluation reserves EUR in millions
As of 31 Dec. 2017 (IAS 39)			15,500	-295
Financial assets				
Loans and advances to banks and customers	LaR	FVM	32	
	FVO	ACO	-5	
Third party securities	FVO	ACO	-6	
	AfS	ACO		-124
	LaR	ACO		6 ³⁾
Equity investments	AfS	FVM	165	-165
Financial liabilities	FVO	ACO	5	
	FVO	FVD	178	-178
Risk provisions for lending business				
Loans and advances to banks and customers			-118	
Third party securities			-5	
Provisions for credit risks			-24	
Deferred income tax assets/liabilities			15	6
Equity effects – total			236	-454
As of 1 Jan. 2018 (IFRS 9)			15,735	-749

¹⁾ Abbreviations of measurement categories in accordance with IAS 39:

LaR = Loans and receivables

FVO = Fair value option

AfS = Available for sale financial assets

²⁾ Abbreviations of measurement categories in accordance with IFRS 9:

ACO = Financial instruments measured at amortised cost

FVM = Financial instruments measured at fair value

FVD = Financial liabilities designated at fair value

³⁾ Remaining balance of revaluation reserves resulting from the reallocation of third party securities from AfS to LaR in the years 2008 and 2009

(24) Reconciliation of measurement categories from IAS 39 to IFRS 9 at the date of initial application

The carrying amounts of financial assets and financial liabilities as of 31 December 2017 are reconciled with the new carrying amounts as of 1 January 2018 in accordance with IFRS 9.

KfW's business model is focused on sustainability and a long-term approach, and therefore the core business is allocated to the "hold to collect" business model and measured at amortised cost.

The requirements for financial liabilities remain largely unchanged. Nonetheless, through the use of fair value option the changes in fair value that result from changes in own credit risk are now recognised directly in equity in the revaluation reserve.

The main effects contained in the reconciliation table are presented as follows:

Loans and advances to customers

- In accordance with IAS 39, KfW's holding arrangements for the Federal Republic of Germany were measured at amortised cost as collateralised loans. In accordance with IFRS 9, these holding arrangements are to be measured at fair value due to the business model criterion.
- In accordance with IAS 39, Equity funding agreements made within KfW Group's equity finance business were accounted for as separable embedded derivatives measured at fair value through profit or loss and recognised in Other derivatives. Loan receivables, on the other hand, were recognised at amortised cost in Loans and advances to customers. Under IFRS 9, the derivatives, which were previously separable under IAS 39, are detrimental side agreements that do not meet the SPPI criterion. The instrument in its entirety is therefore to be accounted for in accordance with IFRS 9 at fair value in the FVM measurement category.
- Portions of the restructured loans have contractual arrangements that no longer qualify as to basic lending arrangements and thus do not meet the SPPI criterion in accordance with IFRS 9. In such cases, they were measured at fair value in accordance with IFRS 9.

Securities and investments:

- The equity investment portfolios held by KfW Group were classified as available for sale in accordance with IAS 39 or designated at fair value based on fair value management. In accordance with the new rules under IFRS 9 in conjunction with IAS 32, some equity investment portfolios may no longer be reported as equity instruments, but rather as debt instruments. Regardless of this reclassification, they do not meet the SPPI criterion in accordance with IFRS 9. As KfW does not exercise the option of recognising such equity instruments directly in equity through Other comprehensive income (OCI), all equity investments are accounted for at fair value through profit or loss upon the transition to IFRS 9.

- Third-party securities classified under IAS 39 as available for sale and previously measured at fair value through OCI have been reclassified to the ACO measurement category in accordance with IFRS 9, as they have been assigned to the “hold to collect” business model. The majority of the holdings reclassified from the fair value option to ACO matured during the course of financial year 2018.

Activities relating to the PROMISE and PROVIDE securitisation platforms:

- As part of its promotional lending business, KfW Group offered commercial banks the opportunity to place their credit risks in the capital market in a synthetic securitisation via the two standardised platforms PROMISE (programme for the securitisation of SME loans) and PROVIDE (programme for the securitisation of housing loans). In the first stage, KfW Group assumed the default risks of the reference portfolio via portfolio credit default swaps (CDSs), while the risks were simultaneously passed on to third parties via portfolio CDSs/credit-linked notes. Thus these are economically hedged positions. Credit derivatives are classified as financial guarantees. They were accounted for by designating them at fair value to avoid an accounting mismatch. The fair values were reported as Loans and advances to banks or liabilities to banks/customers. KfW did not choose designation at fair value upon implementation of IFRS 9. Portfolio CDSs are recognised as financial guarantees issued or received in accordance with the generally applicable accounting policies for these financial instruments. Credit-linked notes with non-separable embedded financial guarantees are accounted for at ACO in accordance with accounting policies for funding. As the change was made for the entire hedged position, it does not result in any equity effects through the initial application of IFRS 9.

Risk provisions:

- Adjustments in the net carrying amount of financial instruments that continue to be carried at amortised cost under IFRS 9 might still arise as a result of new rules on impairment recognition.

Reconciliation of measurement categories

	Gross carrying amount ¹⁾ 31 Dec. 2017	Risk provisions	Net carrying amount 31 Dec. 2017	Reclassification	Revaluation	Net carrying amount 1 Jan. 2018	Risk provisions	Gross carrying amount 1 Jan. 2018
Assets	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	274,491	177	274,315	0	-6	274,309	192	274,500
Holdings by measurement category – IAS 39	274,491	177	274,315	-274,315				
Loans and receivables (LaR)	274,486	177	274,310	-274,310				
to ACO (IFRS 9)				-274,282				
to FVM (IFRS 9)				-28				
Fair value through profit or loss (FVTPL)	5		5	-5				
to ACO (IFRS 9)				-5				
Holdings by measurement category – IFRS 9				274,315	-6	274,309	192	274,500
At amortised cost (ACO)				274,287	-7	274,280	192	274,472
from LaR (IAS 39)				274,282	-2	274,280		
from FVTPL (IAS 39)				5	-5	0		
Fair value through profit or loss (FVM)				28	1	29		29
from LaR (IAS 39)				28	1	29		
Loans and advances to customers	127,759	1,280	126,479	45	-84	126,440	1,381	127,821
Holdings by measurement category – IAS 39	127,759	1,280	126,479	-126,479				
Loans and receivables (LaR)	127,759	1,280	126,479	-126,479				
to ACO (IFRS 9)				-116,881				
to FVM (IFRS 9)				-9,598				
Holdings by measurement category – IFRS 9				126,524	-84	126,440	1,381	127,821
At amortised cost (ACO)				116,881	-115	116,766	1,381	118,147
from LaR (IAS 39)				116,881	-115	116,766		
Fair value through profit or loss (FVM)				9,643	32	9,674		9,674
from LaR (IAS 39)				9,598	32	9,630		
from FVTPL (IAS 39)				45	0	45		
Other derivatives	5,145		5,145	-45	0	5,100		5,100
Securities and investments	33,615		33,615	0	-131	33,484		33,484
Holdings by measurement category – IAS 39	33,615		33,615	-33,615				
Available-for-sale financial assets (Afs)	22,909		22,909	-22,909				
to ACO (IFRS 9)				-21,962				
to FVM (IFRS 9)				-947				
Fair Value through profit or loss (FVTPL)	1,876		1,876	-1,876				
to ACO (IFRS 9)				-92				
to FVM (IFRS 9)				-1,784				
Held-to-maturity investments (HtM)	2,587		2,587	-2,587				
to ACO (IFRS 9)				-2,587				
Loans and receivables (LaR)	6,242		6,242	-6,242				
to ACO (IFRS 9)				-6,242				
Holdings by measurement category – IFRS 9				33,615	-131	33,484		33,484
At amortised cost (ACO)				30,884	-131	30,753		30,753
from LaR (IAS 39)				6,242	5	6,247		
from HtM (IAS 39)				2,587				
from FVTPL (IAS 39)				92	-7	85		
from Afs (IAS 39)				21,962	-128	21,834		
Fair value through profit or loss (FVM)				2,731		2,731		2,731
from Afs (IAS 39)				947		947		
from FVTPL (IAS 39)				1,784		1,784		
Deferred tax assets	469		469	0	27	496		496
Total assets				0	-194			

¹⁾ Adjustments to previous year figures as explained in note "Changes to significant accounting policies and estimates"

	Gross carrying amount ¹⁾ 31 Dec. 2017	Risk provisions	Net carrying amount 31 Dec. 2017	Reclassification	Revaluation	Net carrying amount 1 Jan. 2018	Risk provisions	Gross carrying amount 1 Jan. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Liabilities and equity								
Liabilities to banks	5,990		5,990	0	-17	5,973		5,973
Holdings by measurement category – IAS 39	5,990		5,990	-5,990				
Fair value through profit or loss (FVTPL)	255		255	-255				
to ACO (IFRS 9)				-17				
to FVD (IFRS 9)				-237				
Other liabilities	5,735		5,735	-5,735				
to ACO (IFRS 9)				-5,735				
Holdings by measurement category – IFRS 9				5,990	-17	5,973		5,973
At amortised cost (ACO)				5,752	-17	5,735		5,735
from FVTPL (IAS 39)				17	-17	0		
from Other liabilities (IAS 39)				5,735	0	5,735		
Designated at fair value (DFV)				237		237		237
from FVTPL (IAS 39)				237				
Liabilities to customers	9,886		9,886	0	12	9,898		9,898
Holdings by measurement category – IAS 39	9,886		9,886	-9,886				
Fair value through profit or loss (FVTPL)	1,835		1,835	-1,835				
to ACO (IFRS 9)				-36				
to FVD (IFRS 9)				-1,798				
Other liabilities	8,051		8,051	-8,051				
to ACO (IFRS 9)				-8,051				
Holdings by measurement category – IFRS 9				9,886	12	9,898		9,898
At amortised cost (ACO)				8,088	12	8,100		8,100
from FVTPL (IAS 39)				36	12	49		
from Other liabilities (IAS 39)				8,051				
Designated at fair value (DFV)				1,798		1,798		1,798
from FVTPL (IAS 39)				1,798		1,798		
Provisions	2,877		2,877	0	24	2,901		2,901
Deferred tax liabilities	257		257	0	5	262		262
Total liabilities and equity				0	25			
Total assets and liabilities				0	-218			

¹⁾ Adjustments to previous year figures as explained in note "Changes to significant accounting policies and estimates"

(25) Reconciliation of risk and other provisions

Reconciliation of risk provisions

	Risk provisions IAS 39 31 Dec. 2017	Adjustment of gross carrying amount to amortised cost ¹⁾	Reclassification	Revaluation	Risk provisions IFRS 9 1 Jan. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	177	14	-1	2	192
Amortised cost (ACO)	177	14	-1	2	192
<i>from LaR (IAS 39)</i>		14	0	2	
<i>to FVM (IFRS 9)</i>			-1	0	
Loans and advances to customers	1,280	220	-235	116	1,381
Amortised cost (ACO)	1,280	220	-235	116	1,381
<i>from LaR (IAS 39)</i>		220	0	116	
<i>to FVM (IFRS 9)</i>			-235	0	
Securities and investments	2	0	0	5	7
Amortised cost (ACO)	2	0	0	5	7
<i>from AfS (IAS 39)</i>				4	
<i>from FVTPL (IAS 39)</i>				1	
Provisions for credit risks	61	0	0	24	85

¹⁾ Notwithstanding IAS 39 arrangements, IFRS 9 explicitly requires that risk provisions be discounted using the effective interest rate. As a result, risk provisions are calculated as the difference between carrying amount and amortised cost, as both carrying amount and amortised cost are determined using the effective interest rate. A corresponding clearing value is needed to adjust the previous balance from risk provisions for the transition to IFRS 9.

(26) Financial instruments reclassified to amortised cost

Financial instruments reclassified to amortised cost at initial implementation, as of 31 Dec. 2018

	Carrying amount as of 31 Dec. 2018	Fair value as of 31 Dec. 2018	Effect on statement of comprehensive income in 2018, if financial instrument had not been reclassified	
	EUR in millions	EUR in millions	Income statement	Change in the revaluation reserve
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Financial assets				
Amortised cost (ACO)				
<i>from AfS (IAS 39)</i>	19.184	19.188	3	-122
<i>from FVTPL (IAS 39)</i>	28	31	1	0

Notes to the statement of comprehensive income

(27) Net interest income

Analysis of Net interest income by class

	2018	2017
	EUR in millions	EUR in millions
Interest and similar income from loans and advances to banks and customers	6,768	n/a
Similar income from financial guarantees	19	n/a
Interest income from securities and investments	177	n/a
Interest income from hedges recognised in the statement of financial position	-4,068	n/a
Other interest income	-60	n/a
Interest income from the effective interest method	2,836	n/a
Interest and similar income from loans and advances to banks and customers	-17	n/a
Interest income from securities and investments	56	n/a
Interest income from other derivatives	812	n/a
Other interest income	851	n/a
Interest income	3,687	n/a

	2018	2017
	EUR in millions	EUR in millions
Interest and similar income from loans and advances to banks and customers	n/a	6,980
Similar income from financial guarantees	n/a	21
Interest income from securities and investments	n/a	235
Interest income from derivatives	n/a	-4,360 ¹⁾
Other interest income	n/a	338
Interest income	n/a	3,213

¹⁾ The Interest income from derivatives reported in the previous period comprises the following items: Interest income from hedges recognised in the statement of financial position and Interest income from other derivatives.

	2018	2017
	EUR in millions	EUR in millions
Interest and similar expense for liabilities to banks and customers	235	220
Interest expense for certificated liabilities	7,317	6,903
Interest expense for subordinated liabilities	0	2
Interest expense for derivatives	-6,314	-6,553
Other interest expense	221	248
Interest expense	1,459	821
Net interest income	2,228	2,393

Expenses for granting promotional loans below market rates – due to additional promotional funds in the form of interest rate reductions impacting KfW's earnings position – amount to EUR 185 million (previous year: EUR 186 million) and are reported in Other interest expense. In addition to the charges resulting from the present value of the nominal scheduled interest rate reductions in new lending business, the Other interest expense item also comprises the expenses arising from amortisation at a constant effective interest rate. Interest and similar income from loans and advances to banks and customers also comprises income from accrual-based amortisation in the amount of the pro-rata nominal planned interest rate reductions for these promotional loans in the amount of EUR 313 million (2017: EUR 360 million).

Interest income from stage 3 loans in the amount of EUR 26 million is reported under Interest and similar income from loans and advances to banks and customers. In the previous year, income from unwinding in the amount of EUR 24 million was reported under Interest and similar income from loans and advances to banks and customers.

Interest income includes negative interest contributions due to the low interest environment totalling EUR 187 million (2017: EUR 179 million). These result from balances with central banks, loans and advances to banks and customers, and securities and investments.

Interest expense includes negative interest contributions as a result of the low interest environment totalling EUR 86 million (2017: EUR 68 million). These result from liabilities to banks and customers and certificated liabilities.

Interest income from hedges recognised in the statement of financial position comprises interest income from derivatives subject to hedge accounting as well as interest income from amortisation of value adjustments from hedge accounting. Interest income from derivatives in hedge accounting is recognised depending on the related hedged item in the interest income from hedge accounting relationships for related financial assets.

Interest expense from derivatives includes the interest expense from all derivatives irrespective of whether they are used in hedge accounting. Interest expense from derivatives in hedge accounting is recognised depending on the related hedged item in the interest expense from derivatives for related financial liabilities.

By including the interest income or expense from the hedged items and derivatives in hedge accounting, presentation is thus based on the economic substance of the hedged financial assets (floating rate financial assets) or hedged financial liabilities (floating rate financial liabilities).

(28) Risk provisions for lending business
Analysis of Risk provisions by transaction

	2018	2017
	EUR in millions	EUR in millions
Expenses for additions to risk provisions	883	529
Direct write-offs	31	52
Expenses for risk provisions	914	581
Income from the reversal of risk provisions	839	266
Income from recoveries of amounts previously written off	77	107
Income from risk provisions	916	373
Net gains/losses from non-substantial contractual modifications	5	n/a
Other risk provisions for lending business	-10	n/a
Total	-3	-209

The gross carrying amount of financial assets whose risk provisioning at the time of modification was assigned to stages 2 or 3 and which were transferred back to stage 1 during the reporting period amounted to EUR 55 million as of the reporting date.

(29) Net commission income
Analysis of Commission income

	2018
	EUR in millions
Revenue from contracts with customers	379
from mandate contractual arrangements with the Federal Government	335
Fee income from mandate agreements, processing activities and services	13
Fee income from the lending business	31
Trust activities	0
Other commission income	8
Financial guarantee contracts	2
Other	5
Total	387

Commission income by segment during the reporting year

	Mittelstandsbank & Private Kunden (SME Bank & Private Clients)	Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)	KfW Capital	Export and project finance	Promotion of developing countries and emerging economies	Financial markets	Head office	KfW Group
2018	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Commission income	145	14	0	18	208	1	0	387
of which Federal Government	137	8	0	0	191	0	0	335
%	94%	56%	0%	0%	91%	0%	0%	87%

Out-of period income

	2018 EUR in millions
Revenue in current period resulting from services performed in the previous period(s)	5

Analysis of Commission income by class in the financial year 2017

	2018 EUR in millions	2017 EUR in millions
Commission income from lending business	n/a	124
Other commission income	n/a	207
Income from trust activities	n/a	0
Commission income	n/a	331

Analysis of Commission expense by class

	2018 EUR in millions	2017 EUR in millions
Commission expense for lending business	14	17
Commission expense for credit derivatives	0	0
Other commission expense	11	11
Commission expense	25	29

Net commission income

	2018	2017
	EUR in millions	EUR in millions
Commission income	387	331
Commission expense	25	29
Total	362	303

(30) Net gains/losses from hedge accounting

Analysis of Net gains/losses from hedge accounting by type of hedging relationship

	Hedge ineffectiveness		Items in the income statement that contain cases of hedge ineffectiveness
	2018	2017	
	EUR in millions	EUR in millions	
Micro fair value hedges	38	93	Net gains/losses from hedge accounting
Interest risk	31	n/a	–
Interest-currency risk	7	n/a	Net gains/losses from hedge accounting
Macro fair value hedges	442	498	–
Interest risk	442	498	–
Total	480	591	Net gains/losses from hedge accounting

Net gains/losses from macro fair value hedge accounting comprise the valuation of hedging instruments in the amount of EUR –713 million (2017: EUR 2,182 million) and the valuation of hedged risks from the hedged portfolios. It also includes the amortisation of the value adjustments from the dynamic hedge designation and de-designation and the pro rata reversal of value adjustments in the event of derecognition of financial instruments from the underlying portfolios as well as the pull-to-par effect of the hedging derivatives.

Analysis of Net gains/losses from micro fair value hedge accounting by hedged item

	2018	2017
	EUR in millions	EUR in millions
Hedging of securities and investments	3	0
Hedging of liabilities to banks and customers	0	-1
Hedging of certificated liabilities	34	91
Hedging of subordinated liabilities	0	1
Subtotal: Effectiveness of hedges	37	92
Amortisation of value adjustments	1	1
Total	38	93

Gross analysis of valuation gains/losses from micro fair value hedge accounting: Comparison of hedged items and hedging instruments in the financial year 2018

	Hedged items	Hedging instruments	Effectiveness of hedges
	EUR in millions	EUR in millions	EUR in millions
Hedging of securities and investments	100	-97	3
Hedging of liabilities to banks and customers	50	-50	0
Hedging of certificated liabilities	57	-23	34
Hedging of subordinated liabilities	0	0	0
Total	207	-170	37

Gross analysis of valuation gains/losses from micro fair value hedge accounting: Comparison of hedged items and hedging instruments in the financial year 2017

	Hedged items	Hedging instruments	Effectiveness of hedges
	EUR in millions	EUR in millions	EUR in millions
Hedging of securities and investments	-198	198	0
Hedging of liabilities to banks and customers	111	-112	-1
Hedging of certificated liabilities	2,109	-2,018	91
Hedging of subordinated liabilities	3	-2	1
Total	2,025	-1,933	92

(31) Net gains/losses from other financial instruments at fair value through profit or loss

Analysis of Net gains/losses from other financial instruments at fair value through profit or loss by class

	2018	2017
	EUR in millions	EUR in millions
Loans and advances to banks/customers	3	0
Securities and investments	113	-54
Assets	116	-54
Liabilities to banks and customers	30	74
Certificated liabilities	315	74
Liabilities	345	148
Financial derivatives not qualifying for hedge accounting	-500	-459
Credit derivatives	0	-11
Derivative financial instruments	-500	-470
Foreign currency translation	-14	-20
Total	-54	-397

Net gains/losses from assets include the net gains/losses from holding arrangements for the Federal Republic of Germany – if attributable to KfW, IPEX's syndication business with a focus on short-term placement, loans that do not meet the SPPI criterion (loans and advances to banks and customers), and equity investments (securities and investments).

Net gains/losses from liabilities measured at fair value include promissory note loans (liabilities to banks and customers) and bonds and notes (certificated liabilities).

Net gains/losses from financial derivatives not qualifying for hedge accounting are attributable to derivatives in economic hedges. Economic hedges are mainly recognised by exercising the fair value option for the hedged items. The hedged items include, in particular, borrowings in the form of Certificated liabilities and Liabilities to banks and customers.

Furthermore, this line item includes gains/losses from embedded derivatives from financial liabilities that are bifurcated; the net gains/losses from the valuation of the associated hedging derivatives are thus compensated for.

Analysis of Net gains/losses from loans and advances to banks and customers at fair value by product type

	2018	2017
	EUR in millions	EUR in millions
Net gains/losses from Loans and advances	3	0
Total	3	0

Analysis of Net gains/losses from securities and investments at fair value by product type

	2018	2017
	EUR in millions	EUR in millions
Bonds and other fixed-income securities	0	-3
Shares and other non-fixed income securities	8	0
Equity investments	105	-52
Total	113	-54

Analysis of Net gains/losses from credit derivatives and credit-linked notes from the PROMISE and PROVIDE synthetic securitisation platforms at fair value

	2018	2017
	EUR in millions	EUR in millions
CDSs	n/a	-11
Issued credit-linked notes	n/a	11
Total	n/a	0

Gross analysis of results from economically hedged borrowings: Comparison of hedged items and hedging instruments

	2018	2017
	EUR in millions	EUR in millions
Borrowings	345	137
Hedging instruments	-469	-349
Total (effectiveness of economic hedges)	-124	-212

(32) Net gains/losses from securities and investments

Analysis of Net gains/losses from securities and investments by class

	2018	2017
	EUR in millions	EUR in millions
Bonds and other fixed-income securities	n/a	25
Shares and other non-fixed income securities	n/a	0
Equity investments	n/a	-25
Shares in subsidiaries not included in the consolidated financial statements	n/a	0
Total	n/a	0

The net gains/losses from securities and investments in the previous year included gains and losses realised from the sale and impairment of Securities and investments classified as available-for-sale financial assets, loans and receivables or held-to-maturity investments.

In the reporting year 2017, equity instruments at a carrying amount of EUR 79 million, for which the fair value could not be reliably determined, were disposed of. This resulted in 2017 in a realised net gain of EUR 12 million, which was contained in the net gains/losses from equity investments.

Disclosures on impairment of securities and investments

	2018	2017
	EUR in millions	EUR in millions
Securities and investments	n/a	43
<i>Bonds and other fixed-income securities</i>	<i>n/a</i>	<i>1</i>
<i>Equity investments</i>	<i>n/a</i>	<i>42</i>

Disclosures on the reversal of impairment losses from securities and investments

	2018	2017
	EUR in millions	EUR in millions
Securities and investments	n/a	25
<i>Bonds and other fixed-income securities</i>	n/a	25

(33) Risk provisions in the securities business

Analysis of Risk provisions by transaction

	2018	2017
	EUR in millions	EUR in millions
Expenses for additions to risk provisions	6	n/a
Direct write-offs	0	n/a
Expenses for risk provisions	6	n/a
Income from the reversal of risk provisions	6	n/a
Income from risk provisions	6	n/a
Other risk provisions for lending business	0	n/a
Total	0	n/a

(34) Net gains/losses from disposal of financial instruments measured at amortised cost

	2018	2017
	EUR in millions	EUR in millions
Income from disposal of financial instruments measured at amortised cost	2	n/a
Expenses from disposal of financial instruments measured at amortised cost	0	n/a
Total	2	n/a

Income from disposal resulted from the sale of financial assets.

(35) Net gains/losses from investments accounted for using the equity method

	2018	2017
	EUR in millions	EUR in millions
Net gains/losses from investments accounted for using the equity method	22	22

(36) Administrative expense

Analysis of Administrative expense

	2018	2017
	EUR in millions	EUR in millions
Wages and salaries	548	517
Social security contributions	75	73
Expenses for pension provision and other employee benefits	148	78
Personnel costs	771	668
Other administrative expenses	526	487
Depreciation, amortisation and impairment of property, plant and equipment and intangible assets	122	92
Non-personnel expense	647	579
Total	1,418	1,247

Expenses for pension provisions and other employee benefits include pension provisions recognized in connection with the measures to modernise KfW.

Other administrative expenses include rental expenses arising from Operating leases in the amount of EUR 16 million (2017: EUR 14 million).

Depreciation, amortisation and impairment of property, plant and equipment and intangible assets result in particular from costs necessary to meet regulatory requirements and for the modernisation of KfW's information technology architecture, to be depreciated or amortised beginning in 2018.

(37) Net other operating income or loss

Analysis of Net other operating income or loss

	2018	2017
	EUR in millions	EUR in millions
Other operating income	52	36
Other operating expense	47	39
Total	5	-2

Other operating income primarily includes income from the reversal of other provisions in the amount of EUR 33 million (2017: EUR 12 million).

Other operating expense includes contributions payable by KfW IPEX-Bank GmbH to the restructuring fund for banks in the amount of EUR 15 million (2017: EUR 13 million). KfW is not obligated to contribute to the fund in accordance with Section 2 of the Restructuring Fund Act (*Restrukturierungsfondsgesetz – "RStrukFG"*).

(38) Taxes on income

Analysis of Taxes on income by component

	2018	2017
	EUR in millions	EUR in millions
Current taxes on income	61	36
Deferred taxes	-74	-10
Total	-13	26

Deferred tax income largely resulted from capitalising deferred taxes on the KfW holding company's loss carryforwards.

The reconciliation presents the relationship between the calculated income tax expense for the financial year and reported taxes on income.

Tax reconciliation

	2018	2017
	EUR in millions	EUR in millions
Profit/loss from operating activities (before taxes)	1,623	1,453
Group income tax rate	0%	0%
Calculated income tax expense	0	0
Effects of tax rate differentials within the group	62	32
Effect of tax rate changes	0	0
Effects of previous year taxes recorded in the reporting year	-4	2
Effects of non-deductible taxes on income	4	7
Effects of non-deductible business expenses	5	14
Effects of tax-free income	-1	1
Trade tax add-ons/reductions	1	1
Permanent accounting differences	12	-2
Effects of changes in recognised deferred tax assets	-92	-29
Reported taxes on income	-13	26

KfW's applicable income tax rate of 0%, on which the reconciliation is based, takes into account the tax status of KfW as a non-taxable public-law institution and the major effect of this status on profit/loss from operating activities.

The effects of tax rate differentials result from individual group companies being taxable and the related different tax rates. The tax rates continue to range from 0% to 32%.

(39) Other comprehensive income

Analysis of Other comprehensive income by class

	2018	2017
	EUR in millions	EUR in millions
Amounts reclassifiable to the income statement	n/a	202
Financial instruments	n/a	208
<i>Bonds and other fixed-income securities</i>	n/a	44
<i>Shares and other non-fixed income securities</i>	n/a	0
<i>Equity investments</i>	n/a	165
Deferred taxes on financial instruments	n/a	-6
Investments accounted for using the equity method	n/a	0
Amounts not reclassified to the income statement	155	79
Change in own credit risk of liabilities designated at fair value through profit or loss	157	n/a
Deferred taxes on financial instruments	0	n/a
Defined benefit pension obligations	0	82
Deferred taxes on defined benefit pension obligations	-1	-3
Total	155	281

Other comprehensive income comprises amounts recognised directly in equity under Revaluation reserves. These amounts include income and expense from the change in own credit risk of liabilities designated at fair value through profit or loss, from financial instruments classified as available-for-sale financial assets (financial year 2017), changes in actuarial gains and losses for defined benefit obligations, and changes in deferred taxes reported depending on the underlying transaction.

Segment reporting

(40) Segment reporting by business sector

In accordance with the provisions of IFRS 8, segment reporting follows the internal management reporting system, which is used by the group's main decision-makers to assess each segment's performance and to allocate resources to segments.

In accordance with the business sector structure for KfW Group, the segments and their products and services can be presented as follows:

Mittelstandsbank & Private Kunden (SME Bank & Private Clients)	<ul style="list-style-type: none"> – Start-up financing – Financing of general corporate investments and investments in innovation, energy and environmental protection – Education financing – Financing for housing construction, conversion and refurbishment
Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)	<ul style="list-style-type: none"> – Financing of municipal and social infrastructure – Customised corporate financing with equity and debt capital – Customised financing of banks and promotional institutions of the federal states
KfW Capital	<ul style="list-style-type: none"> – Investments in German and European venture capital and venture debt funds (as of 1 January 2019 transfer of KfW's existing VC business to KfW Capital GmbH & Co. KG)
Export and project finance	<ul style="list-style-type: none"> – Financing of German and European export activities – Financing of projects and investments which are of special interest for Germany and Europe
Promotion of developing countries and emerging economies	<ul style="list-style-type: none"> – Promotion of developing countries and emerging economies on behalf of the Federal Government through budget funds and complementary market funds raised by KfW – Financing provided by DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH (private sector promotion)
Financial markets	<ul style="list-style-type: none"> – Securities and money market investments – Holding arrangements for the Federal Republic of Germany – Transactions mandated by the Federal Government, loan granted to Greece – Funding
Head office	<ul style="list-style-type: none"> – Central interest rate and currency management – Strategic equity investments

The business sector structure was adjusted compared to the structure of previous reports, in line with the realigned organisational structure and product responsibility, with effect from 1 April 2018, as follows:

The new business sectors Mittelstandsbank & Private Kunden (*SME Bank & Private Clients*), Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*) and KfW Capital replace the previous two business sectors Mittelstandsbank (*SME Bank*) and Kommunal- und Privatkundenbank/Kreditinstitute (*Municipal and Private Client Bank/Credit Institutions*). The products of the former business sectors were fully allocated to the new business sectors. The business sector Mittelstandsbank & Private Kunden comprises the retail financing business in the areas of start-ups/SMEs, innovation, environmental and climate protection, housing construction and modernisation, and education. The business sector Individualfinanzierung & Öffentliche Kunden comprises the existing equity finance business, in addition to customised finance and municipal loan business. The KfW Capital business sector contains the

venture capital products previously allocated to the business sector Mittelstandsbank. KfW's existing business was contributed to KfW Capital GmbH & Co. KG as of 1 January 2019.

The new business sector structure is used for the full financial year 2018 and retroactively as the basis for determining comparative figures for financial year 2017.

The business sectors are measured on the basis of their contribution to consolidated profit. The individual line items are based on the following methods:

- Net interest income (before promotional expense) comprises interest margins from KfW's lending business calculated on the basis of the market interest rate method¹⁾. The item also includes the imputed return on equity with an analysis based on economic capital usage. Head office also includes the treasury result, which largely comprises the income/loss from interest rate and spread management. The profit contribution from KfW funding²⁾ is allocated to the Financial markets business sector.
- Promotional expense included in Interest, Commission and Administrative expense in the income statement is reported separately pursuant to the internal management report due to the special relevance of promotional expense as a management variable.

Promotional expense is understood to mean certain expenses of the two business sectors Mittelstandsbank & Private Kunden (*SME Bank & Private Clients*) and Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*) with a positive impact on the achievement of KfW's promotional objectives. Promotional expense primarily consists of additions of the interest rate reductions accounted for at present value³⁾ from new commitments as well as from the compounding effect. Additional promotional components are the expenses for sales partner incentives through upfront fees (included in Commission expense) as well as for available and product-related marketing and sales measures (included in Administrative expense).

- The allocation of Administrative expense (before promotional expense) is based on the results from activity-based accounting by cost centres⁴⁾. Administrative expense (before promotional expense) includes amortisation of intangible assets and depreciation on property, plant and equipment.

¹⁾ Funding at matching maturities using KfW's internal refinancing curve is assumed for the calculation of interest margins in this method.

²⁾ The difference between the realised refinancing rates and the maturity-matched refinancing rates calculated in-house.

³⁾ See note regarding "KfW's promotional lending business" for details of KfW's interest rate reductions in the promotional lending business. The present value of the nominal scheduled interest rate reductions, which is recognised as interest expense in profit or loss, is allocated to the Mittelstandsbank & Private Kunden (*SME Bank & Private Clients*) and Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients*) business sectors. The compounding effect on the present values contained in Interest expense is allocated to the Head office for simplicity's sake.

⁴⁾ The costs incurred in the organisational units are largely allocated to the products by means of core services.

- In the Risk provisions for lending business item, net impairment charges, direct write-offs, recoveries on loans written off and the net gains/losses from non-substantial contractual modifications are distributed among the segments according to the underlying loan.
- The valuation result comprises the net gains/losses from hedge accounting, the net gains/losses from other financial instruments at fair value, the net gains/losses from securities and investments, the net gains/losses from risk provisions in the securities business, the net gains/losses from disposal of financial instruments measured at amortised cost, the net gains/losses from investments accounted for using the equity method and net other operating income.
- When taxes on income are allocated to the business sectors (excluding the Head office), only the current taxes on income are taken in account. Deferred taxes are allocated to the Head office.
- The reported economic capital requirement covers all types of risk under the definition of economic capital requirements in the risk report section of the group management report.
- In accordance with the internal management reporting system, segment assets are unreported as they are used neither to assess each segment's performance nor to allocate resources to segments.
- The presentation of segment income and expense is based on consolidated figures. Administrative and commission expense, as well as commission income and other operating income resulting from service relationships within KfW Group, are adjusted in segment reporting. Any remaining negligible consolidation effects are reported in the reconciliation/consolidation column.

Segment reporting by business sector for the financial year 2018

	Mittelstands-bank & Private Kunden (SME Bank & Private Clients) ¹⁾	Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) ¹⁾	KfW Capital ¹⁾	Export and project finance ¹⁾	Promotion of developing countries and emerging economies ¹⁾	Financial markets	Head office	Reconciliation/consolidation	KfW Group
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Volume of new commitments	36,294	9,544	141	17,730	10,558	1,472	0	-245	75,495
Net interest income (before promotional expense)	420	97	0	719	374	308	500	-5	2,413
Net commission income (before promotional expense)	145	11	0	18	202	-3	0	0	374
Administrative expense (before promotional expense)	388	85	7	253	438	93	135	0	1,400
Operating result before valuation (before promotional expense)	178	24	-7	483	138	212	366	-6	1,387
Risk provisions for lending business	-12	-4	0	21	-14	1	5	0	-3
Valuation result	4	22	9	68	64	4	278	5	455
Profit/loss from operating activities (before promotional expense)	170	42	2	572	188	218	648	0	1,839
Promotional expense	196	6	0	0	0	0	14	0	216
Taxes on income	0	0	0	35	22	0	-70	0	-13
Consolidated profit	-26	36	2	537	165	218	703	0	1,636
Economic capital requirement	8,090	1,040	171	1,166	1,698	1,035	5,168	0	18,369

¹⁾ The valuation result of the business sectors contains the following net gains/losses from investments accounted for using the equity method: Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) EUR -7.6 million, KfW Capital EUR 0.1 million, Export and project finance EUR 26.6 million and Promotion of developing countries and emerging economies EUR 3.3 million.

Segment reporting by business sector for the financial year 2017

	Mittelstands-bank & Private Kunden (SME Bank & Private Clients) ¹⁾	Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) ¹⁾	KfW Capital ¹⁾	Export and project finance ¹⁾	Promotion of developing countries and emerging economies ¹⁾	Financial markets	Head office	Reconciliation/consolidation	KfW Group
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Volume of new commitments	42,388	9,319	105	13,751	9,749	1,541	0	-372	76,481
Net interest income (before promotional expense)	463	107	1	798	381	235	596	-3	2,579
Net commission income (before promotional expense)	101	-3	0	21	198	0	0	0	316
Administrative expense (before promotional expense)	376	74	10	238	389	88	58	0	1,234
Operating result before valuation (before promotional expense)	188	29	-9	581	189	147	539	-3	1,661
Risk provisions for lending business	-90	11	0	-89	-42	2	0	0	-209
Valuation result	-1	32	0	-2	-31	4	209	3	214
Profit/loss from operating activities (before promotional expense)	97	72	-9	489	117	152	748	0	1,667
Promotional expense	188	5	0	0	0	0	20	0	213
Taxes on income	0	1	0	21	10	0	-5	0	26
Consolidated profit	-91	66	-9	469	107	152	733	0	1,427
Economic capital requirement	7,884	882	116	1,307	1,947	1,137	4,956	0	18,228

¹⁾ The valuation result of the business sectors contains the following net gains/losses from investments accounted for using the equity method: Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) EUR -2.2 million, KfW Capital EUR -0.6 million, Export and project finance EUR 17.4 million and Promotion of developing countries and emerging economies EUR 7.2 million.

The reconciliation/consolidation column includes all adjustments that were necessary to reconcile segment information with the aggregated information for KfW Group. The consolidation effects reported for "Volume of new commitments" relate to commitments for programme loans made by Mittelstandsbank & Private Kunden (SME Bank & Private Clients) and Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients) for which KfW IPEX-Bank acts as an on-lending bank. The other amounts in this column result from minimal consolidation effects.

(41) Segment reporting by region

Net interest and commission income are allocated on the basis of the customers' geographical location. The imputed return on equity included in net interest income, the profit contribution from KfW funding, and the treasury result are allocated to Germany. KfW receives commission income from the Federal Government for supporting developing countries and emerging economies using budget funds of the Federal Government. These funds are allocated according to the region of the country receiving the investment.

Property, plant and equipment and intangible assets are not reported according to region because, apart from immaterial amounts, these assets relate to Germany.

Segment reporting by region for the financial year 2018

	Germany	Europe (excl. Germany)	Rest of the world	Reconciliation/ consolidation	KfW Group
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Net interest income	1,210	420	603	-5	2,228
Net commission income	148	22	191	0	362
Segment income	1,358	442	794	-5	2,590

Segment reporting by region for the financial year 2017

	Germany	Europe (excl. Germany)	Rest of the world	Reconciliation/ consolidation	KfW Group
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Net interest income	1,330	420	646	-3	2,393
Net commission income	87	30	185	0	303
Segment income	1,417	450	831	-3	2,695

The reconciliation/consolidation column includes all adjustments that were necessary to reconcile segment information with the aggregated information for KfW Group. The amounts in this column result solely from minimal consolidation effects.

Notes to the statement of financial position

(42) Cash reserves

Analysis of Cash reserves by class

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Cash	0	0
Balances with central banks	17,465	11,087
Total	17,465	11,087

(43) Loans and advances to banks

Analysis of Loans and advances to banks by class

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Money-market transactions	12,023	10,390
Loans and advances	262,074	256,475
Promissory note loans	22	0
Other receivables	6,293	7,626
Total	280,413	274,491

An adjustment to the carrying amount totalling EUR 1,030 million (31 Dec. 2017: EUR 1,185 million) is reported under Loans and advances, due to the interest rate being below the market rate for promotional loans paid out with additional promotional funds in the form of interest rate reductions impacting KfW's earnings position.

The receivables from reverse repurchase agreements (reverse "repos") and cash collateral pledged are included in Other receivables.

Analysis of Loans and advances to banks by underwriting liability type

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Direct loans to banks	73,472	72,306
On-lent customer loans with full underwriting borne by the on-lending commercial bank	187,392	182,449
On-lent customer loans with partial underwriting borne by the on-lending commercial bank	1,974	2,191
Direct and on-lent subordinated loans	267	714
Adjustment to the carrying amount due to the interest rate being below the market rate for promotional loans paid out with additional promotional funds in the form of interest rate reductions with an impact on KfW's earnings position	-1,030	-1,185
Total	262,074	256,475

Direct loans to banks include, in particular, global loans granted as part of financing for domestic housing construction and SMEs.

(44) Loans and advances to customers

Analysis of Loans and advances to customers by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Money-market transactions	771	5,156
Loans and advances	124,379	121,964
Promissory note loans	1,131	0
Other receivables	596	639
Total	126,878	127,759

An adjustment to the carrying amount totalling EUR 84 million (31 Dec. 2017: EUR 111 million) is reported under Loans and advances due to the interest rate being below the market rate for promotional loans paid out with additional promotional funds in the form of interest rate reductions impacting KfW's earnings position.

Analysis of Loans and advances to customers by underwriting liability type

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Direct loans to customers	121,655	119,235
On-lent customer loans without underwriting borne by the on-lending commercial bank	209	234
Customer loans on-lent through insurance companies with full underwriting borne by the on-lending insurance company	667	621
Direct subordinated loans and subordinated loans on-lent through commercial banks and insurance companies	1,932	1,985
Adjustment to the carrying amount due to the interest rate being below the market rate for promotional loans paid out with additional promotional funds in the form of interest rate reductions with an impact on KfW's earnings position	-84	-111
Total	124,379	121,964

Direct loans to customers include, in particular, loans granted under export and project financing, municipal financing and education financing. The item also includes loans connected with certain transactions mandated by the Federal Government in accordance with the KfW Law.

(45) Risk provisions for lending business

Analysis of Risk provisions for lending business by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Loans and advances to banks	195	177
of which stage 1	122	n/a
of which stage 2	33	n/a
of which stage 3	39	n/a
Loans and advances to customers	1,350	1,280
of which stage 1	199	n/a
of which stage 2	176	n/a
of which stage 3	975	n/a
Provisions for losses on loans and advances	1,545	1,457
Provisions for credit risks	73	61
of which stage 1	40	n/a
of which stage 2	28	n/a
of which stage 3	6	n/a
Total	1,618	1,517

Provisions for losses on loans and advances also include money market investments and reverse repos.

Development of Risk provisions for lending business in the financial year 2018

	Impairments for expected losses from loans and advances to banks			Impairments for expected losses from loans and advances to customers			Provisions for credit risks		
	Stage 1	Stage 2	Stage 3	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	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	120	32	40	219	200	962	34	42	9
Transfer from stage 2 and stage 3 to stage 1	2	-2	0	24	-24	0	5	-5	0
Transfer from stage 1 and stage 3 to stage 2	-4	4	0	-13	27	-15	-2	2	0
Transfer from stage 1 and stage 2 to stage 3	-1	-6	6	-3	-34	37	0	-2	2
Additions	68	19	24	90	123	477	58	18	5
Utilisation	0	0	-14	0	-3	-177	0	0	0
Reversals	-65	-15	-20	-122	-117	-406	-56	-28	-11
Exchange rate and other changes	1	0	0	3	3	46	1	1	0
As of 31 Dec. 2018	122	33	39	199	176	975	40	28	6

Reparametrisation of probabilities of default and of loss given default were undertaken for the retail business due to an improved data basis. This resulted in a reversal of risk provisions amounting to EUR 65 million.

In the reporting year, EUR 54 million (31 Dec. 2017: EUR 54 million) in interest income was not collected for impaired loans and advances.

The contractual balance outstanding of financial assets that were written off during the reporting period and that are still subject to enforcement measures amounted to EUR 71 million as of the reporting date.

Development of Risk provisions for lending business in the financial year 2017 by risk assessment type

	Individually assessed risks	Risks assessed on a portfolio basis	Provisions for losses on loans and advances	Provisions (individual risks)	Provisions (portfolio risks)	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	1,064	546	1,610	9	35	1,654
Additions	497	68	565	2	14	581
Utilisation	-328	0	-328	0	0	-328
Reversals	-180	-82	-261	-3	-1	-266
Unwinding	-24	0	-24	0	0	-24
Exchange rate changes	-67	-25	-92	0	-1	-94
Changes in consolidated group	-6	-6	-12	0	6	-6
As of 31 Dec. 2017	956	500	1,456	8	53	1,517

(46) Development of gross carrying amounts in lending business

Analysis of gross carrying amounts in lending business by class in the financial year 2018

	Gross carrying amounts of loans and advances to banks			Gross carrying amounts of loans and advances to customers			Gross carrying amounts of off-balance sheet lending business		
	Stage 1	Stage 2	Stage 3	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	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	273,891	451	131	97,070	4,008	17,070	82,351	367	261
Transfer from stage 2 and stage 3 to stage 1	63	-65	2	451	-451	0	3	-3	0
Transfer from stage 1 and stage 3 to stage 2	-171	175	-4	-2,098	2,126	-28	-73	73	0
Transfer from stage 1 and stage 2 to stage 3	-33	-36	69	-421	-394	815	-8	0	8
Additions	158,981	41	5	23,635	150	255	1,268	25	1
<i>of which recently purchased or issued financial assets</i>	116,350	29	0	14,646	7	13	1,044	5	1
<i>of which current business</i>	42,630	12	5	8,988	143	242	223	20	0
Disposals	-154,224	-115	-75	-23,346	-1,051	-951	-1,070	-60	-8
<i>of which financial assets derecognised</i>	-154,224	-115	-57	-23,337	-1,049	-798	-1,070	-60	-8
<i>of which default on receivables</i>	0	0	-19	-9	-2	-153	0	0	0
Changes from non-substantial contractual modification	0	0	0	0	4	0	0	0	0
Exchange rate and other changes	1,310	2	0	358	53	0	2,951	-32	-51
As of 31 Dec. 2018	279,816	453	127	95,650	4,445	17,159	85,421	370	211

(47) Value adjustments from macro fair value hedge accounting

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Value adjustments to assets under macro fair value hedge accounting	9,071	9,648

The fair values attributable to hedged risks in the hedged portfolios in the at amortised cost measurement category are included in this item.

(48) Derivatives designated for hedge accounting

Analysis of derivatives with positive fair values designated for hedge accounting by type of hedging relationship

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Micro fair value hedge accounting	9,354	8,820
Macro fair value hedge accounting	157	254
Total	9,512	9,074

Analysis of derivatives with positive fair values designated for hedge accounting by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Interest-related derivatives	2,869	3,688
Currency-related derivatives	6,643	5,386
Total	9,512	9,074

Only Interest-related derivatives are designated for macro fair value hedge accounting. Cross-currency swaps are presented under Currency-related derivatives.

(49) Other derivatives

Analysis of Other derivatives with positive fair values by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Interest-related derivatives	3,738	4,461
Currency-related derivatives	1,536	639
Other derivatives	0	45
Total	5,274	5,145

Cross-currency swaps are presented under Currency-related derivatives.

Under Other derivatives are derivatives with positive fair values of EUR 200 million (31 Dec. 2017: EUR 92 million) attributable to embedded derivatives that are bifurcated.

(50) Securities and investments

Analysis of Securities and investments by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Bonds and other fixed-income securities	32,874	30,900
Equity investments	2,818	2,672
Shares in non-consolidated subsidiaries	43	43
Total securities and investments by class	35,735	33,615
Risk provisions for securities and investments	-7	n/a
Total	35,729	33,615

Development of Risk provisions for securities and investments in the financial year 2018

	Impairments for expected losses from securities and investments		
	Stage 1	Stage 2	Stage 3
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	6	1	0
Additions	5	0	0
Reversals	-5	-1	0
As of 31 Dec. 2018	6	1	0

Development of gross carrying amounts of the securities and investments measured at amortised cost in the financial year 2018

	Stage 1	Stage 2	Stage 3
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	30,455	205	100
Transfer from stage 2 and stage 3 to stage 1	7	-7	0
Additions	13,864	0	0
<i>of which recently purchased or issued financial assets</i>	13,719	0	0
<i>of which current business</i>	145	0	0
Disposals	-11,662	-155	-9
<i>of which financial assets derecognised</i>	-11,662	-155	-9
Exchange rate and other changes	68	-7	0
As of 31 Dec. 2018	32,732	35	91

(51) Investments accounted for using the equity method

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Investments accounted for using the equity method	514	415
Total	514	415

The note regarding “Disclosures on shareholdings” contains a list of Investments accounted for using the equity method.

(52) Property, plant and equipment

Analysis of Property, plant and equipment by class

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Land and buildings	848	856
Plant and equipment	78	78
Other property, plant and equipment	32	17
Total	958	950

Payments in advance and assets under construction are presented in Other property, plant and equipment.

Development of Property, plant and equipment in the financial year 2018

	Acquisition/ production cost EUR in millions	Accumulated depreciation, impairment and reversal of impairment losses EUR in millions	Net carrying amount EUR in millions
Carrying amount as of 1 Jan. 2018	1,339	-388	950
Additions/reversals of impairment losses	59	0	59
Disposals	-18	17	-1
Depreciation	0	-49	-49
Impairment losses	0	-1	-1
Carrying amount as of 31 Dec. 2018	1,379	-421	958

Development of Property, plant and equipment in the financial year 2017

	Acquisition/ production cost	Accumulated depreciation, impairment and reversal of impairment losses	Net carrying amount
	EUR in millions	EUR in millions	EUR in millions
Carrying amount as of 1 Jan. 2017	1,278	-347	931
Additions/reversals of impairment losses	66	0	66
Disposals	-6	5	-1
Depreciation	0	-46	-46
Impairment losses	0	0	0
Carrying amount as of 31 Dec. 2017	1,339	-388	950

(53) Intangible assets

Analysis of Intangible assets by class

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Software	171	206
<i>Purchased software</i>	117	138
<i>Internally generated software</i>	54	68
Other intangible assets	54	46
Total	225	252

Other intangible assets include, in particular, software under development.

Development of Intangible assets in the financial year 2018

	Acquisition/ production cost	Accumulated amortisation, impairment and reversal of impairment losses	Net carrying amount
	EUR in millions	EUR in millions	EUR in millions
Carrying amount as of 1 Jan. 2018	397	-145	252
Changes in consolidated group	0	0	0
Additions/reversals of impairment losses	45	0	45
Disposals	-3	3	0
Amortisation	0	-63	-63
Impairment losses	0	-9	-9
Carrying amount as of 31 Dec. 2018	439	-214	225

Amortisation increased compared to the previous year, particularly as a result of the start of amortisation of the costs of meeting regulatory requirements and of the comprehensive modernisation of KfW's information technology architecture.

Development of Intangible assets in the financial year 2017

	Acquisition/ production cost	Accumulated amortisation, impairment and reversal of impairment losses	Net carrying amount
	EUR in millions	EUR in millions	EUR in millions
Carrying amount as of 1 Jan. 2017	338	-103	235
Changes in consolidated group	0	0	0
Additions/reversals of impairment losses	64	0	64
Disposals	-5	4	-2
Amortisation	0	-39	-39
Impairment losses	0	-7	-7
Carrying amount as of 31 Dec. 2017	397	-145	252

(54) Income tax assets

Analysis of Income tax assets by type

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Current income tax assets	21	29
Deferred income tax assets	559	469
Total	579	498

Current income tax assets result from creditable taxes (investment income tax/solidarity surcharge) and tax receivables from advance tax payments during the reporting year.

Deferred income tax assets mostly result from valuation differences relating to the statement of financial position items listed below.

Composition of deferred tax assets by statement of financial position item

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Loans and advances to banks and customers (incl. risk provisions)	69	59
Securities and investments	33	21
Intangible assets	15	15
Other derivatives (liabilities)	251	255
Provisions	58	58
Other statement of financial position items	0	0
Tax loss carryforwards	132	61
Subtotal	559	469
Offset against deferred tax liabilities	0	0
Total	559	469

(55) Other assets

Analysis of Other assets by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Other assets and receivables	670	667
Prepaid and deferred charges	46	37
Total	716	704

Prepaid and deferred charges contains financial assets resulting from contractual rights ("contract assets" in accordance with IFRS 15). These developed as follows:

Development of assets from contractual rights

	2018	2017
	EUR in millions	EUR in millions
As of 1 Jan.	0	n/a
Additions	19	n/a
Disposals	0	n/a
As of 31 Dec.	19	n/a

(56) Liabilities to banks

Analysis of Liabilities to banks by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Money-market transactions	0	6
Promissory note loans	1,931	1,864
Other financial liabilities	6,288	4,120
Total	8,220	5,990

Liabilities from cash collateral received are included in Other financial liabilities.

(57) Liabilities to customers

Analysis of Liabilities to customers by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Money-market transactions	2,312	289
Promissory note loans	4,514	5,188
Other financial liabilities	5,478	4,409
Total	12,303	9,886

Liabilities from cash collateral received are included in Other financial liabilities.

(58) Certificated liabilities

Analysis of Certificated liabilities by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Money-market issues	41,740	40,185
Bonds and notes	376,842	366,105
Total	418,581	406,290

(59) Value adjustments from macro fair value hedge accounting

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Value adjustments to liabilities under macro fair value hedge accounting	98	119

The fair values attributable to formerly hedged risks in the hedged portfolios in the liabilities at amortised cost measurement category are included in this item.

(60) Derivatives designated for hedge accounting

Analysis of derivatives with negative fair values designated for hedge accounting by type of hedging relationship

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Micro fair value hedge accounting	6,296	9,233
Macro fair value hedge accounting	3,595	5,255
Total	9,891	14,488

Analysis of derivatives with negative fair values designated for hedge accounting by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Interest-related derivatives	5,029	6,293
Currency-related derivatives	4,862	8,195
Total	9,891	14,488

(61) Other derivatives

Analysis of Other derivatives with negative fair values by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Interest-related derivatives	889	974
Currency-related derivatives	1,640	1,927
Total	2,529	2,902

Cross-currency swaps are presented under Currency-related derivatives.

Other derivatives include derivatives with negative fair values of EUR 13 million (31 Dec. 2017: EUR 18 million) attributable to embedded derivatives that are bifurcated.

(62) Provisions

Analysis of Provisions by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Provisions for pensions and similar commitments	2,148	2,024
Provisions for credit risks	73	61
Other provisions	807	793
Total	3,028	2,877

Development of Provisions for pensions and similar commitments in the financial year 2018

	Defined benefit obligations	Early retirement	Partial retirement	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	1,981	29	14	2,024
Additions	104	75	5	184
<i>Current service cost</i>	65	75	5	146
<i>Past service cost</i>	0	0	0	0
<i>Interest cost</i>	39	0	0	39
<i>Other additions</i>	0	0	0	0
Actuarial gains and losses	0	0	0	0
<i>Changes in demographic assumptions</i>	15	0	0	15
<i>Changes in financial assumptions</i>	-77	0	0	-77
<i>Changes in experience adjustments</i>	61	0	0	61
Utilisation	-49	-11	-5	-65
Reversals	0	0	0	0
Transfers	0	0	0	0
Contributions by members (recognised in equity)	5	0	0	5
Changes in consolidated group	0	0	0	0
As of 31 Dec. 2018	2,041	93	14	2,148

Additional pension provisions were recognized in 2018.

The average expected residual term of the defined benefit pension obligations is 19.0 years as of 31 December 2018 (31 Dec. 2017: 19.3 years).

Development of Provisions for pensions and similar commitments in the financial year 2017

	Defined benefit obligations	Early retirement	Partial retirement	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	2,002	34	14	2,050
Additions	102	4	5	110
<i>Current service cost</i>	68	4	5	77
<i>Past service cost</i>	0	0	0	0
<i>Interest cost</i>	33	0	0	33
<i>Other additions</i>	0	0	0	0
Actuarial gains and losses	-82	0	0	-82
<i>Changes in demographic assumptions</i>	-2	0	0	-2
<i>Changes in financial assumptions</i>	-100	0	0	-100
<i>Changes in experience adjustments</i>	20	0	0	20
Utilisation	-46	-9	-5	-60
Reversals	0	0	0	0
Transfers	0	0	0	0
Contributions by members (recognised in equity)	5	0	0	5
Changes in consolidated group	0	0	0	0
As of 31 Dec. 2017	1,981	29	14	2,024

Provisions for pensions and similar commitments are calculated on the basis of the new RT 2018 G Heubeck actuarial tables and the following other actuarial assumptions:

Actuarial assumptions in % p.a.

	31 Dec. 2018	31 Dec. 2017
Technical discount rate	2.07	1.88
Rate of salary increases	2.20	2.20
Rate of pension increases	2.50	2.50
Rate of staff turnover	1.83	1.50

The technical discount rate as of 31 December 2018 reflects an adjustment to the average residual term of the defined benefit pension obligations translating into an adjustment to the average capital commitment period used.

Sensitivity of defined benefit pension obligations as of 31 December 2018

	Difference	Change in defined benefit obligations EUR in millions	Difference	Change in defined benefit obligations EUR in millions
Life expectancy	+1 year	85	-1 year	-85
Technical discount rate	+0.25%	-95	-0.25%	102
Rate of salary increases	+0.50%	17	-0.50%	-16
Rate of pension increases	+0.50%	132	-0.50%	-80
Rate of staff turnover	+1.00%	-4	-1.00%	4

Sensitivity of defined benefit pension obligations as of 31 December 2017

	Difference	Change in defined benefit obligations EUR in millions	Difference	Change in defined benefit obligations EUR in millions
Life expectancy	+1 year	83	-1 year	-84
Technical discount rate	+0.25%	-93	-0.25%	100
Rate of salary increases	+0.50%	17	-0.50%	-16
Rate of pension increases	+0.50%	129	-0.50%	-117
Rate of staff turnover	+1.00%	-4	-1.00%	5

Development of Risk provisions for lending business

For the development of Risk provisions for lending business see the note regarding “Risk provisions for lending business”.

Development of Other provisions in the financial year 2018

	Obligations to employees	Other provisions	Total
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	33	760	793
Additions	3	85	88
Interest cost	0	2	2
Other additions	3	83	86
Utilisation	-3	-38	-41
Reversals	0	-33	-33
As of 31 Dec. 2018	33	774	807

Obligations to employees show other long-term employee benefits including provisions for service anniversaries. Corresponding actuarial reports have been prepared for these obligations.

An Other provision item in the amount of EUR 59 million (31 Dec. 2017: EUR 40 million) is reported due to the interest rate being below the market rate for irrevocable promotional loan commitments with additional promotional funds in the form of interest rate reductions impacting KfW's earnings position. Changes to existing provisions are presented as net additions or, in the case of a decline, as a transfer via the adjustments to the carrying amounts of already disbursed promotional loans recognised on the assets side under Loans and advances to banks or customers.

Other provisions also comprise obligations arising from the assumption of the operations of the State Insurance Company of the GDR in liquidation (*Staatliche Versicherung der Deutschen Demokratischen Republik in Abwicklung – “SINA”*, an institution under public law), which are offset by receivables in the same amount from the Federal Agency for Special Tasks Arising from Unification (*Bundesanstalt für vereinigungsbedingte Sonderaufgaben – “BvS”*) recognised in Other assets.

Development of Other provisions in the financial year 2017

	Obligations to employees	Other provisions	Total
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	33	739	771
Additions	5	80	86
<i>Interest cost</i>	0	3	3
<i>Other additions</i>	5	77	83
Utilisation	-4	-48	-53
Reversals	-1	-11	-11
As of 31 Dec. 2017	33	760	793

(63) Income tax liabilities

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Current income tax liabilities	31	16
Deferred income tax liabilities	253	257
Total	284	272

Current income tax liabilities as of 31 December 2018 primarily consist of tax provisions at the level of taxable companies included in KfW Group.

Deferred income tax liabilities mostly resulted from valuation differences relating to the statement of financial position items listed below.

Analysis of deferred tax liabilities by statement of financial position item

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Other derivatives (assets)	245	254
Other statement of financial position items	8	3
Total	253	257

(64) Other liabilities

Analysis of Other liabilities by class

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Other financial liabilities	437	460
Deferred income	104	157
Total	540	617

Deferred income contains liabilities resulting from contractual rights ("contract liabilities" in accordance with IFRS 15). These developed as follows:

Development of liabilities from contractual rights

	2018	2017
	EUR in millions	EUR in millions
As of 1 Jan.	40	n/a
Additions	8	n/a
Disposals	13	n/a
As of 31 Dec.	35	n/a

(65) Equity

Analysis of Equity

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Subscribed capital	3,750	3,750
less uncalled outstanding contributions	-450	-450
Paid-in subscribed capital	3,300	3,300
Capital reserve	8,447	8,447
<i>of which promotional reserves from the ERP Special Fund</i>	7,150	7,150
Reserve from the ERP Special Fund	1,191	1,191
Retained earnings	17,371	15,500
<i>Statutory reserve under Article 10 (2) KfW Law</i>	1,875	1,875
<i>Special reserve under Article 10 (3) KfW Law</i>	10,092	9,207
<i>Special reserve less the special loss account from provisioning pursuant to Section 17 (4) of the D-Mark Balance Sheet Law</i>	21	21
<i>Other retained earnings</i>	5,383	4,396
Fund for general banking risks	600	600
Revaluation reserves	-594	-295
<i>Valuation gains/losses from available-for-sale financial assets (after tax)</i>	n/a	277
<i>Valuation result from the change in own credit risk of liabilities designated at fair value through profit or loss</i>	-21	n/a
<i>Actuarial gains and losses from defined benefit pension obligations (after tax)</i>	-573	-572
Total	30,315	28,742

Equity forms the basis for the capital available for covering risks, which are matched against the capital requirements derived from internal management.

For information concerning Equity in relation to risk-bearing capacity see the risk report in the group management report.

Notes to financial instruments

The different IFRS 9 measurement categories are abbreviated as follows in the Notes to financial instruments:

ACO = Financial instruments measured at amortised cost

FVM = Financial instruments measured at fair value

FVD = Financial instruments designated at fair value

(66) Gains and losses from financial instruments by measurement category

The following tables show the results from financial instruments included in the different statement of comprehensive income items presented by measurement category. The result from foreign currency translation is not included.

Gains and losses from financial instruments by measurement category in the financial year 2018

	ACO assets	ACO liabilities	FVM assets	FVM liabilities	FVD liabilities	Deriva- tives des- ignated for hedge accounting	Total
	EUR in millions	EUR in millions					
Interest income	6,126	0	415	437	0	-3,290	3,687
Interest expense	-185	-6,328	318	-204	-492	5,473	-1,419
Risk provisions for lending business	-3	0	0	0	0	0	-3
Commission income	8	0	0	0	0	0	8
Commission expense	-12	-6	0	0	0	0	-18
Net gains/losses from hedge accounting	312	136	0	0	0	32	480
Net gains/losses from other financial instru- ments at fair value through profit or loss	0	0	-338	-47	345	0	-40
Net gains/losses from disposal of financial instruments measured at amortised cost	2	0	0	0	0	0	2
Net other operating income	0	-1	0	0	0	0	-1
Change in revaluation reserves	0	0	0	0	157	0	157
Total	6,247	-6,199	395	185	11	2,214	2,853

Gains and losses from financial instruments by measurement category in the financial year 2017

	Net interest income	Risk provisions for lending business	Net commission income	Net gains/losses from hedge accounting	Net gains/losses from other financial instruments at fair value through profit or loss	Net gains/losses from securities and investments	Net other operating income	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Loans and receivables	6,349	-209	106	-3,412	0	4	0	2,839
Held-to-maturity investments	-3	0	0	0	0	0	0	-3
Other financial liabilities	-6,656	0	0	2,241	0	0	5	-4,410
Available-for-sale financial assets	185	0	0	-169	0	-4	0	11
Financial assets at fair value through profit or loss	39	0	3	0	-54	0	0	-12
Financial liabilities at fair value through profit or loss	-587	0	-3	0	137	0	0	-453
Financial instruments classified as held for trading	1,811	0	0	0	-459	0	0	1,352
Derivatives designated for hedge accounting	1,290	0	0	1,931	0	0	0	3,222
Total	2,427	-209	106	591	-377	0	5	2,545

**(67) Statement of financial position for financial instruments
by measurement category**

The following tables show the assets and liabilities from financial instruments included in the different statement of financial position items presented by measurement category.

Financial assets by measurement category as of 31 December 2018

	Loans and advances to banks	Loans and advances to customers	Risk provisions for lending business	Value adjustments from macro fair value hedge accounting	Derivatives designated for hedge accounting	Other derivatives	Securities and investments	Assets (financial instruments)	
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	%
ACO	280,395	117,254	-1,545	9,071	0	0	32,851	438,027	94.1
FVM	18	9,624	0	0	0	5,274	2,877	17,793	3.8
Derivatives designated for hedge accounting	0	0	0	0	9,512	0	0	9,512	2.0
Total	280,413	126,878	-1,545	9,071	9,512	5,274	35,729	465,332	100.0

Financial liabilities by measurement category as of 31 December 2018

	Liabilities to banks	Liabilities to customers	Certificated liabilities	Value adjustments from macro fair value hedge accounting	Derivatives designated for hedge accounting	Other derivatives	Liabilities (financial instruments)	
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	%
ACO	7,980	10,644	407,614	98	0	0	426,336	94.4
FVM	0	0	0	0	0	2,529	2,529	0.6
FVD	240	1,659	10,967	0	0	0	12,866	2.8
Derivatives designated for hedge accounting	0	0	0	0	9,891	0	9,891	2.2
Total	8,220	12,303	418,581	98	9,891	2,529	451,622	100.0

Financial assets by measurement category as of 31 December 2017

	Loans and advances to banks	Loans and advances to customers	Risk provisions for lending business	Value adjustments from macro fair value hedge accounting	Derivatives designated for hedge accounting	Other derivatives	Securities and investments	Assets (financial instruments)	
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	%
Loans and receivables	274,486	127,759	-1,457	9,648	0	0	6,242	416,678	90.9
Held-to-maturity investments	0	0	0	0	0	0	2,587	2,587	0.6
Available-for-sale financial assets	0	0	0	0	0	0	22,909	22,909	5.0
Financial assets at fair value through profit or loss	5	0	0	0	0	0	1,876	1,882	0.4
Financial assets classified as held for trading	0	0	0	0	0	5,145	0	5,145	1.1
Derivatives designated for hedge accounting	0	0	0	0	9,074	0	0	9,074	2.0
Total	274,491	127,759	-1,457	9,648	9,074	5,145	33,615	458,276	100.0

Financial liabilities by measurement category as of 31 December 2017

	Liabilities to banks	Liabilities to customers	Certificated liabilities	Value adjustments from macro fair value hedge accounting	Derivatives designated for hedge accounting	Other derivatives	Liabilities (financial instruments)	
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	%
Other financial liabilities	5,735	8,051	394,599	119	0	0	408,504	92.9
Financial liabilities at fair value through profit or loss	255	1,835	11,691	0	0	0	13,780	3.1
Financial liabilities classified as held for trading	0	0	0	0	0	2,902	2,902	0.7
Derivatives designated for hedge accounting	0	0	0	0	14,488	0	14,488	3.3
Total	5,990	9,886	406,290	119	14,488	2,902	439,674	100.0

(68) Fair values of financial instruments

In the following tables, the fair values of financial instruments are compared with their carrying amounts. The fair value of the additional balances with central banks recognised in Cash reserves is their carrying amount. Existing Risk provisions for lending business are deducted from the carrying amounts of Loans and advances to banks and customers and Securities and investments.

Fair values of financial instruments as of 31 December 2018

	Fair value	Carrying amount (statement of financial position)	Difference
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	287,081	280,218	6,862
Loans and advances to customers	129,100	125,528	3,572
Value adjustments from macro fair value hedge accounting	n/a	9,071	-9,071
Derivatives designated for hedge accounting	9,512	9,512	0
Other derivatives	5,274	5,274	0
Securities and investments	35,740	35,729	12
Assets	466,707	465,332	1,375
Liabilities to banks	8,334	8,220	114
Liabilities to customers	12,486	12,303	183
Certificated liabilities	419,738	418,581	1,157
Value adjustments from macro fair value hedge accounting	n/a	98	-98
Derivatives designated for hedge accounting	9,891	9,891	0
Other derivatives	2,529	2,529	0
Liabilities	452,978	451,622	1,356

Interest-related changes in value are also included in measuring the fair value of the financial instruments. Accordingly, when the comparison is made with the carrying amount, it is necessary to take into account the changes in value (interest-related) resulting from the recognition of Loans and advances and borrowings in macro fair value hedge accounting.

Fair values of financial instruments as of 31 December 2017

	Fair value	Carrying amount (statement of financial position)	Difference
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	284,945	274,315	10,631
Loans and advances to customers	128,567	126,479	2,088
Value adjustments from macro fair value hedge accounting	n/a	9,648	-9,648
Derivatives designated for hedge accounting	9,074	9,074	0
Other derivatives	5,145	5,145	0
Securities and investments	33,682	33,615	67
Assets	461,414	458,276	3,138
Liabilities to banks	6,110	5,990	120
Liabilities to customers	10,055	9,886	169
Certificated liabilities	409,187	406,290	2,897
Value adjustments from macro fair value hedge accounting	n/a	119	-119
Derivatives designated for hedge accounting	14,488	14,488	0
Other derivatives	2,902	2,902	0
Liabilities	442,741	439,674	3,067

(69) Disclosures on methods used to measure financial instruments at fair value

The following tables show the financial instruments measured at fair value or for which the fair value is indicated in the Notes according to the valuation methods used.

Financial instruments measured at fair value are allocated to the following valuation methods:

**Financial assets measured at fair value or for which the fair value is indicated in the Notes,
as of 31 December 2018**

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unob- servable data	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Financial assets measured at fair value				
Loans and advances to banks – FVM	0	0	17	18
Loans and advances to customers – FVM	0	9,437	186	9,624
Derivatives designated for hedge accounting	0	9,512	0	9,512
Other derivatives – FVM	0	4,700	575	5,274
Securities and investments – FVM	21	2,079	778	2,877
Subtotal of financial assets measured at fair value	21	25,727	1,556	27,305
Fair values of financial assets carried at amortised cost				
Loans and advances to banks – ACO	0	17,890	269,172	287,063
Loans and advances to customers – ACO	0	771	118,705	119,476
Securities and investments – ACO	26,128	6,654	76	32,859
Subtotal of fair values of financial assets carried at amortised cost	26,128	25,316	387,953	439,398
Total	26,149	51,043	389,510	466,702

**Financial liabilities measured at fair value or for which the fair value is indicated in the Notes,
as of 31 December 2018**

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unob- servable data	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Financial liabilities measured at fair value				
Liabilities to banks – FVD	0	240	0	240
Liabilities to customers – FVD	0	1,659	0	1,659
Certificated liabilities – FVD	7,649	3,263	55	10,967
Derivatives designated for hedge accounting	0	9,891	0	9,891
Other derivatives – FVM	0	2,432	97	2,529
Subtotal of financial liabilities measured at fair value	7,649	17,485	152	25,287
Fair values of financial liabilities carried at amortised cost				
Liabilities to banks – ACO	0	8,094	0	8,094
Liabilities to customers – ACO	0	10,807	20	10,826
Certificated liabilities – ACO	357,038	51,732	0	408,771
Subtotal of fair values of financial liabilities carried at amortised cost	357,038	70,633	20	427,691
Total	364,688	88,118	172	452,978

**Financial assets measured at fair value or for which the fair value is indicated in the Notes,
as of 31 December 2017**

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unob- servable data	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Financial assets measured at fair value				
Loans and advances to banks – recorded at fair value through profit or loss	0	5	0	5
Loans and advances to customers – classified as held for trading	0	0	0	0
Derivatives designated for hedge accounting	0	9,074	0	9,074
Other derivatives	0	4,472	673	5,145
Securities and investments – available for sale	21,869	689	351	22,909
Securities and investments – recorded at fair value through profit or loss	92	1,447	338	1,876
Subtotal of financial assets measured at fair value	21,960	15,688	1,362	39,010
Fair values of financial assets carried at amortised cost				
Loans and advances to banks – loans and receivables	0	17,629	267,311	284,940
Loans and advances to customers – loans and receivables	0	5,156	123,410	128,567
Securities and investments – loans and receivables	651	5,636	7	6,293
Securities and investments – held-to-maturity investments	2,069	535	0	2,603
Subtotal of fair values of financial assets carried at amortised cost	2,719	28,956	390,728	422,404
Total	24,680	44,644	392,091	461,414

**Financial liabilities measured at fair value or for which the fair value is indicated in the Notes,
as of 31 December 2017**

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unob- servable data	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Financial liabilities measured at fair value				
Liabilities to banks – recorded at fair value through profit or loss	0	255	0	255
Liabilities to customers – recorded at fair value through profit or loss	0	1,820	15	1,835
Certificated liabilities – recorded at fair value through profit or loss	8,139	3,392	160	11,691
Derivatives designated for hedge accounting	0	14,488	0	14,488
Other derivatives	0	2,816	86	2,902
Subtotal of financial liabilities measured at fair value	8,139	22,770	261	31,170
Fair values of financial liabilities carried at amortised cost				
Liabilities to banks – other liabilities	0	5,855	0	5,855
Liabilities to customers – other liabilities	0	8,203	18	8,220
Certificated liabilities – other liabilities	346,519	50,978	0	397,496
Subtotal of fair values of financial liabilities carried at amortised cost	346,519	65,035	18	411,572
Total	354,658	87,805	278	442,741

Change of valuation method used for financial assets measured at fair value with a transfer between the “Quoted market price” and “Valuation method based on observable market data (model)” levels in the financial year 2018

	Transfers from “Quoted market price” to “Valuation method based on quoted market prices (model)”	Transfers from “Valuation method based on observable market data (model)” to “Quoted market price”
	EUR in millions	EUR in millions
Securities and investments – FVM	9	0

The transfers within Securities and investments are a result of changes in market activity as of the reporting date.

Change of valuation method used for financial liabilities measured at fair value with a transfer between the “Quoted market price” and “Valuation method based on observable market data (model)” levels in the financial year 2018

	Transfers from “Quoted market price” to “Valuation method based on quoted market prices (model)”	Transfers from “Valuation method based on observable market data (model)” to “Quoted market price”
	EUR in millions	EUR in millions
Certificated liabilities – FVD	0	0

Change of valuation method used for financial assets measured at fair value with a transfer between the “Quoted market price” and “Valuation method based on observable market data (model)” levels in the financial year 2017

	Transfers from “Quoted market price” to “Valuation method based on quoted market prices (model)”	Transfers from “Valuation method based on observable market data (model)” to “Quoted market price”
	EUR in millions	EUR in millions
Securities and investments – available for sale	0	222
Securities and investments – recorded at fair value through profit or loss	20	0

Change of valuation method used for financial liabilities measured at fair value with a transfer between the “Quoted market price” and “Valuation method based on observable market data (model)” levels in the financial year 2017

	Transfers from “Quoted market price” to “Valuation method based on quoted market prices (model)”	Transfers from “Valuation method based on observable market data (model)” to “Quoted market price”
	EUR in millions	EUR in millions
Certificated liabilities – recorded at fair value through profit or loss	0	346

Development of financial assets measured at fair value in the financial year 2018, using valuation methods based in

part on unobservable data

	Loans and advances to banks – FVM	Loans and advances to customers – FVM	Derivatives designated for hedge accounting and other derivatives	Securities and investments – FVM	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	29	252	631	688	1,600
A. Changes recognised in the income statement					
Net interest and commission income	0	-4	-3	0	-6
<i>Contracts still valid at year-end</i>	0	0	-1	0	0
Net gains/losses from hedge accounting	0	0	0	0	0
<i>Contracts still valid at year-end</i>	0	0	0	0	0
Net gains/losses from other financial instru- ments at fair value through profit or loss	0	3	-70	18	-49
<i>Contracts still valid at year-end</i>	0	-26	-25	20	-31
Total changes recognised in the income statement	0	-1	-73	18	-56
B. Changes recognised directly in equity					
Change of valuation method used	0	0	0	66	66
Transfers from "Quoted market price" and "Valuation method based on observable market data (model)"	0	0	0	0	0
Transfers to "Quoted market price" and "Valuation method based on observable market data (model)"	0	0	0	66	66
Additions	0	52	0	32	84
Disposals	-12	-118	0	-36	-166
Total changes recognised directly in equity	-12	-67	0	63	-16
Changes in consolidated group	0	0	0	0	0
Exchange rate changes	1	2	-3	6	5
Other changes	0	0	19	3	22
As of 31 Dec. 2018	17	186	575	778	1,556

Development of financial assets measured at fair value in the financial year 2017, using valuation methods based in

part on unobservable data

	Loans and advances to banks – recorded at fair value through profit or loss	Loans and advances to banks – classified as held for trading	Loans and advances to customers – recorded at fair value through profit or loss	Loans and advances to customers – classified as held for trading	Derivatives designated for hedge accounting	Other derivatives	Securities and investments – available for sale	Securities and investments – recorded at fair value through profit or loss	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2017	0	0	0	0	0	864	825	432	2,123
A. Changes recognised in the income statement									
Net interest and commission income	0	0	0	0	0	-2	0	0	-2
<i>Contracts still valid at year-end</i>	0	0	0	0	0	-1	0	0	-1
Net gains/losses from hedge accounting	0	0	0	0	0	0	0	0	0
<i>Contracts still valid at year-end</i>	0	0	0	0	0	0	0	0	0
Net gains/losses from other financial instruments at fair value through profit or loss	0	0	0	0	0	-129	0	2	-127
<i>Contracts still valid at year-end</i>	0	0	0	0	0	-126	0	3	-123
Net gains/losses from securities and investments	0	0	0	0	0	0	-6	0	-6
<i>Contracts still valid at year-end</i>	0	0	0	0	0	0	-13	0	-13
Change in revaluation reserves	0	0	0	0	0	0	165	0	165
<i>Contracts still valid at year-end</i>	0	0	0	0	0	0	165	0	165
Total changes recognised in the income statement	0	0	0	0	0	-131	158	2	29
B. Changes recognised directly in equity									
Change of valuation method used	0	0	0	0	0	0	-596	-71	-667
Transfers from "Quoted market price" and "Valuation method based on observable market data (model)"	0	0	0	0	0	1	0	0	1
Transfers to "Quoted market price" and "Valuation method based on observable market data (model)"	0	0	0	0	0	0	-596	-71	-668
Additions	0	0	0	0	0	1	151	4	156
Disposals	0	0	0	0	0	-51	-101	-1	-153
Total changes recognised directly in equity	0	0	0	0	0	-50	-546	-68	-665
Changes in consolidated group	0	0	0	0	0	0	-28	-29	-56
Exchange rate changes	0	0	0	0	0	-8	-59	0	-67
Other changes	0	0	0	0	0	-1	0	0	-1
As of 31 Dec. 2017	0	0	0	0	0	673	350	338	1,362

Development of financial liabilities measured at fair value in the financial year 2018, using valuation methods based in

part on unobservable data

	Liabilities to banks – FVD	Liabilities to customers – FVD	Certificated liabilities – FVD	Derivatives designated for hedge accounting and other derivatives	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2018	0	0	160	86	246
A. Changes recognised in the income statement					
Net interest and commission income	0	0	0	1	1
<i>Contracts still valid at year-end</i>	0	0	0	1	1
Net gains/losses from hedge accounting	0	0	0	0	0
<i>Contracts still valid at year-end</i>	0	0	0	0	0
Net gains/losses from other financial instruments at fair value through profit or loss	0	0	-21	-15	-35
<i>Contracts still valid at year-end</i>	0	0	-5	-12	-17
Total changes recognised in the income statement	0	0	-21	-13	-34
B. Changes recognised directly in equity					
Change in revaluation reserves	0	0	-4	0	-4
<i>Contracts still valid at year-end</i>	0	0	-2	0	-2
Change of valuation method used	0	0	-88	-1	-89
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0	4	2	6
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0	-92	-3	-95
Additions	0	0	0	-1	-1
Disposals	0	0	0	5	5
Total changes recognised directly in equity	0	0	-92	3	-89
Changes in consolidated group	0	0	0	0	0
Exchange rate changes	0	0	8	2	11
Other changes	0	0	0	19	19
As of 31 Dec. 2018	0	0	55	97	152

Development of financial liabilities measured at fair value in the financial year 2017, using valuation methods based in

part on unobservable data

	Liabilities to banks – recorded at fair value through profit or loss EUR in millions	Liabilities to customers – recorded at fair value through profit or loss EUR in millions	Certificated liabilities – recorded at fair value through profit or loss EUR in millions	Derivatives designated for hedge accounting EUR in millions	Other derivatives EUR in millions	Total EUR in millions
As of 1 Jan. 2017	0	32	114	3	90	240
A. Changes recognised in the income statement						
Net interest and commission income	0	0	0	0	0	0
<i>Contracts still valid at year-end</i>	0	0	0	0	0	0
Net gains/losses from hedge accounting	0	0	0	0	0	0
<i>Contracts still valid at year-end</i>	0	0	0	0	0	0
Net gains/losses from other financial instruments at fair value through profit or loss	0	0	4	0	5	9
<i>Contracts still valid at year-end</i>	0	0	4	0	5	9
Total changes recognised in the income statement	0	0	4	0	5	9
B. Changes recognised directly in equity						
Change of valuation method used	0	0	49	0	0	49
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0	70	0	1	71
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0	-22	0	-1	-23
Additions	0	0	0	0	0	0
Disposals	0	-17	0	-2	-12	-31
Total changes recognised directly in equity	0	-17	49	-2	-12	17
Changes in consolidated group	0	0	0	0	0	0
Exchange rate changes	0	0	-7	-1	4	-4
Other changes	0	0	0	0	-1	-1
As of 31 Dec. 2017	0	15	160	0	86	261

The following tables show how an alternative determination of relevant unobservable data, i.e. values in best and worst case scenarios would impact fair values for significant products allocated to this level.

Information on unobservable data as of 31 Dec. 2018

Major products	Valuation method used	Relevant unobservable data with alternative determination	Range
Loans and advances to customers	Discounted cash flow method ¹⁾	Credit Spread	-500 to +3,000 basis points
		Internal spread	-45 to +25 basis points
		Risk costs	+/- 10%
Securities and investments from equity finance business	Discounted cash flow method ²⁾	Cost of capital	0,5% to 1,5% (absolute fluctuation)
		Long-term result	5% (relative fluctuation)
Derivatives with positive or negative fair values, which comprise a hedging instrument for customers with respect to export and project finance	Discounted cash flow method	Risk costs	+/- 10%
		Expected risk-free customer margin	7% to 13%
Certificated liabilities	Option pricing model	Correlations	+/- 500 basis points

¹⁾ If the credit spread and the internal spread could not be used for valuation purposes, the sensitivities were calculated on the basis of the cost of risk.

²⁾ If the cost of capital and the long-term result could not be used for valuation, the sensitivities were calculated on the basis of the cost of risk.

Information on unobservable data as of 31 Dec. 2017

Major products	Valuation method used	Relevant unobservable data with alternative determination	Range
Derivatives with positive or negative fair values, which comprise a hedging instrument for customers with respect to export and project finance	Discounted cash flow method	Expected risk-free customer margin	8% to 14%
Securities and investments from equity finance accounted for at fair value through profit or loss	Discounted cash flow method	Cost of capital	0,5% to 1,5% (absolute fluctuation)
		Long-term result	5% (relative fluctuation)

Sensitivity analysis for the financial assets measured at fair value, using valuation methods based in part on unobservable data as of 31 December 2018

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to customers – recorded at fair value through profit or loss	201	186	169
Other derivatives – with positive fair values	580	575	569
Securities and investments – recorded at fair value through profit or loss	876	778	709
Total	1,656	1,539	1,447

Sensitivity analysis for the financial liabilities measured at fair value, using valuation methods based in part on unobservable data as of 31 December 2018

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Certificated liabilities – recorded at fair value through profit or loss	55	55	55
Other derivatives – with negative fair values	96	97	98
Total	151	152	153

Sensitivity analysis for the financial assets measured at fair value, using valuation methods based in part on unobservable data as of 31 December 2017

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to customers – recorded at fair value through profit or loss	0	0	0
Other derivatives – with positive fair values	682	673	664
Securities and investments – recorded at fair value through profit or loss	399	338	290
Total	1.082	1.011	954

Sensitivity analysis for the financial liabilities measured at fair value, using valuation methods based in part on unobservable data as of 31 December 2017

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Certificated liabilities – recorded at fair value through profit or loss	158	160	162
Other derivatives – with negative fair values	85	86	87
Total	242	246	248

(70) Disclosures on micro fair value hedge accounting

Disclosures on hedged items in micro fair value hedge accounting by risk type – 2018

	Carrying amount of hedged items	Accumulated fair value hedge adjustment (fair value of the hedged risk to the hedged item)	Fair value hedge adjustment to be amortised (discontinued hedge relationships)	Statement of financial position items in which the hedged items are reported	Hedge fair value changes in hedged items to determine hedge ineffectiveness (income statement effect – hedged items)
	EUR in millions	EUR in millions	EUR in millions		EUR in millions
Assets					
Interest risk					
Bonds	23,880	224	0	Securities and investments	99
Interest-currency risk					
Bonds	215	1	0	Securities and investments	1
Liabilities and equity					
Interest risk					
Promissory note loans	6,296	367	4	Liabilities to banks; liabilities to customers	50
Certificated liabilities	113,554	1,435	1,193	Certificated liabilities	-386
Interest-currency risk					
Promissory note loans	0	0	0	Liabilities to banks; liabilities to customers	0
Certificated liabilities	144,221	1,903	-2	Certificated liabilities	444

Disclosures on hedging instruments in micro fair value hedge accounting by risk type – 2018

	Par value of hedging instruments	Carrying amount of hedging instruments	Statement of financial position items in which the hedging instruments are reported	Fair value change to determine hedge ineffectiveness (income statement effect – hedging instruments)	Average interest rate of hedging instruments
	EUR in millions	EUR in millions		EUR in millions	%
Assets					
Interest risk					
Interest-related transactions: interest rate swap	92,950	2,712	Derivatives designated for hedge accounting	-96	1.4
Interest-currency risk					
Currency-related transactions: cross currency interest rate swap	84,707	6,643	Derivatives designated for hedge accounting	-1	2.9
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	36,058	1,434	Derivatives designated for hedge accounting	364	1.9
Interest-currency risk					
Currency-related transactions: cross currency interest rate swap	163,884	4,862	Derivatives designated for hedge accounting	-437	2.6

Analysis of par values of hedging instruments by hedge relationship according to remaining terms as of 31 Dec. 2018

Due	In up to one month	Between 1 and 3 months	Between 3 months and 1 year	Between 1 year and 5 years	In more than 5 years
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Assets					
Interest risk					
Interest-related transactions: interest rate swap	3,200	2,915	3,392	43,246	40,197
Interest-currency risk					
Currency-related transactions: cross currency interest rate swap	36	3,953	18,833	47,347	14,538
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	302	659	3,863	17,991	13,242
Interest-currency risk					
Currency-related transactions: cross currency interest rate swap	1,317	4,072	35,524	104,880	18,091

(71) Disclosures on macro fair value hedge accounting

Disclosures on hedged items in macro fair value hedge accounting by risk type – 2018

	Carrying amount of hedged items	Value adjustment from macro fair value hedge accounting	Value adjustment from macro fair value hedge accounting to be amortised (discontinued hedge relationships)	Statement of financial position items in which the hedged items are reported		Hedge fair value changes in hedged items to determine hedge ineffectiveness (income statement effect – hedged items)
				Carrying amount before value adjustment from macro fair value hedge accounting	Value adjustment from macro fair value hedge accounting	
	EUR in millions	EUR in millions	EUR in millions			EUR in millions
Interest risk						
Assets				Loans and advances to banks; loans and advances to customers	Value adjustment from macro fair value hedge accounting	
	171,009	9,071	1,359			212
Liabilities and equity				Liabilities to banks; liabilities to customers	Value adjustment from macro fair value hedge accounting	
	0	98	98			28

Disclosures on hedging instruments in macro fair value hedge accounting by risk type – 2018

	Par value of hedging instruments	Carrying amount of hedging instruments	Statement of financial position items in which the hedging instruments are reported	Fair value changes in hedging instruments to determine hedge ineffectiveness (income statement effect – hedging instruments)
Assets				
Interest risk				
Interest-related transactions: interest rate swap			Derivatives designated for hedge accounting	
	19,973	157		-244
Liabilities and equity				
Interest risk				
Interest-related transactions: interest rate swap			Derivatives designated for hedge accounting	
	165,288	3,595		446

Analysis of par values of hedging instruments by remaining terms as of 31 Dec. 2018

Due	In up to one month	Between 1 and 3 months	Between 3 months and 1 year	Between 1 year and 5 years	In more than 5 years
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Assets					
Interest risk					
Interest-related transactions: interest rate swap	0	9	1,275	6,437	12,253
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	957	800	9,085	79,415	75,031

(72) Additional disclosures on derivatives

Analysis of derivatives by class

	Par value		Fair values 31 Dec. 2018		Fair values 31 Dec. 2017	
	31 Dec. 2018	31 Dec. 2017	positive	negative	positive	negative
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Interest-related derivatives	454,253	423,508	6,593	5,913	8,149	7,263
Currency-related derivatives	196,941	201,670	7,993	6,494	5,978	10,108
Credit derivatives	10	9	0	0	0	0
Total	651,203	625,187	14,586	12,407	14,127	17,371

Cross-currency swaps are presented under Currency-related derivatives.

Analysis of derivatives by counterparty

	Par value		Fair values 31 Dec. 2018		Fair values 31 Dec. 2017	
	31 Dec. 2018	31 Dec. 2017	positive	negative	positive	negative
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OECD banks	638,428	612,782	13,987	12,165	13,474	17,050
Non-OECD banks	441	741	0	14	0	48
Other counterparties	9,966	8,798	586	74	597	64
Public sector	2,369	2,865	13	154	55	210
Total	651,203	625,187	14,586	12,407	14,127	17,371

The analysis includes financial and credit derivatives which are presented in the items Derivatives designated for hedge accounting and Other derivatives. Separable embedded derivatives are not included.

The economic hedge effect of financial derivatives with an aggregate principal amount of EUR 585.0 billion (31 Dec. 2017: EUR 567.8 billion) is reflected in the accounts; the risk-mitigating impact of the remaining financial derivatives is not reflected in the accounts.

As in 2017, KfW Group did not pledge any collateral (in the form of securities) under derivative transactions that can be resold or repledged at any time without payments being past due.

However, liquid collateral totalling EUR 2,851 million (31 Dec. 2017: EUR 6,227 million) was provided, which is recognised in Loans and advances to banks and customers.

As in 2017, KfW Group did not receive any collateral (in the form of securities) under derivative transactions, which can be resold or repledged at any time without payments by the protection seller being past due.

However, provision of liquid collateral totalling EUR 4,978 million (31 Dec. 2017: EUR 3,358 million) was accepted, which was reported under Liabilities to banks and customers.

The volume of initial differences between the transaction price and model value arising from the use of a valuation technique that makes significant use of unobservable data which have yet to be amortised over the life of the financial instrument developed as follows during the reporting period:

Day one profit or loss

	2018	2017
	EUR in millions	EUR in millions
As of 1 Jan.	-91	-93
Addition	-14	-12
Reversal	13	9
Exchange rate changes	-1	5
As of 31 Dec.	-93	-91

The net gains/losses from financial derivatives not qualifying for hedge accounting includes amortisation effects in the amount of EUR 9 million (2017: EUR 10 million).

(73) Additional disclosures on Liabilities to banks

Disclosures on Liabilities to banks designated at fair value through profit or loss

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Carrying amount	240	237
Repayment amount at maturity	245	245
Difference	5	8

Of the difference between the repayment amount at maturity and the carrying amount, EUR 0 million (previous year: EUR 0 million) is attributable to borrowings for which the repayment amount builds up as a result of the capitalisation over time of interest due.

(74) Additional disclosures on Liabilities to customers

Disclosures on Liabilities to customers designated at fair value through profit or loss

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Carrying amount	1,659	1,835
Repayment amount at maturity	2,765	3,159
Difference	1,105	1,325

Of the difference between the repayment amount at maturity and the carrying amount, EUR 1,105 million (31 Dec. 2017: EUR 1,312 million) is attributable to borrowings for which the repayment amount builds up as a result of the capitalisation over time of interest due.

(75) Additional disclosures on Certificated liabilities

Disclosures on certificated liabilities designated at fair value through profit or loss

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Carrying amount	10,967	11,691
Repayment amount at maturity	12,905	13,887
Difference	1,938	2,197

Of the difference between the repayment amount at maturity and the carrying amount, EUR 3,115 million (31 Dec. 2017: EUR 3,727 million) is attributable to borrowings for which the repayment amount builds up as a result of the capitalisation over time of interest due.

(76) Disclosures on repurchase agreements

Disclosures on repo transactions

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Carrying amount of securities sold under repo transactions that continue to be recognised in Securities and investments	126	11
Liabilities to banks (countervalue)	121	11

The fair value of securities sold under repo transactions that continue to be recognised in Securities and investments totals EUR 125 million (31 Dec. 2017: EUR 11 million). The fair value of the corresponding repayment obligations is EUR 121 million (31 Dec. 2017: EUR 11 million).

Moreover, KfW Group did not pledge any collateral (in the form of securities) under repo transactions that can be resold or repledged at any time without payments being past due, unchanged from 31 December 2017.

As in 2017, KfW Group did not receive any collateral (in the form of securities) under repo transactions that can be resold or repledged at any time without payments by the protection seller being past due.

As in 2017, the group neither pledged nor accepted any liquid collateral.

Disclosures on reverse repo transactions

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Loans and advances to banks (countervalue)	3,027	972
Loans and advances to customers (countervalue)	0	0
Total	3,027	972

The fair value of securities purchased under reverse repos that are not recognised amounts to EUR 3,145 million (31 Dec. 2017: EUR 986 million).

Moreover, as in 2017, KfW Group did not receive any collateral (in the form of securities) under reverse repo transactions that can be resold or repledged at any time without payments by the protection seller being past due.

As in 2017, KfW Group did not pledge any collateral (in the form of securities) under reverse repo transactions that can be resold or repledged at any time without payments being past due.

As in 2017, the group neither pledged nor accepted any liquid collateral.

(77) Disclosure on offsetting financial instruments

KfW uses the EUREX central clearing system to settle part of its derivative transactions. This form of settling derivative transactions results in the recognition of a net amount in the statement of financial position for the transactions affected, as the involvement of EUREX as the central counterparty (CCP) meets all of the requirements for offsetting as set out in the relevant IFRS standard. This means that positive and negative fair values of derivatives for which EUREX acts as the central counterparty are offset against the corresponding collateral and reported in a net item in the statement of financial position.

For securities repo transactions (reverse repos and repos) for which EUREX acts as the central counterparty, offsetting is also performed for receivables and liabilities provided that relevant IFRS requirements are met. In addition, framework agreements featuring netting agreements are in place between KfW and its business partners for OTC derivatives and securities repo transactions.

One form of netting is close-out netting, which provides for the extinction of all rights and obligations relating to individual transactions under the framework agreement upon termination of said framework agreement by the contractual partner, or upon the latter's insolvency, with the rights and obligations replaced by a single compensation claim (or obligation) in the amount of the net replacement costs of the terminated individual transactions. This does not represent a present legal claim for offsetting.

Close-out netting is not to be confused with the offsetting of payments in normal business. The same framework agreement provides for the latter case, that payments due on the same day and in the same currency may be offset and a net payment made instead of each individual payment (payment netting). This represents a present legal claim for offsetting.

KfW's framework agreements relating to bilateral OTC derivatives (not in central clearing) all include close-out netting agreements with the business partners. Payment netting is limited in the agreement to the relevant individual transaction, so that multiple transaction payment netting does not occur. The requirements for offsetting financial assets and financial liabilities are therefore not met for these KfW OTC derivatives.

KfW's framework agreements for repo transactions include close-out netting agreements and, in some cases, payment netting agreements with the business partners as well. However, as KfW does not generally perform multiple transaction payment netting with repo transactions, the requirements for offsetting of financial assets and financial liabilities are not met for KfW's repo transactions.

In accordance with the collateral agreements concluded for OTC derivatives and repo transactions, the values of the available collateral are used in determining the single compensation claim (or obligation) in close-out netting. Both cash and securities are permitted forms of collateral under the existing collateral agreements between KfW and its business partners. The collateral agreements provide for a transfer of title in the case of securities as collateral. Consequently, the transferred securities are not subject to any selling or pledging restrictions.

Disclosures on financial assets with netting agreements as of 31 December 2018

	Carrying amount of financial assets before offsetting (gross amount)	Netted figure as carrying amount of financial liabilities (gross amount)	Reported financial assets (net amount)	Carrying amount of non-offsettable financial liabilities	Fair value of collateral received	Total net amount
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OTC derivatives	16,795	2,778	14,017	8,997	4,830	190
Reverse repos	3,027	0	3,027	121	2,893	12
Total	19,822	2,778	17,044	9,119	7,723	202

Disclosures on financial liabilities with netting agreements as of 31 December 2018

	Carrying amount of financial liabilities before offsetting (gross amount)	Netted figure as carrying amount of financial assets (gross amount)	Reported financial liabilities (net amount)	Carrying amount of non-offsettable financial assets	Fair value of collateral pledged	Total net amount
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OTC derivatives	18,820	6,641	12,179	8,997	2,835	347
Repos	121	0	121	121	0	0
Total	18,942	6,641	12,300	9,119	2,835	347

In addition to the net amount, the items Derivatives designated for hedge accounting and Other derivatives also include bifurcated embedded derivatives not subject to netting agreements.

Receivables from reverse repo transactions are reported under Loans and advances to banks and customers.

Disclosures on financial assets with netting agreements as of 31 December 2017

	Carrying amount of financial assets before offsetting (gross amount)	Netted figure as carrying amount of financial liabilities (gross amount)	Reported financial assets (net amount)	Carrying amount of non-offsettable financial liabilities	Fair value of collateral received	Total net amount
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OTC derivatives	16,134	2,632	13,502	10,114	3,174	214
Reverse repos	972	0	972	11	961	0
Total	17,106	2,632	14,474	10,125	4,135	214

Disclosures on financial liabilities with netting agreements as of 31 December 2017

	Carrying amount of financial liabilities before offsetting (gross amount)	Netted figure as carrying amount of financial assets (gross amount)	Reported financial liabilities (net amount)	Carrying amount of non-offsettable financial assets	Fair value of collateral pledged	Total net amount
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OTC derivatives	22,961	5,866	17,095	10,114	6,211	770
Repos	11	0	11	11	0	0
Total	22,972	5,866	17,106	10,125	6,211	770

Other Notes

(78) Off-balance sheet transactions

Analysis by class

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Irrevocable loan commitments	84,116	80,082
Financial guarantee contracts	1,145	1,282
Contingent liabilities from financial guarantees	1,166	949
Other contingent liabilities	1,711	1,420
Total	88,139	83,733

All off-balance sheet transactions are disclosed in the Notes at their par values less any related provisions.

Irrevocable loan commitments are firm commitments by KfW Group to grant a loan under contractually agreed upon terms. These mainly relate to the domestic promotional business but also to commitments for loans that are intended for placement in syndicate transactions.

Other contingent liabilities include payment obligations attributable to equity investments which are not fully paid up and do not have to be consolidated.

As part of the sale of its stake in Deutsche Industriebank ("IKB") in 2008, KfW agreed to indemnify IKB for certain legal risks up to a certain amount. As of the end of the reporting period, no proceedings are pending against IKB which are relevant in this context.

In accordance with IAS 37.92, no further disclosures on contingent liabilities are necessary.

(79) Trust activities and administered loans

Analysis of trust activities by class (transactions in KfW's own name but for the account of third parties)

	31 Dec. 2018 EUR in millions	31 Dec. 2017 EUR in millions
Loans and advances to banks	912	931
Loans and advances to customers	11,297	11,502
Securities and investments	4,623	3,737
Assets held in trust	16,832	16,170
Liabilities to banks	0	0
Liabilities to customers	16,832	16,170
Liabilities held in trust	16,832	16,170

EUR 12,439 million (31 Dec. 2017: EUR 11,597 million) of the assets held in trust are attributable to the business sector Promotion of developing countries and emerging economies.

Volume of administered loans granted (loans in the name and for the account of third parties)

	31 Dec. 2018	31 Dec. 2017
	EUR in millions	EUR in millions
Administered loans	17,975	15,524

(80) Leasing transactions as lessee

Disclosures on lessee agreements as of 31 December 2018

	Due within one year	Due in between one and five years	Due in more than five years	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Operating leases				
Future minimum lease payments	16	58	6	80

Disclosures on lessee agreements as of 31 December 2017

	Due within one year	Due in between one and five years	Due in more than five years	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Operating leases				
Future minimum lease payments	13	52	41	106

Leases are classified as operating leases or as finance leases depending on the risks and rewards relating to ownership of an asset. This classification determines their accounting treatment.

Contracts where the group is a lessee (including real estate leases) are classified as operating leases; the corresponding rental payments are included in Administrative expense.

The small number of contracts in which KfW Group acts as a lessor are classified as operating leases. The corresponding rental income is recognised in Other operating income.

(81) Average number of employees during the financial year

	2018	2017
Female employees	3,081	2,961
Male employees	3,294	3,152
Total	6,376	6,113
Staff not covered by collective agreements	4,474	4,281
Staff covered by collective agreements	1,902	1,832

The average number of employees includes temporary staff but excludes members of the Executive Board and trainees and was calculated based on the levels at the end of each quarter.

(82) Remuneration report

The remuneration report describes the basic structure of the remuneration plan for members of the Executive Board and Board of Supervisory Directors; it also discloses their remuneration on an individual basis.

Overview of total remuneration of members of the Executive Board and Board of Supervisory Directors

	2018 EUR in thousands	2017 EUR in thousands
Members of the Executive Board	3,132.1	4,034.1
Former members of the Executive Board and their surviving dependants	4,767.7	4,236.2
Members of the Board of Supervisory Directors	185.0	191.8
Total	8,084.8	8,462.1¹⁾

¹⁾ In addition, the contractually agreed variable remuneration for Dr Schröder set at EUR 274,000 for financial year 2017 was paid out in accordance with the contract in financial year 2018.

Remuneration of the Executive Board

The remuneration system for KfW's Executive Board is aimed at appropriately compensating members of the Executive Board for their duties and responsibilities. Executive Board contracts are drawn up based on the 1992 version of the policy for hiring executive board members at credit institutions of the Federal Government (*Grundsätze für die Anstellung der Vorstandsmitglieder bei den Kreditinstituten des Bundes*). The Federal Public Corporate Governance Code (Public Corporate Governance Kodex des Bundes – "PCGK") is taken into account when drawing up contracts. Each contract is individualised accordingly on this basis.

Components of remuneration

The Executive Board members receive fixed monetary remuneration paid in equal monthly instalments.

The following table shows total remuneration, broken down into remuneration components and other forms of remuneration, as well as additions to pension provisions for the individual members of the Executive Board.

Annual remuneration of the Executive Board and additions to pension provisions in 2018 and 2017, EUR in thousand^{1), 4)}

	Salary		Other remuneration		Total		Additions to pension provisions ²⁾	
	2018	2017	2018	2017	2018	2017	2018	2017
	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
Dr Günther Bräunig (Chief Executive Officer)	760.4	607.0	30.7	29.8	791.1	636.8	280.6	134.4
Dr Ingrid Hengster	544.1	528.5	36.7	34.8	580.8	563.3	371.7	363.2
Bernd Loewen	597.6	590.0	39.4	38.6	637.0	628.6	123.2	292.9
Prof. Dr Joachim Nagel	526.7	86.7 ³⁾	35.1	7.2 ³⁾	561.8	93.9 ³⁾	376.5	456.1
Dr Stefan Peiß	534.6	527.8	26.8	25.8	561.4	553.6	72.9	416.2
Total	2,963.4	2,340.0	168.7	136.2	3,132.1	2,476.2	1,224.9	1,662.8

¹⁾ Amounts in the table are subject to rounding differences.

²⁾ The discount rate for pension obligations increased in 2018 due to the rise in long-term capital market rates, from 1.88% (31 Dec. 2017) to 2.07% (31 Dec. 2018).

³⁾ From 1 November 2017.

⁴⁾ Only the current members of the Executive Board are included in the table. Dr Schröder and Dr Kloppenburg were not included as they stepped down from the Executive Board in 2017.

Dr Schröder stepped down from the Executive Board of KfW with effect from 31 December 2017 and did not receive remuneration for financial year 2018. The contractually agreed variable remuneration set at EUR 274,000 for financial year 2017 was paid out in accordance with the contract in financial year 2018.

Responsibilities

The Presidial and Nomination Committee has discussed the Executive Board compensation system including contract components since the committee structure was modified in accordance with the applicable Section 25d of the German Banking Act (*Kreditwesengesetz* – “KWG”) and adopts and regularly reviews it. The Presidial and Nomination Committee is advised on these matters by the Remuneration Committee, which in turn considers the results of certain analyses of the Risk and Credit Committee regarding the incentive effects of the compensation systems. Likewise after consulting with the Remuneration Committee on the matter, the Board of Supervisory Directors decides upon the basic structure of the Executive Board’s compensation system.

The Presidial and Nomination Committee discussed remuneration issues during the reporting year, on 11 April 2018 and 20 June 2018.

Fringe benefits

Other remuneration largely comprises the contractual fringe benefits. Executive Board members are entitled to a company car with driver services for business and personal use. Executive Board members reimburse KfW for using a company car with a driver for private purposes in accordance with applicable tax regulations. They are reimbursed under tax regulations for the cost of maintaining a second home for business reasons.

Executive Board members are insured under a group accident insurance policy. Allowances are provided for health and long-term care insurance. Executive Board members are covered by a directors and officers liability insurance policy, which insures them against the risks of financial loss associated with their actions in their capacity as Executive Board members and by a supplemental legal expenses insurance policy. KfW Executive Board members acting in their management capacity are also protected by a special legal expenses group policy for employees covering criminal activities.

No remuneration is paid to members of the Executive Board for assuming executive body functions at group companies.

As with all other executives, Executive Board members may also opt to participate in the deferred remuneration programme – a supplemental company pension scheme financed via tax-free salary conversion. Moreover, they are entitled to anniversary bonuses in accordance with KfW’s general company policy.

In addition, the fringe benefits contain the cost of security systems at Executive Board members' homes; these benefits are not recognised as Other remuneration but as Non-personnel expense.

The contractual fringe benefits are subject to taxation as benefits in money's worth for Executive Board members if they cannot be granted on a tax-free basis or if this is contractually agreed.

There were no loans to any members of the Executive Board in 2018.

No Executive Board member was granted or promised any benefits by a third party during the past financial year with a view to his/her position as a member of the KfW Executive Board.

Pension benefits and other benefits in the case of early retirement

In accordance with Article 1 (3) of the KfW Bylaws, the appointment of an Executive Board member should not generally extend beyond the legal age of retirement. Upon reaching the age of 65 or statutory retirement age and the expiry of their Executive Board contract, Executive Board members are entitled to claim pension payments; they are also entitled to pension benefits if their employment relationship terminates due to permanent disability. Two members of the Executive Board who were first appointed to the Board in 2006 and 2007 respectively and subsequently reappointed also have the option of retiring at their own request at the age of 63. Dr Norbert Kloppenburg shall receive a contractually granted and grandfathered temporary allowance from 1 November 2017.

Pension commitments for Executive Board members as well as their surviving dependants are based on the 1992 version of the Federal Government's policy for hiring executive board members at credit institutions. The PCGK is taken into account when drawing up the Executive Board contracts.

Executive Board member contracts include a severance pay cap in accordance with the recommendations of the PCGK. In other words, payments to these Executive Board members due to early termination of the Executive Board function without good cause in accordance with Section 626 of the German Civil Code (*Bürgerliches Gesetzbuch – "BGB"*) should not exceed the equivalent of two years' salary or remuneration including fringe benefits for the remainder of the contract, depending on which of the amounts is lower.

The full benefit entitlement totalled 49% of the final salary in the reporting year with different contractual arrangements. The retirement benefit entitlement amounted to 70% of the full entitlement for first-time appointment, with an increase per completed year of service of 0.98 to 3.0 percentage points depending on the contract (from an initial 34.3% to a maximum of 49% of the final salary).

The Executive Board contracts contain additional individual provisions, in particular concerning vesting of pension benefits. The newer contracts also include provisions on retrospective pension contributions where pension benefits are not yet vested and the member in question has not been reappointed.

Pension payments to former Executive Board members or their surviving dependants were as follows in 2018 and 2017:

Pension payments to former Executive Board members or their surviving dependants

	Headcount 2018	EUR in thousands 2018	Headcount 2017	EUR in thousands 2017
Former members of the Executive Board	19	3,875.7	20	3,510.4
Surviving dependants	10	892.0	8	725.8
Total	29	4,767.7	28	4,236.2

Provisions in the amount of EUR 69,601 thousand were set up at the end of the financial year 2018 for pension obligations to former members of the Executive Board and their surviving dependants (previous year: EUR 65,932 thousand).

No loans were granted to former Executive Board members or their surviving dependants in financial year 2018.

Remuneration of members of the Board of Supervisory Directors

The amount of remuneration to members of the Board of Supervisory Directors is determined by the supervisory authority in accordance with Article 7 (10) of the KfW Bylaws. With the last revision in May 2010, remuneration to members of the Federal Government who are members of the Board of Supervisory Directors pursuant to Article 7 (1) No. 1 and No. 2 of the KfW Law was set at EUR 0.

In the reporting year, remuneration for other members of the Board of Supervisory Directors pursuant to Article 7 (1) Nos. 3–7 of the KfW Law amounted to EUR 5,100 p.a.; remuneration for membership of a Board of Supervisory Directors committee was a standard amount of EUR 600 p. a. for each member. Committee chairs did not receive special remuneration.

Members who join during the year receive their remuneration on a pro rata basis.

A daily allowance (EUR 200 per meeting day) is paid and travel expenses and applicable VAT are reimbursed upon request.

The following table provides details on the remuneration paid to the Board of Supervisory Directors in financial year 2018; stated amounts are net amounts in thousands of euros. Travel expenses are reimbursed upon submission of receipts and are not taken into account in the table.

Remuneration of members of the Board of Supervisory Directors for the financial year 2018

No.	Name	Dates of membership	Board of Supervisory Directors membership ¹⁾	Committee membership ¹⁾	Daily allowance	Total
			EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
		2018				
1.	Brigitte Zypries	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
2.	Peter Altmaier (BMF)	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
3.	Peter Altmaier (BMWi)	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
4.	Olaf Scholz	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
5.	Sören Bartol	26 Apr. – 31 Dec.	3.8	1.1	0.6	5.5
6.	Dr Holger Bingmann	1 Jan. – 31 Dec.	5.1	0.6	0.6	6.3
7.	Volker Bouffier ²⁾	1 Jan. – 31 Dec.	5.1	1.2	0.0	6.3
8.	Dr Uwe Brandl	1 Jan. – 31 Dec.	5.1	0.0	0.2	5.3
9.	Frank Bsirske	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
10.	Robert Feiger	1 Jan. – 31 Dec.	5.1	0.6	0.4 ³⁾	6.1 ³⁾
11.	Klaus-Peter Flosbach	1 Jan. – 31 Dec.	5.1	0.6	1.0	6.7
12.	Sigmar Gabriel	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
13.	Christian Görke ²⁾	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
14.	Dr Louis Hagen	1 Jan. – 31 Dec.	5.1	1.2	1.0	7.3
15.	Dr Matthias Haß ²⁾	2 Mar. – 31 Dec.	4.3	0.0	0.0	4.3
16.	Hubertus Heil	1 Jan. – 14 Mar.	1.3	0.5	0.0	1.8
17.	Monika Heinold ²⁾	1 Jan. – 31 Dec.	5.1	0.6	0.0	5.7
18.	Dr Barbara Hendricks	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
19.	Reinhold Hilbers ²⁾	2 Feb. – 31 Dec.	4.7	1.1	0.4	6.2
20.	Reiner Hoffmann	1 Jan. – 31 Dec.	5.1	1.1	0.0	6.2
21.	Gerhard Hofmann	1 Jan. – 31 Dec.	5.1	1.2	0.8	7.1
22.	Dr Bruno Hollnagel	1 Mar. – 31 Dec.	4.3	0.0	0.4	4.7
23.	Andreas Ibel	1 Jan. – 31 Dec.	5.1	0.0	0.4	5.5
24.	Bartholomäus Kalb	1 Jan. – 31 Dec.	5.1	0.6	1.0	6.7
25.	Julia Klöckner	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
26.	Stefan Körzell	1 Jan. – 31 Dec.	5.1	1.1	0.6	6.8
27.	Dr Joachim Lang	1 Jan. – 31 Dec.	5.1	1.1	0.0	6.2
28.	Lutz Lienenkämper ²⁾	1 Jan. – 31 Dec.	5.1	0.9	0.0	6.0
29.	Heiko Maas	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
30.	Dr Gerd Müller	1 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
31.	Dr Hans-Walter Peters	1 Jan. – 31 Dec.	5.1	2.3	0.0	7.4
32.	Eckhardt Rehberg	1 Jan. – 31 Dec.	5.1	1.6	0.0	6.7
33.	Dr Johannes-Jörg Riegler	1 Jan. – 31 Dec.	5.1	0.6	0.6	6.3
34.	Joachim Rukwied	1 Jan. – 31 Dec.	5.1	0.6	0.0	5.7
35.	Andreas Scheuer	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
36.	Helmut Schleweis	1 Jan. – 31 Dec.	5.1	2.3	0.0	7.4
37.	Christian Schmidt (BMEL)	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
38.	Christian Schmidt (BMVI)	1 Jan. – 14 Mar.	0.0	0.0	0.0	0.0
39.	Carsten Schneider	1 Jan. – 31 Dec.	5.1	1.2	1.2	7.5
40.	Svenja Schulze	14 Mar. – 31 Dec.	0.0	0.0	0.0	0.0
41.	Holger Schwannecke	1 Jan. – 31 Dec.	5.1	1.8	0.0	6.9
42.	Edith Sitzmann ²⁾	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
43.	Dr Florian Toncar	1 Mar. – 31 Dec.	4.3	0.7	0.4	5.4
44.	Dr Martin Wansleben	1 Jan. – 31 Dec.	5.1	0.6	0.0	5.7
Total			150.2	25.2	9.6	185

¹⁾ The amounts had not yet been paid out as of the reporting date 31 December 2018. ²⁾ Amount governed by state law.

³⁾ This amount includes a payment for 2017. ⁴⁾ Amounts for financial year 2018 until the date of assessment. Any later claims will be included in the next report.

Remuneration of members of the Board of Supervisory Directors for the financial year 2017

No.	Name	Dates of membership	Board of Supervisory Directors membership ¹⁾	Committee membership ¹⁾	Daily allowance	Total
			EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
		2017				
1.	Dr Wolfgang Schäuble	1 Jan. – 24 Oct.	0.0	0.0	0.0	0.0
2.	Peter Altmaier	24 Oct. – 31 Dec.	0.0	0.0	0.0	0.0
3.	Sigmar Gabriel	1 Jan. – 27 Jan.	0.0	0.0	0.0	0.0
4.	Brigitte Zypries	27 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
5.	Kerstin Andreae	1 Jan. – 31 Dec.	5.1	0.6	0.6	6.3
6.	Dr Holger Bingmann	13 Dec. – 31 Dec.	0.4	0.0	0.0	0.4
7.	Anton F. Börner	1 Jan. – 26.Sep.	3.8	0.5	0.0	4.3
8.	Volker Bouffier ²⁾	1 Jan. – 31 Dec.	5.1	1.2	0.0	6.3
9.	Dr Uwe Brandl	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
10.	Hans-Dieter Brenner	1 Jan. – 31 Dec.	5.1	0.6	1.4	7.1
11.	Frank Bsirske	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
12.	Alexander Dobrindt	1 Jan. – 24 Oct.	0.0	0.0	0.0	0.0
13.	Georg Fahrenschon	1 Jan. – 31 Dec.	5.1	2.5	0.4	8.0
14.	Robert Feiger	1 Jan. – 31 Dec.	5.1	0.6	0.4	6.1
15.	Klaus-Peter Flosbach	1 Jan. – 31 Dec.	5.1	0.6	1.2	6.9
16.	Sigmar Gabriel	27 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
17.	Christian Görke ²⁾	1 Jan. – 31 Dec.	5.1	0.0	0.0	5.1
18.	Dr Louis Hagen	1 Jan. – 31 Dec.	5.1	1.2	1.4	7.7
19.	Hubertus Heil	1 Jan. – 31 Dec.	5.1	1.8	0.0	6.9
20.	Monika Heinold ²⁾	1 Jan. – 31 Dec.	5.1	0.6	0.0	5.7
21.	Dr Barbara Hendricks	1 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
22.	Reiner Hoffmann	1 Jan. – 31 Dec.	5.1	1.2	0.0	6.3
23.	Gerhard Hofmann	1 Jan. – 31 Dec.	5.1	1.2	0.6	6.9
24.	Andreas Ibel	1 Jan. – 31 Dec.	5.1	0.0	0.6	5.7
25.	Bartholomäus Kalb	1 Jan. – 31 Dec.	5.1	0.6	1.4	7.1
26.	Dr Markus Kerber	1 Jan. – 31 Mar.	1.3	0.3	0.0	1.6
27.	Stefan Körzell	1 Jan. – 31 Dec.	5.1	1.2	0.2	6.5
28.	Dr Joachim Lang	1 Apr. – 31 Dec.	3.8	0.9	0.0	4.7
29.	Lutz Lienenkämper	22 Sep. – 31 Dec.	1.7	0.0	0.0	1.7
30.	Dr Gesine Löttsch	1 Jan. – 31 Dec.	5.1	1.2	0.6	6.9
31.	Dr Gerd Müller	1 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
32.	Eckhardt Rehberg	1 Jan. – 31 Dec.	5.1	1.2	0.0	6.3
33.	Joachim Rukwied	1 Jan. – 31 Dec.	5.1	0.6	0.6	6.3
34.	Christian Schmidt	1 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
35.	Christian Schmidt (BMVI)	24 Oct. – 31 Dec.	0.0	0.0	0.0	0.0
36.	Andreas Schmitz	1 Jan. – 31 Dec.	5.1	2.5	1.8	9.4
37.	Carsten Schneider	1 Jan. – 31 Dec.	5.1	1.2	1.0	7.3
38.	Peter-Jürgen Schneider ²⁾	1 Jan. – 20 Nov.	4.7	1.1	0.4	6.2
39.	Holger Schwannecke	1 Jan. – 31 Dec.	5.1	1.8	0.0	6.9
40.	Edith Sitzmann ²⁾	1 Jan. – 31 Dec.	5.1	0.1	0.0	5.2
41.	Dr Frank-Walter Steinmeier	1 Jan. – 31 Dec.	0.0	0.0	0.0	0.0
42.	Prof. Dr Georg Unland ²⁾	1 Jan. – 28 Dec.	5.1	0.6	1.0	6.7
43.	Dr Norbert Walter-Borjans ²⁾	1 Jan. – 8 July	3.0	0.4	0.0	3.4
44.	Dr Martin Wansleben	1 Jan. – 31 Dec.	5.1	0.6	0.0	5.7
Total			151.3	26.9	13.6	191.8

¹⁾ The amounts had not yet been paid out as of the reporting date 31 December 2017.

²⁾ Amount governed by state law.

There are no pension obligations for members of the Board of Supervisory Directors.

Members of the Board of Supervisory Directors did not receive remuneration in the reporting year for personal services provided.

No direct loans were granted to members of the Board of Supervisory Directors in the reporting year.

Members of the Board of Supervisory Directors are also covered by a directors and officers liability insurance policy, which insures them against the risks of financial loss associated with their actions in their capacity as Supervisory Directors and by a supplemental legal expenses insurance policy. No deductibles are currently agreed. KfW Supervisory Directors acting in that capacity are also protected by a special legal expenses group policy for employees covering criminal action brought against Supervisory Directors and by a group accident insurance policy.

(83) Related party disclosures

In accordance with IAS 24, KfW Group's related entities include the consolidated subsidiaries, the non-consolidated subsidiaries, joint ventures, associates and the interests held by the Federal Government.

Natural persons considered related parties in accordance with IAS 24 include the members of the Executive Board and of the Board of Supervisory Directors, the Directors of KfW, the managing directors of all subsidiaries included in the consolidated financial statements, the members of the supervisory boards of certain consolidated subsidiaries and their close family members.

KfW is a public-law institution in which the Federal Republic of Germany (Federal Government) holds an 80% stake and the Federal States hold a 20% stake. Any transactions with the Federal Government and the Federal States in the financial year 2018 are covered by the rules and regulations set forth in the KfW Law. This also includes operations in which the Federal Republic of Germany has a state interest and for which the Federal Government has mandated KfW (mandated transactions in accordance with Article 2 (4) of the KfW Law).

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 Section 2 (4) of the KfW Law, during the 2018 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 the action carried out. The Federal Government exercises participation rights.

In addition to mandated transactions, the Federal Government also has agency agreements with KfW, which primarily govern the individual promotional programmes.

The business relationships between KfW and natural persons considered related parties are primarily determined by the KfW Bylaws and by applying the principles of the Federal Public Corporate Governance Code. The conditions and prices reflect market conditions or are concluded in accordance with KfW's general conditions for its loan programmes open to the general public.

(84) Auditor's fees

	2018	2017
	EUR in thousands	EUR in thousands
Audit	5,209	4,418
Other attestation services	854	285
Tax advisory services	0	0
Other services	0	3
Total	6,064	4,706

(85) Disclosures on unconsolidated structured entities

KfW Group's unconsolidated structured entities within the meaning of IFRS 12 relate to the following business sectors:

Structured entities in the business sector Financial markets

KfW makes investments in ABS and ABCP transactions to promote the financing of SMEs, of climate and environmental protection projects and as part of liquidity management. The business sector Financial markets also manages an existing portfolio to which no further acquisitions are added. This portfolio currently consists of securities issued since 2001. KfW's investments average less than 10% of a transaction's volume. In cases of investments for promotional purposes, the proportion of KfW's investment may be higher, but generally no more than 50% of the transaction volume.

As of 31 December 2018, the carrying amount of the positions held totalled EUR 5.3 billion (31 December 2017: EUR 4.7 billion).

Structured entities in the business sector Export and project finance

Tailored leasing/financing concepts are structured via property leasing companies, primarily in the "Aviation and Rail" and "Maritime Industries" sector departments. A separate entity is basically created for each transaction, with KfW Group participating as the lender. In the case of some of these business partners, the sponsoring banks act as managers of trust companies, but in the majority of cases, these business partners are set up as separate legal entities. KfW Group provides loans to these companies, generally together with other credit institutions. KfW also has credit relationships with some structured entities as market participants in the commodities financing business, where KfW Group supports these customers with export pre-financing structures.

As of 31 December 2018, the carrying amount of the positions held totalled EUR 3.7 billion (31 December 2017: EUR 3.5 billion).

Structured entities in the business sector Promotion of developing countries and emerging economies

As a finance and advisory institution, DEG provides support within its development mandate in line with its business activity guidelines. DEG's mandate is to promote the development of the private sector of a) developing countries, b) central and eastern European countries and New Independent States (NIS), and c) other countries approved by its shareholder KfW in agreement with the Federal Government. In certain isolated cases this is undertaken via investments in structured entities in the form of equity investments and loans. In accordance with the applied risk principles, the risk of loss is limited to the volume invested or committed.

As of 31 December 2018, the carrying amount of the positions held totalled EUR 0.2 billion (31 December 2017: EUR 0.2 billion).

The following table shows the carrying amounts of assets relating to unconsolidated structured entities and the maximum possible loss that could result from these exposures.

Maximum risk of loss as of 31 Dec. 2018

	Loans and advances to customers	Securities and investments	Other assets	Contingent liabilities; irrevocable loan commitments
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Carrying amount	3,245	5,420	6	580
Risk and other provisions	23	1	0	1
Max. risk of loss	3,222	5,420	6	579

Maximum risk of loss as of 31 Dec. 2017

	Loans and advances to customers	Securities and investments	Other assets	Contingent liabilities; irrevocable loan commitments
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Carrying amount	3,133	4,766	15	479
Risk and other provisions	19	0	0	1
Max. risk of loss	3,114	4,766	15	478

The maximum risk of loss is equal to the nominal amount for credit lines, (financial) guarantees and other liquidity facilities less the provisions for credit risks recognised in the statement of financial position. The maximum risk of loss relating to KfW Group's investments is their carrying amount (net). The maximum risk of loss does not include effects from KfW Group's hedging instruments used to reduce the maximum risk of loss.

No support is provided to structured entities in KfW Group beyond the respective financing.

In exceptional cases, KfW Group acts as the sponsor for structured entities in which it holds shares purely on a trust basis on behalf of the Federal Government. The risk of these structured entities lies exclusively with the Federal Government. In such cases, KfW Group is considered as the sponsor of the structured entities because the entities were initiated and/or structured by KfW Group on behalf of the Federal Government.

(86) Disclosures on shareholdings

Subsidiaries included in the consolidated financial statements

Name/registered office	Capital share	Equity (IFRS) as of 31 Dec. 2018	Equity (IFRS) as of 31 Dec. 2017
	%	EUR in millions	EUR in millions
KfW IPEX-Bank GmbH, Frankfurt am Main	100.0	3,395	4,297
DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne	100.0	2,906	2,831
KfW Beteiligungsholding GmbH, Bonn, Germany	100.0	3,188	2,937
Interkonnektor GmbH, Frankfurt am Main, Germany	100.0	74	47
KfW Capital GmbH & Co. KG, Frankfurt am Main	100.0	24	n/a

KfW Capital GmbH & Co. KG was included in the consolidated financial statements for the first time in financial year 2018.

Associates included in the consolidated financial statements using the equity method

Name/registered office	Capital share	Equity as of 30 Sept. 2018	Equity as of 30 Sept. 2017
	%	EUR in millions	EUR in millions
Microfinance Enhancement Facility S.A., Luxembourg	18.5	501	441
Green for Growth Fund, Southeast Europe S.A., Luxembourg	14.5	371	336
AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co KG, Munich	47.5	113	171
coparion GmbH & Co. KG, Cologne	20.0	45	14
Name/registered office	Capital share	Equity as of 31 Dec. 2018	Equity as of 31 Dec. 2017
	%	EUR in millions	EUR in millions
DC Nordseekabel GmbH und Co. KG, Bayreuth	50.0	602	366

Microfinance Enhancement Facility S.A. (MEF) has been accounted for using the equity method since 2009. MEF, a KfW investment in a refinancing facility for microfinance institutions, is part of the business sector Promotion of developing countries and emerging economies. Details of the business sectors as well as a summary of financial information can be found on the company's website (<http://www.mef-fund.com/>).

Green for Growth Fund, Southeast Europe S.A. (GGF) has been included in the consolidated financial statements using the equity method since 2010. GGF is a fund to promote SME and private household investment in energy efficiency and renewable energy in the Western Balkans and in Turkey (KfW's investment in GGF is also part of the business sector Promotion of developing countries and emerging economies). Details of GGF's business sectors as well as a summary of financial information can be found on the company's website (<http://www.ggf.lu>).

KfW (business sector Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)) initiated the Eigenkapitalfonds für deutschen Mittelstand (German SME Equity Fund) together with Commerzbank in July 2010, each providing funds of almost EUR 100 million. It is accounted for using the equity method. The fund focuses on small and medium-sized (family) companies with a maximum annual revenue of EUR 500 million. The fund acquires minority interests and provides the company with real equity particularly for the purpose of financing growth.

DC Nordseekabel GmbH und Co. KG (DC Nordseekabel) was accounted for using the equity method, as a joint venture of Interkonnektor GmbH (Nordseekabel-Projekt NordLink in the business sector Export and project finance), for the first time in the financial year 2015. The NordLink project is one of the major projects in the European energy sector and comprises an investment volume of around EUR 1.5 to 2 billion. As it will primarily serve as a conduit for renewably sourced energy, the underwater cable will play an important role in the success of Germany's energy transition. Norwegian state-owned power grid operator Statnett, KfW and the transmission systems operator TenneT, which is responsible for the German territory of the North Sea, concluded a cooperation agreement in February 2015 to construct an underwater cable between Germany and Norway. The NordLink project is being realised by a syndicate, in which Statnett and DC Nordseekabel each hold a 50% stake. KfW – via its subsidiary Interkonnektor GmbH – and TenneT each hold a 50% stake in DC Nordseekabel, which is responsible for construction and obtaining permits in Germany.

coparion GmbH & Co. KG (coparion; business sector KfW Capital) as an associated company was accounted for using the equity method for the first time in financial year 2016. This co-investment fund by KfW and the German Federal Ministry for Economic Affairs and Energy (BMWi) participates in young technology companies by offering venture capital, together with private lead investors.

Entities not included in the consolidated financial statements

Four subsidiaries, five joint ventures, nine associated companies, and eight special purpose vehicles (including structured entities) of minor significance to the presentation of the net assets, financial position and results of operations of KfW Group have not been consolidated; instead, they are shown in the statement of financial position under Securities and investments or Loans and advances. These companies account for approximately 0.1% of KfW Group's total assets.

List of KfW Group shareholdings as of 31 December 2018

No.	Name	Place	Capital share in %	CC ⁽¹⁾	Exchange rate EUR 1.00 = CU as of 31 Dec. 2018 ⁽²⁾	Equity in TCU ^(2), 3)	Net income in TCU ^(2), 3)
KfW shareholdings							
A. Fully consolidated subsidiaries included in the consolidated financial statements							
1	DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH ⁽⁶⁾	Cologne	100.0	EUR	1.0000	2,521,629	59,891
2	Interkonnektor GmbH ⁽⁶⁾	Frankfurt am Main	100.0	EUR	1.0000	56,884	-12,981
3	KfW Beteiligungsholding GmbH ⁽⁶⁾	Bonn	100.0	EUR	1.0000	2,268,164	201,330
4	KfW Capital GmbH & Co. KG ⁽⁶⁾	Frankfurt am Main	100.0	EUR	1.0000	24,225	0
B. Subsidiaries not included in the consolidated financial statements							
5	Finanzierungs- und Beratungsgesellschaft mbH ⁽⁶⁾	Berlin	100.0	EUR	1.0000	5,001	-93
6	tbg Technologie-Beteiligungsgesellschaft mbH ⁽⁶⁾	Bonn	100.0	EUR	1.0000	60,040	2,102
C. Joint ventures not included in the consolidated financial statements							
7	Deutsche Energie-Agentur GmbH (dena) ⁽⁵⁾	Berlin	26.0	EUR	1.0000	5,140	880
D. Other shareholdings (only capital shares totalling at least 20%)							
8	AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co. KG ⁽⁵⁾	Munich	47.5	EUR	1.0000	130,807	6,802
9	Berliner Energieagentur GmbH ⁽⁵⁾	Berlin	25.0	EUR	1.0000	6,208	601
10	eCapital Technologies Fonds II GmbH & Co. KG ⁽⁵⁾	Münster	24.8	EUR	1.0000	17,500	-576
11	Coparion GmbH & Co. KG ⁽⁵⁾	Cologne	20.0	EUR	1.0000	19,284	2,575
Shareholdings of KfW IPEX-Bank GmbH							
A. Subsidiaries not included in the consolidated financial statements							
1	Bussard Air Leasing Ltd. i.L. ⁽⁵⁾	Dublin, Ireland	100.0	USD	1.1450	-2,152	0
2	Sperber Rail Holdings Inc. ⁽⁵⁾	Wilmington, USA	100.0	USD	1.1450	145	-4,642
B. Joint ventures not included in the consolidated financial statements							
3	Canas Leasing Ltd. i.L. ⁽⁵⁾	Dublin, Ireland	50.0	USD	1.1450	0	0
Shareholdings of KfW Beteiligungsholding GmbH							
A. Fully consolidated subsidiaries included in the consolidated financial statements							
1	KfW IPEX-Bank GmbH	Frankfurt am Main	100.0	EUR	1.0000	3,396,155	65,544

List of KfW Group shareholdings as of 31 December 2018

No.	Name	Place	Capital share in %	CC ¹⁾	Exchange rate EUR 1.00 = CU as of 31 Dec. 2018 ²⁾	Equity in TCU ^{2), 3)}	Net income in TCU ^{2), 3)}
Shareholdings of DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH							
A. Joint ventures not included in the consolidated financial statements							
1	PCC-DEG Renewables GmbH	Duisburg	40.0	EUR	1.0000	15,615	-2,913
B. Other shareholdings (only capital shares totalling at least 20%)							
2	Aavishkaar Frontier Fund	Ebène Cyber-City, Mauritius	20.8	USD	1.1450	13,881	-406
3	Ace Power Embilipitiya Pvt Ltd.	Colombo, Sri Lanka	26.0	LKR	209.4390	3,867,134	1,278,407
4	ACON Latin America Opportunities Fund IV-A, L.P.	Toronto, Canada	39.9	USD	1.1450	59,381	16,079
5	Acon Latin America Opportunities Fund-A, L.P.	Toronto, Canada	40.0	USD	1.1450	51,363	-220
6	ACON Retail MXD, L.P.	Toronto, Canada	100.0	USD	1.1450	9,079	-4,987
7	Adobe Mezzanine Fund II, L.P.	Montreal, Canada	23.7	USD	1.1450	884	-261
8	Adobe Social Mezzanine Fund I, L.P.	Montreal, Canada	24.8	USD	1.1450	11,095	1,329
9	ADP Enterprises W.L.L.	Manama, Bahrain	23.3	EUR	1.0000	191,171	-19,807
10	ADP II Holding 11 S.A.R.L.	Munsbach, Luxembourg	33.3	USD	1.1450	4)	4)
11	Advent Latin American Private Equity Fund III-B, L.P.	Wilmington, USA	100.0	USD	1.1450	1,521	777
12	AEP China Hydro Ltd.	Ebène Cyber-City, Mauritius	30.2	USD	1.1450	55,636	-4,759
13	AfricInvest III – SPV 1	Port Louis, Mauritius	21.8	EUR	1.0000	4)	4)
14	Agrofundos Brasil VI Fundo de Investimento em Participações Multiestratégia	São Paulo, Brazil	29.9	BRL	4.4445	242,305	-97,180
15	Apis Growth 2 Ltd.	Ebène Cyber-City, Mauritius	25.6	USD	1.1450	37,513	970
16	Banque Nationale de Développement Agricole S. A.	Bamako, Mali	21.4	XOF	655.9570	45,983,746	8,942,773
17	Banyan Tree Growth Capital, LLC	Mauritius, Mauritius	27.0	USD	1.1450	72,837	-1,598
18	Benetex Industries Ltd.	Dhaka, Bangladesch	28.3	BDT	95.7419	5)	5)
19	Berkeley Energy Wind Mauritius Ltd.	Ebène Cyber-City, Mauritius	25.8	EUR	1.0000	85,425	-14,783
20	Bozano Investimentos Growth Capital Fund I-B, L.P.	George Town, Cayman Islands	25.0	USD	1.1450	15,717	-1,536
21	CGFT Capital Pooling GmbH & Co. KG	Berlin	40.0	EUR	1.0000	9,151	-3,270
22	CoreCo Central America Fund I, L.P.	Wilmington, USA	22.0	USD	1.1450	26,305	874
23	Darby Latin American Private Debt Fund IIIA, L.P.	Toronto, Canada	37.6	USD	1.1450	2,962	-410
24	Deep Catch Namibia Holdings (Pty) Ltd.	Windhoek, Namibia	38.6	NAD	16,4494	124.629	13.329

List of KfW Group shareholdings as of 31 December 2018

No.	Name	Place	Capital share in %	CC ¹⁾	Exchange rate EUR 1.00 = CU as of 31 Dec. 2018 ²⁾	Equity in TCU ^{2), 3)}	Net income in TCU ^{2), 3)}
Shareholdings of DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH							
B. Other shareholdings (only capital shares totalling at least 20%)							
25	ECP Africa Fund IV LLC	Ebène Cyber-City, Mauritius	51.9	USD	1.1450	140,663	20,397
26	Emerald Sri Lanka Fund I Ltd.	Ebène Cyber-City, Mauritius	23.5	USD	1.1450	9,399	-922
27	Emerging Europe Leasing and Finance (EELF) B.V.	Amsterdam, Netherlands	25.0	EUR	1.0000	⁵⁾	⁵⁾
28	EMF NEIF I (A), L.P.	Fareham, United Kingdom	28.1	USD	1.1450	42,449	473
29	EMX Capital Partners, L.P.	Toronto, Canada	20.1	USD	1.1450	60,461	1,935
30	Equis DFI Feeder, L.P.	George Town, Cayman Islands	37.0	USD	1.1450	23,902	9,628
31	Forebright New Opportunities Fund II, L.P.	George Town, Cayman Islands	28.1	USD	1.1450	⁴⁾	⁴⁾
32	Frontier Bangladesh II, L.P.	George Town, Cayman Islands	20.0	USD	1.1450	6,761	-1,808
33	Grassland Finance Ltd.	Hong Kong, Hong Kong	25.0	HKD	8.9675	418,456	-6,923
34	Kandeo Fund II (A), L.P.	Toronto, Canada	53.1	USD	1.1450	25,358	-553
35	Kendall Court Mezzanine (Asia) Bristol Merit Fund, L.P.	George Town, Cayman Islands	24.4	USD	1.1450	12,537	-244
36	Kibele B.V.	Amsterdam, Netherlands	22.3	USD	1.1450	⁵⁾	⁵⁾
37	Knauf Gips Buchara OOO	Bukhara, Uzbekistan	25.0	UZS	9.586.6700	148,030,888	8,297,498
38	Knauf Gypsum Philippines Inc.	Makati, Philippines	25.0	PHP	60.1130	1,386,887	-75,038
39	Leiden PE II, L.P.	Toronto, Canada	27.0	USD	1.1450	27,643	-2,426
40	Lereko Metier REIPPP Fund Trust	Sandhurst, South Africa	32.3	ZAR	16.4594	526,716	105,743
41	Lereko Metier Solafrica Fund I Trust	Johannesburg, South Africa	47.5	ZAR	16.4594	186,285	-4,736
42	Lovcen Banka AD	Podgorica, Montenegro	28.1	EUR	1.0000	12,589	436
43	MC II Pasta Ltd.	Qormi, Malta	36.1	EUR	1.0000	⁵⁾	⁵⁾
44	Medisia Investment Holdings Pte Ltd.	Singapore, Singapore	32.7	USD	1.1450	83,147	23,364
45	Metier Retailability en Commandite Partnership	Sandhurst, South Africa	23.8	ZAR	16.4594	557,146	-6,910
46	Navegar II (Netherlands) B.V.	Amsterdam, Netherlands	29.2	USD	1.1450	⁵⁾	⁵⁾
47	OAO Bucharagips	Kogon, Uzbekistan	24.9	EUR	1.0000	363	-2,462
48	Operadora de Servicios Mega, S.A. de C.V., SOFOM E.R.	Zapopan, Mexico	23.5	MXN	22.5087	909,937	53,113

List of KfW Group shareholdings as of 31 December 2018

No.	Name	Place	Capital share in %	CC ¹⁾	Exchange rate EUR 1.00 = CU as of 31 Dec. 2018 ²⁾	Equity in TCU ^{2), 3)}	Net income in TCU ^{2), 3)}
Shareholdings of DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH							
B. Other shareholdings (only capital shares totalling at least 20%)							
49	Orilus Investment Holdings Pte. Ltd.	Singapore, Singapore	33.0	USD	1.1450	78,257	-235
50	Phi Capital Trust	Chennai, India	22.5	INR	79.7298	402,910	-86,076
51	Russia Partners Technology Fund, L.P.	George Town, Cayman Islands	21.6	USD	1.1450	113,095	-1,586 ⁵⁾
52	SEAF Central and Eastern Europe Growth Fund LLC	Wilmington, USA	23.9	USD	1.1450	945	-62
53	Sierra Madre Philippines I, L.P.	George Town, Cayman Islands	20.0	USD	1.1450	-69	-1,608
54	Stratus Capital Partners B, L.P.	Edinburgh, United Kingdom	75.0	USD	1.1450	14,979	1,121
55	Stratus SCP Fleet Fundo de Investimento em Participações – Multiestratégia	São Paulo, Brazil	39.7	BRL	4.4445	43,760	8,673
56	Takura II Feeder Fund Partnership	Cape Town, South Africa	25.0	USD	1.1450	39,354	8,356
57	Tolstoi Investimentos S.A.	São Paulo, Brazil	31.1	BRL	4.4445	⁵⁾	⁵⁾
58	TOO Isi Gips Inder	Inderborskij, Kazakhstan	40.0	EUR	1.0000	1,662	284
59	TOO Knauf Gips Kaptshagaj	Kapchagay, Kazakhstan	40.0	EUR	1.0000	20,228	5,357
60	Triple P SEA Financial Inclusion Fund LP	Singapore, Singapore	25.2	USD	1.1450	537	-1,183
61	Vietnam Opportunity Fund II PTE. LTD.	Singapore, Singapore	32.0	USD	1.1450	⁴⁾	⁴⁾
62	Whitlam Holding PTE. Ltd.	Singapore, Singapore	38.7	USD	1.1450	53,064	24,125
63	Worldwide Group, Inc	Charlestown, St. Kitts und Nevis	33.4	USD	1.1450	25,031	2,243

Shareholdings of Interkonnektor GmbH

A. Joint ventures included in the consolidated financial statements

1	DC Nordseekabel GmbH & Co. KG	Bayreuth	50.0	EUR	1.0000	601,635	52,063
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B. Joint ventures not included in the consolidated financial statements

2	DC Nordseekabel Beteiligungs GmbH	Bayreuth	50.0	EUR	1.0000	-58	3
3	DC Nordseekabel Management GmbH	Bayreuth	50.0	EUR	1.0000	-111	1

Shareholdings of KfW Capital GmbH & Co. KG

A. Subsidiaries not included in the consolidated financial statements

1	KfW Capital Verwaltungs GmbH	Frankfurt	100.0	EUR	1.0000	26	1
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¹⁾ ISO currency code

²⁾ CU = currency units in local currency; TCU = thousand currency units in local currency ³⁾ Financial statements prepared in accordance with local accounting standards.

⁴⁾ The company is in the start-up phase; no annual financial statements have been prepared yet. ⁵⁾ No current annual financial statements are available.

⁶⁾ Preliminary data as of 31 December 2018 is available. The data is based on the most recent annual financial statements of the investee (where available).



Attestations

Statement by the Executive Board

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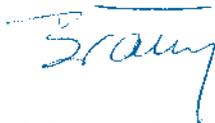
Independent auditor's report

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Statement by the Executive Board

To the best of our knowledge, and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of KfW Group, and the group management report includes a fair review of the development and performance of the business and the position of KfW Group, together with a description of the principal risks and rewards associated with the expected developments of KfW Group.

Frankfurt am Main, 26 February 2019
KfW



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 consolidated financial statements and of the group management report

Opinions

We have audited the consolidated financial statements of KfW, Frankfurt am Main and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2018, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the fiscal year from January 1, 2018 to December 31, 2018, and notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of KfW for the fiscal year from January 1, 2018 to December 31, 2018.

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

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at December 31, 2018 and of its financial performance for the fiscal year from January 1, 2018 to December 31, 2018, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated 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 consolidated financial statements and of the group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the group 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 consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities 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 consolidated financial statements and on the group 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, the Information on the “Summarised non-financial statement of KfW as the parent company and of KfW Group” as well as the sections „Key figures of KfW Group“ and „Overview of KfW“ of the Financial Report 2018, which we obtained prior to the date of this auditor’s report, and the Letter of the Executive Board, the Report of the Board of Supervisory Directors as well as the sections “Members and tasks of the Board of Supervisory Directors”, „Directors and Managing Directors of KfW Group“, “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 consolidated financial statements and on the group 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 consolidated financial statements, with the group 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 consolidated financial statements and the group management report

The Executive Board is responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the Executive Board is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Executive Board is responsible for assessing the Group'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, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the Executive Board is responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated 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 group 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 group management report.

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

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

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated 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 consolidated financial statements and on the group 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 consolidated financial statements and this group 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 consolidated financial statements and of the group 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 consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group 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 Group'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 consolidated financial statements and in the group 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 Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the Executive Board in the group 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

Wagner
Wirtschaftsprüfer
(German Public Auditor)

Dombek
Wirtschaftsprüferin
(German Public Auditor)

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