Financial Report
2019

KFW

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 2019 alone, KfW provided promotional funds totalling EUR 77.3 billion. Of this total, 38% 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 2019 raised EUR 80.6 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

	2019	2018
	EUR in billions	EUR in billions
	77.3	75.5

Key figures of the income statement

	2019	2018
	EUR in millions	EUR in millions
Net interest income (before promotional expense)	2,484	2,413
Net commissions (before promotional expense)	512	374
Administrative expense (before promotional expense)	1,320	1,400
Operating result before valuation (before promotional expense)	**1,677**	**1,387**
Risk provisions for lending business	–174	–3
Net gains/losses from hedge accounting and other financial instruments at fair value through profit or loss	–10	426
Net gains/losses from securities and investments and from investments accounted for using the equity method	10	25
Operating result after valuation (before promotional expense)	**1,503**	**1,834**
Net other operating income	46	5
Profit/loss from operating activities (before promotional expense)	**1,549**	**1,839**
Promotional expense	159	216
Taxes on income	23	–13
Consolidated profit	**1,367**	**1,636**
Consolidated profit before IFRS effects	**1,447**	**1,311**
Cost-income ratio before promotional expense[1)]	44.0%	50.2%

[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. 2019 EUR in billions	31 Dec. 2018 EUR in billions
Total assets	506.0	485.8
Volume of lending	486.2	483.5
Volume of business	610.7	590.7
Equity	31.4	30.3
Equity ratio	6.2%	6.2%

Key regulatory figures

	31 Dec. 2019 EUR in billions	31 Dec. 2018 EUR in billions
Risk position	138.8	140.8
Tier 1 capital	29.5	28.3
Regulatory capital	29.5	28.3
Tier 1 capital ratio	21.3%	20.1%
Total capital ratio	21.3%	20.1%

Employees of KfW Group[1)]

	2019	2018
	6,705	6,376

[1)] Average number of employees during the financial year

Contents

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

Actual zero amounts and amounts rounded to zero are presented as EUR 0 million.

Taking responsibility

MAKING AN IMPACT

We supported forward-looking projects in Germany, Europe and the world with a total volume of EUR 77.3 billion.

Dr Günther Bräunig

Letter from the Executive Board

Message from KfW's Executive Board regarding the coronavirus crisis

Just before the publication of our 2019 Annual Report, the coronavirus crisis has hit us with full force. This crisis poses a formidable challenge for all of us. Rapid and targeted measures are required to stabilise the economy. In this situation, KfW is taking responsibility as Germany's largest promotional bank. As we have already done in the recent past, namely after the financial crisis of 2008, KfW will be supporting enterprises in Germany with an extensive special programme.

The objective is to quickly provide liquidity for small, medium-sized and large enterprises and guide them through these difficult times. At KfW, we will put all our experience and strength to work in implementing the special programme on behalf of the German Federal Government, together with the German credit industry. All our activities are currently secondary to this objective. This task will have a decisive impact on our 2020 business year.

Dear readers,

Promotional year 2019 was a successful one, in which both our promotional instruments and our expertise were in demand once again. This enabled us to finance a large number of projects contributing to climate protection, sustainable economic growth, quality of life and prosperity in Germany, in Europe and around the world.

Commitments in 2019

KfW's total business volume grew to EUR 77.3 billion in 2019 (2018: EUR 75.5 billion), of which EUR 43.4 billion went to promoting businesses, private clients and municipalities in Germany (2018: EUR 46.0 billion).

Dr Ingrid Hengster

Demand for promotional loans declined overall due to the low interest rate environment and positive financing conditions; however, it differed between programmes. The “Baukindergeld” scheme introduced in September 2018 continued to attract great demand in 2019, and the KfW Home Ownership Programme made a substantial contribution to fostering home ownership in Germany with a considerable increase in commitments. The commitment volume in financing for businesses rose both for the KfW Entrepreneur Loan and under the KfW Renewable Energy Programme.

KfW Capital, the subsidiary responsible for expanding venture capital financing, committed investments of EUR 156 million in its first full financial year, and established a firm footing in the market.

The commitment volume in business sector Export and project finance, which provides financing in the interests of the German and European economy, rose by around 25% to a record EUR 22.1 billion (2018: EUR 17.7 billion). This is in large part attributable to the growth in bank refinancing from the CIRR ship and ERP export financing programmes.

At EUR 10.6 billion, promotion of developing countries and emerging economies maintained the high volume of the previous year (2018: EUR 10.6 billion). EUR 8.8 billion of this amount was accounted for by KfW Development Bank and EUR 1.8 billion by DEG. The regional focus for KfW Development Bank was on Africa and the Middle East, with 43% of commitments (almost EUR 3.5 billion).

The qualitative targets which are relevant for KfW’s promotional activites developed well on a stable trajectory with climate and environmental protection (“environmental share”) at 38% and promotion of SMEs (“SME share”) at 40% of financing.

Providing impetus

PROMOTIONAL BANK

We were able to provide important impetus for housing construction, innovation and digitalisation in Germany in 2019.

Operating successfully

ANNUAL STATEMENTS

Development of the earnings position remained highly satisfactory with consolidated profit of EUR 1.4 billion.

Bernd Loewen

Annual result 2019

Development of the earnings position was satisfactory in financial year 2019, with consolidated profit of close to EUR 1.4 billion, despite a year-on-year decline (2018: EUR 1.6 billion). The operating result before valuation (before promotional expense) of EUR 1.7 billion was particularly encouraging, thanks to increased interest and commission income, and lower administrative costs compared to the previous year (2018: EUR 1.4 billion).

The valuation result was below that of the previous year due to an increased but still moderate net risk provisioning charge of EUR 174 million (2018: EUR 3 million) and a lower positive contribution from the equity investment portfolio of EUR 95 million (2018: EUR 128 million). This decline was reinforced by IFRS-induced effects from hedge accounting of EUR 80 million, which had a negative impact on earnings.

KfW's domestic funding expenses, which had a negative impact on KfW Group's earnings position, remained considerably below expectations at EUR 159 million (2018: EUR 216 million) in the continuing low interest rate environment.

Consolidated total assets rose by EUR 20.2 billion to EUR 506.0 billion in 2019 (2018: EUR 485.8 billion). This increase was in particular attributable to an increase of EUR 9.4 billion in liquidity held and an increase of EUR 5.0 billion in net loans and advances.

Agenda D-N-A

Digitalisation, sustainability and Africa (in German: Digitalisierung, Nachhaltigkeit und Afrika – "DNA") are major challenges of our time. Our future is dependent on the solutions we find for unrelenting climate change, on whether we succeed in shaping digital change, and how we can give our neighbouring continent with its strongly growing population prospects for the future. As one of the largest national promotional banks in the world, we therefore made these issues the core of our business, our DNA, back in 2018.

Dr Stefan Peiß

Sustainability

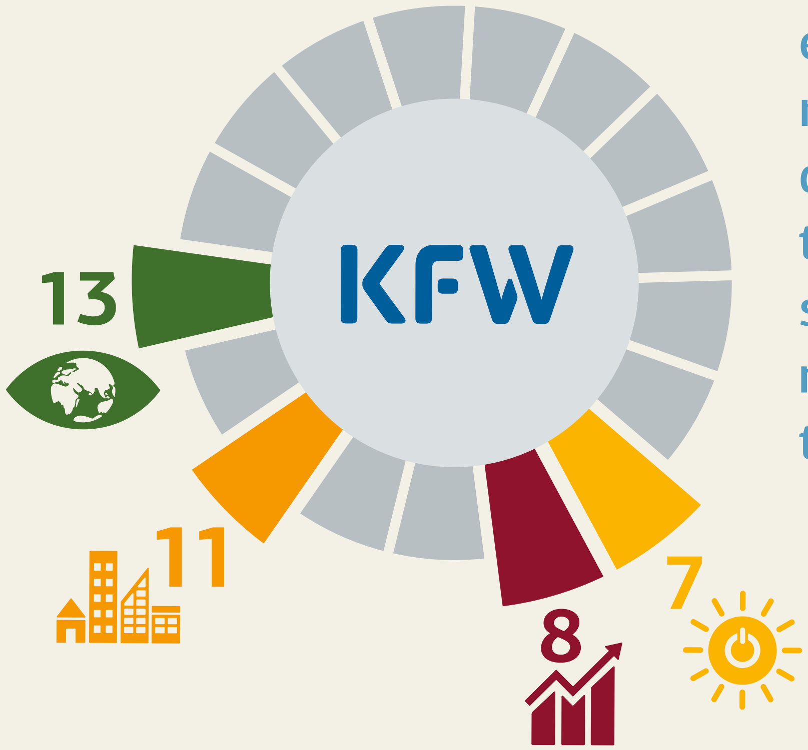
The focus on sustainability has always been one of KfW's key features – in business, in its operations and as an employer. KfW takes account of the highest environmental and social standards in its financing, not least to set an example for the market. Nevertheless, we want to go further and develop KfW into the sustainable bank of the future. Sustainability is therefore a central component of our corporate strategy.

2019 was a year of agenda setting. Our new sustainability mission statement is directly based on the UN's Sustainable Development Goals (SDGs), the Paris Agreement of 2015 and the German Federal Government's sustainability strategy. Among other things, our new exclusion list rules out funding for new coal related-projects, from exploration through land-based transport and infrastructure to coal-fired power stations. KfW is also now disclosing its contribution to the international Sustainable Development Goals (SDGs) in full transparency. The focal points of promotion in 2019 were Sustainable Cities and Communities (SDG 11; EUR 28.8 billion), Climate Action (SDG 13; EUR 27.7 billion), Decent Work and Economic Growth (SDG 8; EUR 26.7 billion), and Affordable and Clean Energy (SDG 7; EUR 25.9 billion). We will further develop the management of KfW business with a view to the Paris Agreement and the SDGs.

We are also committed to our role as a transformative promotional bank, which includes supporting the Federal Government in implementing its Climate Action Programme 2030. We are preparing initiatives in the fields of industry, transport, buildings and energy, in consultation with the Federal Government.

Setting out guidelines

SDGs

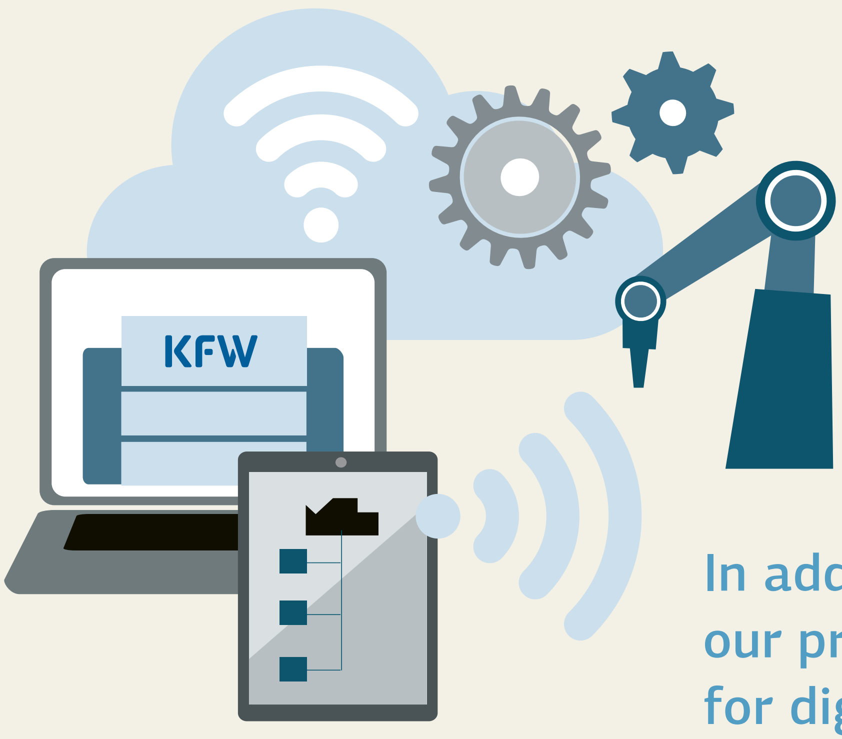


Sustainability is a core element of our corporate strategy, and we disclose our contribution to the international sustainable development goals with full transparency.

Shaping the future

DIGITAL

TRANSFORMATION



In addition to expanding our promotional offering for digital projects, we are also driving the digital transformation ahead within KfW itself.

Melanie Kehr

Digitalisation

As a promotional bank, we see it as our duty to provide support and help shape digitalisation in the economy and society. At the same time, however, we are driving KfW's digital transformation ahead, for instance in application and work processes, and in connecting to portals and platforms.

We expanded our promotional offering for digital projects in 2019; thus, our Smart Cities programme for sustainable digitalisation in municipalities was launched with great success. KfW is breaking new ground in the promotion of digital education with its flagship project TUMO Berlin, which involves opening a digital education centre for young people in Berlin, based on the highly successful TUMO project in Armenia.

The start-up platform that we launched together with the Federal Ministry for Economic Affairs and Energy in 2018, has since had registrations from 80,000 people interested in setting up their own business, who now are receiving digital support in implementing their business ideas from more than 600 partners.

In order to further strengthen Germany as a business location, KfW is working together with the Federal Ministry for Economic Affairs and Energy and the Federal Ministry of Finance to implement the coalition decision to create an investment fund for forward-looking technologies, primarily in the areas of digitalisation and climate technology, with a growing volume of up to EUR 10 billion.

Prof. Dr Joachim Nagel

Africa

Africa and Europe are neighbours, so Africa's major challenges, such as rapid population growth, deficits in investment financing, and continuing climate change, are our challenges, too.

On behalf of the German Federal Government, KfW is committed to ensuring new prospects for the continent, such as with new economic development tools. These include the "Africa Grow" umbrella fund, which provides additional growth capital in Africa, and the "Africa Connect" programme for companies that invest in Africa with a long-term interest and create positive added value at local level. The new Africa CIRR programme will finance large-volume German exports to Africa from 2020, with the goal of strengthening economic cooperation with Africa. KfW set a new record last year overall, with EUR 4.2 billion in new commitments for Africa, taking our Africa portfolio to around EUR 23 billion already.

Despite its many successes, 2019 was also a year of economic upheaval, providing a wide range of tasks for KfW, which will keep us busy beyond 2020. Although they are a challenge for us, we look forward to these tasks, as they will drive Germany, Europe and the world forward. We are optimistic about the future – not least due to the passionate commitment of our employees, whom we would like to take this opportunity to thank for their dedication.

Creating new prospects

FOCUS ON AFRICA

We strengthened our economic cooperation with Africa with a record amount of EUR 4.2 billion in new commitments and through new financing instruments.

The Executive Board

Melanie Kehr **Bernd Loewen** **Dr Ingrid Hengster**

Dr Günther Bräunig
(Chief Executive Officer)

Prof. Dr Joachim Nagel

Dr Stefan Peiß

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

Directors

Dr Stefan Breuer
Jörg Brombach
Dr Frank Czichowski
Andreas Fichelscher
Dr Lutz-Christian Funke
Helmut Gauges
Werner Genter
Dr Karsten Hardraht
Detlev Kalischer
Dirk Kuhmann
Dr Stephan Lauer
Dr Katrin Leonhardt (until 31/1/2020)
Dr Velibor Marjanovic (until 31/7/2019)
Andreas Müller
Stephan Opitz
Gaetano Panno (since 1/10/2019)
Dr Ralf Prinzler
Wolfgang Reuß
Dr Wolfgang Richter (until 24/11/2019)
Matthias Schwenk
Mirko Sedlacek (since 1/8/2019)
Roland Siller
Birgit Spors
Robert Szwedo
Klaus Weirich
Eva Witt (since 1/1/2020)

Members of the Management Board of KfW IPEX-Bank GmbH

Klaus R. Michalak (CEO and CFO)
Markus Scheer
Claudia Schneider (CRO)
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

Christiane Laibach (Chair)
Monika Beck
Philipp Kreutz

DEG was founded in 1962 and has been a wholly-owned subsidiary of KfW Bankengruppe 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


Peter Altmaier, Federal Minister for Economic Affairs and Energy

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 Presidial and Nomination Committee, and the Remuneration Committee each met three times in 2019 for this purpose; the Audit Committee twice and the Risk and Credit Committee five times.

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

- KfW's 2018 annual and consolidated financial statements;
- the business activities and current developments in each of KfW's business sectors, including KfW IPEX-Bank GmbH, DEG and KfW Capital;
- the group's net assets, financial position, results of operations, and risk situation in general, and sensitive risk areas in particular;
- the further development of KfW into a transformative promotional bank for a net-zero GHG future;
- the further development of KfW into a digital promotional bank;
- banking supervisory issues relating to KfW, current consultations with the banking supervisory authorities, compliance with regulatory capital requirements, audits completed and ongoing and the resulting measures, as well as potential effects of future regulatory changes;
- the status on the modernisation of IT and the payment systems, as well as on the realignment of Internal Auditing;
- business and risk strategies, the group and KfW IT strategies for 2020, as well as the Equal Opportunities Plan.

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 impact of the persistent low interest rate environment on promotion, and the associated KfW measures proposed, improvements to innovation promotion in the field of digitalisation, the comprehensive offering on the start-up platform for entrepreneurs and the promotional activities in the context of environmental and climate protection and the German Federal Government's climate cabinet resolutions.
- 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, DEG's business orientation and results and the stepped up activities in Africa.

- 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 addressed in particular the future growth outlook for KfW IPEX-Bank GmbH in light of its targeted approach to further developing its syndication and structuring expertise.
- The Board of Supervisory Directors approved KfW's acquisition of a strategic interest in a Belgian transmission system operator which holds a majority stake in the German transmission grid in Hamburg and in eastern Germany.
- 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 continue to 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 implementing a stringent, multi-dimensional sustainability concept.

The Board of Supervisory Directors was informed at the meetings as well as quarterly, in writing, of the group's net assets, financial position and results of operations, its 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 and his deputy informed of key developments at the bank between meetings.

The Board of Supervisory Directors discussed key aspects of the business strategy, in particular promotional funding of future investments in Germany and sustainable further development of the IPEX business model, and approved the planning for 2020. It acknowledged the multi-year business strategy, the risk strategy, the IT strategies for the group and the individual group companies, as well as the new Equal Opportunities Plan.

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. Two members attended fewer than half of the meetings of the Presidial and Nomination Committee. The same applies to the Remuneration Committee. One member attended fewer than half of the Audit Committee meetings and seven 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 2019 to gain and maintain the expertise required in accordance with the German Banking Act. Two training sessions were also conducted for employees of members of the Board of Supervisory Directors.

Committees of the Board of Supervisory Directors

In exercising its responsibilities prescribed in the Bylaws, the **Presidial and Nomination Committee** discussed Executive Board matters, resolved an adjustment to Executive Board remuneration and made recommendations to the Board of Supervisory Directors on the appointment of Ms Kehr and the reappointment of Dr Peiß and Prof. Dr Nagel to the Executive Board. It resolved on details of the basic business policy strategy underlying KfW's strategic guidelines for 2020.

The committee resolved a redistribution of Executive Board responsibilities resulting from Ms Kehr's appointment as the sixth Executive Board member, in charge of information technology and transaction management.

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.

The **Remuneration Committee** discussed remuneration issues and the reports in accordance with the Remuneration Ordinance for Institutions *(Institutsvergütungsverordnung - "IVV")*. It was informed of the annual 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. It reviewed and confirmed the appropriateness of the Executive Board members' remuneration. The group-wide remuneration strategy and the assessment base for variable employee remuneration for 2019 and 2020 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 various countries and regions, the development and assessment of political risks in relevant areas of activity, measures to further develop the risk culture, details of stress testing and market price risks, including further development of their measurement, the potential effects of regulatory measures currently under discussion, the risk profile of financing in certain sectors, and the remuneration system, with a particular focus on the IVV. The report on shadow banks initiated an in-depth discussion on the topic. The results of Bundesbank assessments, along with the resulting measures and projects, the discussions 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 results of operations, the reports by Internal Auditing and Compliance and the annual financial statements of KfW Group 2018. It made corresponding recommendations to the Board of Supervisory Directors for the approval of the annual financial statements 2018 and the appointment of the auditor for 2020. 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, also dealing with the risk culture. In addition, it addressed auditor independence, determined focal points of the 2019 financial statements audit and discussed the initial results of the 2019 financial statements audit (audit report part I). The committee approved the audit plan of the Internal Auditing department for 2020. It monitored banking supervisory issues and closely reviewed the Bundesbank assessments, along with the resulting measures and projects to remedy the findings.

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

Changes on the boards

In the period under review, the Board of Supervisory Directors appointed Ms Melanie Kehr to the KfW Executive Board with effect from 1 March 2019. It also reappointed Dr Peiß and Prof. Dr Nagel to the KfW Executive Board with effect from 1 January 2020 and 1 November 2020, respectively.

In accordance with Article 7 (1) no. 1 of the KfW Law, in my capacity as Federal Minister for Economic Affairs and Energy, I assumed the Chair of the Board of Supervisory Directors for 2020 from my colleague Olaf Scholz, Federal Minister of Finance.

Doris Ahnen, Verena Göppert, Olav Gutting, Andrea Kocsis, Peter Strobel and Heike Taubert joined the Board of Supervisory Directors with effect from 1 January 2019. Andreas Ibel, Bartholomäus Kalb, Lutz Lienenkämper, Eckhardt Rehberg and Carsten Schneider stepped down from the Board of Supervisory Directors effective the end of 2019. Dr Florian Toncar resigned from the Board of Supervisory Directors with effect from 31 March 2020. The Board of Supervisory Directors would like to thank the members stepping down for their work.

Volker Bouffier, Dr Louis Hagen, Reinhold Hilbers, Gerhard Hofmann, Joachim Rukwied and Edith Sitzmann stepped down with effect from 31 December 2019, and were reappointed with effect from 1 January 2020, according to schedule.
Dr André Berghegger, Ingeborg Esser, Albert Füracker, Johannes Kahrs and Alois Karl joined the Board of Supervisory Directors after the reporting period with effect from 1 January 2020.

Annual financial statements

Ernst & Young GmbH, which was appointed auditor for the 2019 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 2019 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 1 April 2020, 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, 1 April 2020

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 of Finance, and the Deputy Chair by the Federal Minister for Economic Affairs and Energy.

Peter Altmaier
Federal Minister for Economic Affairs and Energy
Deputy Chair
(1 January 2019 - 31 December 2019)
Chair
(since 1 January 2020)

Olaf Scholz
Federal Minister of Finance
Chair
(1 January 2019 - 31 December 2019)
Deputy Chair
(since 1 January 2020)

Doris Ahnen
Minister of State at the Ministry of Finance of the State of Rhineland-Palatinate
Member appointed by the German Bundesrat

Sören Bartol
Member of the German Bundestag
Member appointed by the German Bundestag

Dr André Berghegger
Member of the German Bundestag
Member appointed by the German Bundestag
(since 1 January 2020)

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

Ingeborg Esser
Managing Director of the Federal Association of German Housing and Real Estate Companies (GdW)
Representative of the housing industry
(since 1 January 2020)

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

Albert Füracker
State Minister at the Bavarian State Ministry of Finance and for Regional Identity
Member appointed by the German Bundesrat
(since 1 January 2020)

Verena Göppert
Permanent Deputy of the Executive Director of the Association of German Cities
Representative of the municipalities

Olav Gutting
Member of the German Bundestag
Member appointed by the German Bundestag

Dr Louis Hagen
Chief Executive Officer of Münchener Hypothekenbank eG
Representative of the mortgage banks

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

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

Andreas Ibel
President of the Federal Association of Independent Housing and Real Estate Companies (BFW)
Representative of the housing industry
(until 31 December 2019)

Johannes Kahrs
Member of the German Bundestag
Member appointed by the German Bundestag
(since 1 January 2020)

Bartholomäus Kalb
Former member of the German Bundestag
Member appointed by the German Bundestag
(until 31 December 2019)

Alois Karl
Member of the German Bundestag
Member appointed by the
German Bundestag
(since 1 January 2020)

Julia Klöckner
Federal Minister of Food and Agriculture

Andrea Kocsis
Deputy Chair of ver.di –
United Services Trade Union
Representative of the trade unions

Stefan Körzell
Member of the Federal Executive Board
of the Confederation of German Trade
Unions (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
(until 31 December 2019)

Heiko Maas
Federal Minister of Foreign Affairs

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

Eckhardt Rehberg
Member of the German Bundestag
Member appointed by the
German Bundestag
(until 31 December 2019)

Prof. Dr Johannes-Jörg Riegler
Former President of the Association
of German Public Banks (VÖB)
Representative of industrial credit

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

Andreas Scheuer
Federal Minister of Transport
and Digital Infrastructure

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

Carsten Schneider
Member of the German Bundestag
Member appointed by the
German Bundestag
(until 31 December 2019)

Svenja Schulze
Federal Minister for the Environment,
Nature Conservation and Nuclear Safety

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

Heike Taubert
Minister of Finance
of the State of Thuringia
Member appointed by the
German Bundesrat

Dr Florian Toncar
Member of the German Bundestag
Member appointed by the German
Bundestag
(until 31 March 2020)

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 8 April 2019, 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 remuneration system for the Executive Board, with the decision on the basic structure of the remuneration 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 the process and bundle expertise in the committee.

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 on-lending 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, remuneration 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.

Before Ms Kehr took up her duties as the sixth member of the Executive Board on 1 March 2019, 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;
- 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 Oct. 2018), and Central Services;
- Bernd Loewen – Accounting, Information Technology, and Organisation and Consulting;
- Prof. Dr Joachim Nagel – International Finance, including KfW Development Bank, DEG, and Export and Project Finance (KfW IPEX-Bank GmbH);
- Dr Stefan Peiß – Chief Risk Officer/Head of Risk Controlling, Credit Risk Management, Transaction Management, Compliance and Portfolio Credit Service.

After the appointment of Ms Melanie Kehr to the Executive Board, which was followed by an interim allocation of responsibilities, the following amended rules of procedure became effective upon the approval of the Presidial and Nomination committee dated 8 April 2019:

- Dr Günther Bräunig – Chief Executive Officer, General Secretariat, Group Development and Economics, Legal, Financial Markets, Internal Auditing and also Sustainability;
- Dr Ingrid Hengster – Domestic Finance, including the Individualfinanzierung & Öffentliche Kunden *(Customised Finance & Public Clients)* and Mittelstandsbank & Privatkunden *(SME Bank & Private Clients)* business sectors, New Business Credit Service, Domestic Marketing and Digital Channels, KfW Capital GmbH & Co. KG, and Central Services;
- Melanie Kehr – Information Technology and Transaction Management;
- Bernd Loewen – Accounting, Portfolio Credit Service, Organisation and Consulting, and Human Resources;
- Prof. Dr Joachim Nagel – International Finance, including KfW Development Bank, DEG, and Export and Project Finance (KfW IPEX-Bank GmbH);
- Dr Stefan Peiß – Chief Risk Officer/Head of Risk Controlling, Credit Risk Management, and Compliance.

Pursuant to its resolution dated 8 April 2019, the KfW Board of Supervisory Directors has reappointed Dr Stefan Peiß to the Executive Board of KfW for an additional five years from 1 January 2020 until 31 December 2024. Pursuant to its resolution dated 11 December 2019, the Board of Supervisory Directors has reappointed Prof. Dr Joachim Nagel to the Executive Board of KfW for an additional five years from 1 November 2020 to 31 October 2025.
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 Chair of the Board of Supervisory Directors in the reporting year was Federal Minister Olaf Scholz. There were seven female members on the Board of Supervisory Directors during the reporting year.

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 remuneration 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 remuneration 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 remuneration 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 and 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 2019 on 23 January 2019. The appointment was based on the proposal made by KfW's Board of Supervisory Directors on 6 December 2018. 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 and remark in the auditor's report if it noticed any facts in performing the audit that represent misstatements 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 2019.

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, 1 April 2020

The Executive Board **The Board of Supervisory Directors**

Group manage-
ment report

Basic information on KfW Group

Overview

KfW Group consists of KfW and five consolidated subsidiaries. KfW is a promotional bank of the Federal Republic of Germany, which owns 80% of KfW while the German Federal States own 20%. 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 promotes sustainable improvement of economic, social and environmental conditions around the world, with an emphasis on the German economy. The focus of KfW's promotional activities is on the megatrends anchored in KfW's strategic objectives. A variety of different financing products and services address in particular the areas small and medium-sized enterprises (SMEs), start-ups, innovation, climate and environmental protection, the housing sector, infrastructure, education, export and project finance and development cooperation. The domestic promotional lending business with enterprises and private individuals is characterised by the on-lending strategy, in which KfW extends loans to commercial banks, which, in turn, lend the funds to the ultimate borrowers. KfW thus does not have its own network of branch offices. It funds its business activities via the national and international money and capital markets. 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. As a new subsidiary of KfW, KfW Capital invests in German and European venture capital and venture debt funds in order to strengthen venture 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)*	– 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)*	– 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	– Investments in German and European venture capital and venture debt funds
Export and project finance	– 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	– 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	– 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	– Central interest rate and currency management – Strategic equity investments

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
KfW, Frankfurt am Main, Germany	502,495	483,453
Subsidiaries		
KfW IPEX-Bank GmbH, Frankfurt am Main (KfW IPEX-Bank), Germany	27,029	27,969
DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne (DEG), Germany	6,885	6,274
KfW Beteiligungsholding GmbH, Bonn, Germany	3,307	3,215
KfW Capital GmbH & Co. KG, Frankfurt am Main, Germany	254	25
Interkonnektor GmbH, Frankfurt am Main, Germany	376	292
Investments accounted for using the equity method		
Microfinance Enhancement Facility S.A., Luxembourg (19.2%), Luxembourg	614	592
DC Nordseekabel GmbH & Co. KG, Bayreuth (50.0%), Germany	888	745
Green for Growth Fund, Southeast Europe S.A., Luxembourg (13.25%), Luxembourg	525	470
AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co. KG, Munich (47.5%), Germany	90	115
coparion GmbH & Co. KG, Cologne (16.4%), Germany	84	45

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

Strategic objectives 2024

KfW Group has a set of strategic objectives in place that define KfW's targeted medium-term positioning. This framework encompasses 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 2024 was adopted in 2019.

KfW's **primary objective** is **sustainable promotion**. It aims to improve economic, social and environmental living conditions in Germany, Europe and around the world. This primary objective is supported by the two promotional principles of subsidiarity and sustainability.

Subsidiarity means that KfW focuses on eliminating market weaknesses. Putting this principle into practice, KfW strives to consistently maintain high-quality promotional activities. KfW is also aiming for an increase in the volume of new commitments in line with the development of Germany's nominal GDP growth.

It should be noted with regard to the principle of sustainability that KfW aims to achieve a ranking among the top five national and international promotional banks in the relevant sustainability ratings (Sustainalytics, imug, ISS ESG).

Within the framework of these promotional principles, KfW finances projects relating to the following megatrends of our time: climate change and the environment (environmental share (of financing) > 38%), globalisation, social change and digitalisation and innovation. In domestic promotion, KfW aims to achieve an SME ratio of > 40% in financing small and medium-sized German enterprises.

The primary objective is complemented by **secondary objectives** in the areas of profitability and efficiency, risk and capital, regulation and processes and customer and employee centricity. Digitalisation and agility are considered fundamental prerequisites for achieving these objectives.

Internal management system

KfW has an integrated 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 collaboration of staff responsible for planning in all areas.

The group-wide strategic objectives set by the Executive Board form the basis for the group's strategic planning. This system of objectives serves KfW Group as a 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 aspiration level and are adjusted where necessary, for example, due to changed parameters or newly determined focus areas. Efforts are made, however, to ensure that there are no fundamental changes made to the strategic roadmap 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. Project efficiencies and cost reduction measures are also considered 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 and technical and organisational resources, promotional expense, primary cost planning and tied-up capital) as well as targeted earnings levels. It involves evaluation of the key business and revenue drivers for the business sectors and the group. The central departments (e.g. information technology, human resources and central services) play important roles in achieving the strategic objectives. By involving these departments, their own strategies are aligned with the strategic objectives. The first regular capital budget in the base case is prepared on a multi-year horizon. This enables 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 promotion, risk and finances) for the entire planning period based on the assessment and prioritisation of all strategic initiatives from a group perspective. Strategic group-level planning will be expanded to include business strategy scenario analysis. Scenario analysis is a "what if" analysis of a specific, plausible scenario, looking at the interaction of exogenous influencing factors and translating the results of the analysis into management-relevant parameters in new business, earnings and risk/capital. Such scenarios assist in 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 if necessary.

The business sectors plan their new business, risks and earnings, and each department 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. 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 strategies. 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 a foundation for the group's qualitative and quantitative objectives. The Executive Board reviews target achievement both on a regular and on an ad hoc basis during the current financial year. The assumptions concerning external and internal factors made when determining the business strategy are also subject to regular checks. The development of relevant control variables, their attainment, and the reasons for any shortfalls are analysed as part of strategic management. Strategic assumptions are reviewed and a systematic variance analysis of early objectives and forecasts is performed at the beginning of every year. Findings gained from this comparison are incorporated into the next planning process. At mid-year, the forecasting process serves as a comprehensive basis for interim management input on quantitative group variables in line with the strategic objectives (new business, risk and earnings in respect of funding opportunities), while providing a guide for 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 the KfW Bylaws. The commentary in these reports outlines analyses of causes and any potential plans for action. 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 FTEs, developments and are reported to specific departments. Additionally, analyses 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 risk reporting. The Board of Supervisory Directors receives a risk report quarterly.

Alternative key financial figures used

The KfW Group Management Report contains key financial figures that are not defined in the IFRS. In its strategic objectives, KfW uses key indicators prescribed by accounting standards and supervisory regulations as well as key figures that are geared toward 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:

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 promotion of developing countries and emerging economies – which are accounted for as trust activities – 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 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) to achieve 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 (obtained on the strength of its Triple A rating). 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 Loans and advances to banks or 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 expense).

Cost/income ratio (before promotional expense)
The cost/income ratio (before promotional expense) comprises administrative expense, (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, 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 give rise to temporary net gains or losses that are offset over the term as a whole. In KfW's opinion, such temporary effects on results are not representative as they are caused solely by economically effective hedging relationships.

Consequently, the following reconciliations are performed by eliminating temporary contributions to profit and loss as follows:
- Valuation results from micro and macro hedge accounting.
- 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.
- Net gains or losses from the fair value accounting of hedges with high economic effectiveness but not qualifying for hedge accounting.
- 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

According to IMF estimates, global real gross domestic product (GDP) increased by 2.9% in 2019 compared with 2018 (see table on gross domestic product and global trade). Global economic growth was therefore slower than in 2018, when global real GDP rose by 3.6% year on year, and also slower than the average growth rate for 2011 to 2018, which was also 3.6% per year. This was accompanied by a lower increase in industrial production in the period from January to November 2019 compared with the prior-year period (see table on industrial production). As a result, also global trade** has slowed down, measured by growth rates (see table on gross domestic product and global trade).

Gross domestic product and global trade at constant prices; year-on-year change

	2019 estimate[1)]	2018[1)]	2011–2018 average[2)]
	in %	in %	in %
Global economy*	2.9	3.6	3.6
Global volume of trade**	1.0	3.7	4.0

*The IMF aggregates the annual growth rates of gross domestic product at constant prices of each country on the basis of the shares of country-specific gross domestic product at purchasing power parities in the corresponding global aggregate to the growth rate of global real GDP.
**Goods and services; average of annual percentage changes in global imports and exports.
Sources:
1) IMF (2020), World Economic Outlook. An Update to the Key WEO Projections, 20 January 2020.
2) KfW Research calculations based on World Economic Outlook Data, October 2019 Edition and IMF (2020), World Economic Outlook. An Update to the Key WEO Projections, 20 January 2020.

Industrial production; change over prior-year period

	Average Jan.–Nov. 2019	Average Jan.–Nov. 2018
	in %	in %
Volume of global industrial production*	0.7	3.1

*Excluding construction; seasonally adjusted and import-weighted.
Source: KfW Research calculations based on data from CPB Netherlands Bureau for Economic Policy Analysis

As in the global economy as a whole, economic development in the member states of the **European Economic and Monetary Union (EMU)** also lost momentum last year. Measured in terms of price-adjusted gross domestic product, economic output in the EMU countries rose by 1.2% in 2019 over the previous year. Although the increase in price-adjusted GDP was therefore just 0.1 percentage points below the average growth of 2011 to 2018, the difference compared to 2018 was larger at 0.7 percentage points (see table on gross domestic product at constant prices). The slowdown in price-adjusted economic growth affected all four major euro-area economies (Germany, France, Italy and Spain). According to the European Commission, the lower growth rate of price-adjusted gross domestic product is due to escalating trade conflicts, the below-average increase in the volume of global trade and the decline in global economic growth. Uncertainty resulting from tariff threats, increasing geopolitical tension, lack of clarity regarding the terms of Brexit and the continued weakness of the non-financial economy has also been identified by the European Commission as a negative factor for price-adjusted economic growth in 2019.

Sources:
– National statistical offices: Destatis, Insee, Istat, INE
– European Commission forecast, November 2019

Gross domestic product at constant prices, year-on-year change

	2019	2018	2011–2018 average
	in %	in %	in %
Euro area	1.2	1.9	1.3
Germany	0.6	1.5	1.9

Source: Eurostat, Destatis

In **Germany**, price-adjusted GDP grew by 0.6% year on year in 2019, which was not only less than in 2018 (+1.5%), but also less than the average for 2011 to 2018 (see table on gross domestic product at constant prices). Domestic spending in 2019 was a positive factor in the growth of price-adjusted gross domestic product. With a sustained rise in the number of people in employment located in Germany (+0.9%), there was an increase in both price-adjusted consumer spending (+1.8%) and price-adjusted gross fixed capital formation in construction (+3.8%). Gross fixed capital formation in machinery and equipment also increased in 2019 (+0.4%). In contrast, net exports slowed the increase in price-adjusted GDP in 2019 by 0.4 percentage points, with the growth in price-adjusted exports (+0.9%) lagging behind the growth in price-adjusted imports (+1.9%). As regards output, the 3.6%-decline in price-adjusted gross value added in the manufacturing industry (excluding construction) curbed growth in price-adjusted GDP in 2019.

Development in the **financial markets** was dominated in 2019 by the monetary policy turnaround of the US Federal Reserve and renewed monetary easing by the European Central Bank (ECB). The Federal Reserve initially decided not to raise its key rates any further. It even lowered its key rate range by 25 basis points (bp) three times between July and October, reducing it to 1.50%–1.75%. The ECB was prompted in March 2019 to announce a new series of targeted longer-term refinancing operations ("TLTRO III") starting in September 2019. It then adopted a further package of expansionary monetary policy measures in September. These included a 10 bp cut in its deposit rate to –0.50% and the resumption of net asset purchases from November 2019 (for a monthly amount of EUR 20 billion on an open-ended basis). The ECB had only completed its last asset purchase programme at the end of 2018.

Against the backdrop of these monetary policy measures, money market interest rates, swap rates and government bond yields declined in the euro area and in the US compared to the previous year. For instance, the 3-month EURIBOR averaged –0.36% in 2019 (2018: –0.32%); the 5-year EUR swap rate averaged –0.14% (2018: +0.35%); and the yield of the 10-year German government bond was –0.21% (2018: +0.46%). In the US, the 3-month LIBOR in 2019 was 2.33% on average for the year, compared with 2.31% in the previous year, but declined to 1.91% by the end of 2019. The 5-year USD swap rate averaged 1.94% in 2019 compared with 2.84% the previous year, and the yield on 10-year US Treasuries was 2.14% compared with 2.91% the previous year. The yield curves for the EUR and the USD flattened as measured by the difference between the yields of 10 and 2-year government bonds. On average in 2019, the curve steepness measured in this way for German government bonds was 46 bp (2018: 105 bp) and for US government bonds 17 bp (2018: 39 bp).

In the stock markets, the US S&P 500 and Dow Jones Industrial leading indices reached new all-time highs at the end of 2019 and also traded higher on an annual average than in 2018. Although Germany's leading DAX 30 index stood at 13,249 points at the end of 2019, around 25% higher than the beginning of the year, the 2019 average of 12,109 points was just under one percent below the prior-year average. The trade-weighted euro weakened on average by just under 2% (against the currencies of the 18 most important trading partners outside the euro area) in 2019. It fared somewhat worse against the US dollar. The EUR/USD exchange rate (measured in USD per EUR) averaged 1.18 in 2018, but was down to just 1.12 in 2019, representing a decline of 5%.

Sources:
- Destatis: Fachserie 18 Series 1.1, National Accounts - Domestic Product - First annual results 2019, January 2020
- Federal Reserve, FOMC statement, 30 January 2019
- Federal Reserve, FOMC statement, 31 July 2019
- Federal Reserve, FOMC statement, September 2018, 2019
- Federal Reserve, FOMC statement, 30 October 2019
- European Central Bank, Press Conference, Mario Draghi, President of the ECB, Luis de Guindos, Vice-President of the ECB, Frankfurt am Main, 7 March 2019
- European Central Bank, Press Conference, Mario Draghi, President of the ECB, Luis de Guindos, Vice-President of the ECB, Frankfurt am Main, 12 September 2019
- Bloomberg, Financial market data, 21 January 2020

Development of KfW Group

KfW had a successful year of promotion in 2019, reflected in the increase in **total promotional business volume** to EUR 77.3 billion (2018: EUR 75.5 billion).

The **earnings position**, with a consolidated profit of EUR 1.4 billion, was down on the previous year (EUR 1.6 billion), but still exceeded expectations (EUR 0.8 billion). The operating result before valuation (before promotional expense) increased by EUR 1.4 billion to EUR 1.7 billion. This is also reflected in the cost-income ratio (before promotional expense), which declined to 44.0% (2018: 50.2%) as a result of increased income from interest and commissions and a decline in administrative expense. The valuation result reduced consolidated profit by EUR 0.2 billion (2018: added EUR 0.4 billion).
In its current consolidated income projections for 2020, 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 20.2 billion to EUR 506.0 billion in 2019.
This increase was mainly attributable to an increase of EUR 9.4 billion in liquidity held (to EUR 45.6 billion) and an increase of EUR 5.0 billion in Net loans and advances to EUR 389.9 billion. KfW's promotional business is refinanced in the capital markets. The volume of own issues reported under certificated liabilities amounted to EUR 436.2 billion (year-end 2018: EUR 418.6 billion). The EUR 1.1 billion increase in equity to EUR 31.4 billion was due especially to consolidated comprehensive income.

Business performance in 2019 was largely characterised by the following developments:

A. Continued high demand for KfW products
With a promotional volume of EUR 77.3 billion in financial year 2019 (2018: EUR 75.5 billion), the group was under its projected new business volume of EUR 78.1 billion.
Financing of EUR 43.4 billion (2018: EUR 46.0 billion) was committed in the domestic promotional business. Demand for promotional loans declined overall due to the low-interest-rate environment; however, it differed between programmes. The commitment volume in financing for businesses rose both for the KfW Entrepreneur Loan and under the KfW Renewable Energy Programme. KfW Capital, the subsidiary responsible for expanding venture capital financing, committed to investments of EUR 0.2 billion in its first full financial year.
International business increased by 16% to a promotional volume of EUR 32.7 billion (2018: EUR 28.3 billion). It was marked by an increase in commitments in Export and project finance, from EUR 17.7 billion to EUR 22.1 billion, with the volume of refinancing for export loans covered by the Federal Government (CIRR ship and ERP financing programmes) accounting for the largest share at EUR 3.5 billion, following EUR 0.7 billion the previous year. The Promotion of developing countries and emerging economies business sector remained unchanged at EUR 10.6 billion.

KfW raised EUR 80.6 billion in the capital markets to fund its business activities (2018: EUR 76.1 billion).

Promotional business volume of KfW Group

	2019 EUR in billions	2018 EUR in billions
Domestic business	**43.4**	**46.0**
Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)*	36.0	36.3
Individualfinanzierung & Öffentliche Kunden *(Customised Finance & Public Clients)*	7.2	9.5
KfW Capital	0.2	0.1
Financial markets	**1.4**	**1.5**
International business	**32.7**	**28.3**
Export and project finance	22.1	17.7
Promotion of developing countries and emerging economies	10.6	10.6
Volume of new commitments[1)]	**77.3**	**75.5**

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

B. Operating result up on the previous year

At EUR 1,677 million (2018: EUR 1,387 million), the Operating result before valuation (before promotional expense) was 21% above the prior-year level and exceeded the target. This was due to the increase from EUR 374 million to EUR 512 million in net commission income (before promotional expense) and the decline by EUR 80 million to EUR 1,320 million in administrative expense (before promotional expense). Net interest income (before promotional expense) remained the largest source of KfW's income at EUR 2,484 million (2018: EUR 2,413 million).

C. Valuation result down on the previous year

Charges arising from risk provisions for lending business totalled EUR 174 million in 2019. This figure was still below that of projected standard risk costs of EUR 491 million, but above the prior-year figure (2018: EUR 3 million).
The purely IFRS-related effects from the valuation of derivatives lowered the 2019 result by EUR 80 million (2018: increased the result by EUR 325 million). The EUR 95 million contribution to earnings caused by the equity investment portfolio (2018: EUR 128 million) largely resulted from the Promotion of developing countries and emerging economies business sector (EUR 50 million).

D. Promotional expense remains low in the low interest rate environment

KfW's domestic promotional expense, which has a negative impact on KfW Group's earnings position, was EUR 159 million in financial year 2019 (2018: EUR 216 million), and thus lower than projected. This was primarily the result of a decline in interest rate reductions (EUR 137 million; 2018: EUR 185 million), due in particular 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 2019:

Key financial figures of KfW Group

Key figures of the income statement	2019 EUR in millions	2018 EUR in millions
Operating result before valuation (before promotional expense)	1,677	1,387
Operating result after valuation (before promotional expense)	1,503	1,834
Promotional expense	159	216
Consolidated profit	1,367	1,636
Cost-income ratio (before promotional expense)[1)]	44.0%	50.2%
Key economic figures	**2019 EUR in millions**	**2018 EUR in millions**
Consolidated profit before IFRS effects	1,447	1,311
Key figures of the statement of financial position	**31 Dec. 2019 EUR in billions**	**31 Dec. 2018 EUR in billions**
Total assets	506.0	485.8
Volume of lending	486.2	483.5
Volume of business	610.7	590.7
Equity	31.4	30.3
Equity ratio	6.2%	6.2%

[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).

Comparison with the previous year's forecast

	2018 Forecast for 2019	2019 Actual
New business		
Promotional business volume	EUR 78.1 billion	EUR 77.3 billion
Funding	approx. EUR 80 billion	EUR 80.6 billion
Result		
Consolidated profit before IFRS effects	EUR 0.8 billion	EUR 1.4 billion
Strategic target consolidated profit	EUR 1.0 billion	EUR 1.4 billion
Net interest income (before promotional expense)	high	+3%
Low interest environment	detrimental	
Net commission income	> previous year	+37%
Administrative expense (before promotional expense)	EUR 1,370 million	EUR 1,320 million
CIR (before promotional expense)	46.3%	44.0%
Risk provisions for lending business	< standard risk costs significantly higher than 2018	EUR –174 million
Promotional expense	Prior-year target level	Actual –26%, Target –53%

The main differences between the forecasts from the Financial Report 2018 and the actual business development in 2019 are presented in the economic report.

Development of earnings position

The earnings position in 2019 was characterised by a year-on-year increase in the operating result combined with a decline in the valuation result. This resulted in a consolidated profit of EUR 1.4 billion, which is below the prior year figure (EUR 1.6 billion) but exceeds the target (EUR 0.8 billion).

Reconciliation of internal earnings position (before promotional expense) with external earnings position (after promotional expense) for financial year 2019

		Reconciliation		
	EUR in millions	EUR in millions	EUR in millions	
Net interest income (before promotional expense)	2,484	–137	2,347	Net interest income
Net commission income (before promotional expense)	512	–13	499	Net commission income
Administrative expense (before promotional expense)	1,320	9	1,328	Administrative expense
Operating result before valuation (before promotional expense)	**1,677**	**–159**	**1,518**	**Operating result before valuation**
Risk provisions for lending business	–174		–174	Risk provisions for lending business
Net gains/losses from hedge accounting	–1		–1	Net gains/losses from hedge accounting
Other financial instruments at fair value through profit or loss	–9		–9	Net gains/losses from other financial instruments at fair value through profit or loss
Securities and investments	–5		–6	Net gains/losses from disposal of financial instruments measured at amortised cost
			1	Net gains/losses from risk provisions in the securities business
Net gains/losses from investments accounted for using the equity method	15		15	Net gains/losses from investments accounted for using the equity method
Operating result after valuation (before promotional expense)	**1,503**	**–159**	**1,344**	**Operating result after valuation**
Net other operating income or loss	46		46	Net other operating income or loss
Profit/loss from operating activities (before promotional expense)	**1,549**	**–159**	**1,391**	**Profit/loss from operating activities**
Promotional expense	159	–159	0	–
Taxes on income	23		23	Taxes on income
Consolidated profit	**1,367**		**1,367**	**Consolidated profit**
Temporary net gains/losses from hedge accounting	–80		–80	Temporary net gains/losses from hedge accounting
Consolidated profit before IFRS effects	**1,447**		**1,447**	**Consolidated profit before IFRS effects**

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
Securities and investments	2		2	Net gains/losses from 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 or loss	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**

At EUR 1,677 million (2018: EUR 1,387 million), the **Operating result before valuation (before promotional expense)** was above the prior-year level and the target (EUR 1,588 million).

At EUR 2,484 million, **Net interest income (before promotional expense)** increased compared to the 2018 figure (EUR 2,413 million). The increase is due to interest margin income in the lending business and the treasury result. In contrast, return on equity declined.

Net commission income (before promotional expense) was EUR 512 million, which is higher than the 2018 figure of EUR 374 million. The increase was mainly due to remuneration of EUR 211 million (2018: EUR 143 million) for the promotional programmes, which was received primarily under the Energy-efficient Construction and Refurbishment programmes, as well as the "Baukindergeld" scheme introduced in 2018. KfW also generated commission income totalling EUR 240 million (2018: EUR 186 million) from the administration of German Financial Cooperation in the business sector Promotion of developing countries and emerging economies. The increase in payments from the Federal Government includes income received in 2019 from final billings of programmes and the administration of Financial Cooperation for 2018. The remuneration from the Federal Government was offset by related administrative expense.

Administrative expense (before promotional expense) declined from EUR 1,400 million to EUR 1,320 million and was lower than expected (EUR 1,370 million).
Personnel expense amounted to EUR 749 million, which is below the previous year's figure of EUR 771 million. However, the prior-year figure was impacted by a non-recurring effect from the creation of pension provisions. The higher number of employees and negotiated pay increases served to increase expenses.

Non-personnel expense (before promotional expense) declined to EUR 571 million (2018: EUR 629 million). Of the EUR 58 million decrease, EUR 61 million was attributable to the reduced utilisation of consultancy and support services.
The savings against a budget of EUR 50 million in administrative expense resulted from a lower-than-projected increase in FTEs and lower costs for external capacity support.

The cost-income ratio before promotional expense decreased to 44.0% (2018: 50.2%), mainly due to the overall increase in operating income and decreased expenditure. Adjusted for income and expenses from products for which cost-based remuneration has been agreed with the Federal Government, the cost-income ratio for 2019 amounts to 36.0% (2018: 41.9%).

KfW Group's **risk provisions for lending business** resulted in an impact on earnings in 2019 of EUR 174 million, greater than in the previous year (2018: EUR 3 million), but below the projected standard risk costs (EUR 491 million). Expenses resulting from risk provisions for lending business largely related to education financing in the business sector Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)* and to the subsidiary DEG in the business sector Promotion of developing countries and emerging economies.

Net additions to the provision for imminent credit risks (stage 3), including direct write-offs, and the result from modified contracts increased by EUR 115 million year on year (2018: EUR 96 million) and primarily related to the business sector Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)* with additions of EUR 114 million. Of this figure, EUR 86 million was attributable to education financing (2018: EUR 45 million). The business sector Promotion of developing countries and emerging economies needed a further addition of EUR 108 million (2018: EUR 40 million), of which EUR 109 million was attributable to DEG. The business sector Export and project finance recorded net reversals of EUR 8 million in 2019 (2018: EUR 9 million).
At EUR 77 million, income from recoveries of loans previously written off was the same as that of the previous year (2018: EUR 77 million). Of this, EUR 46 million was attributable to the business sector Mittelstandsbank & Private Kunden and EUR 15 million to the business sector Promotion of developing countries and emerging economies. Risk provisions increased to EUR 1.2 billion in financial year 2019 (2018: EUR 1.0 billion). Of this total, EUR 0.5 billion was attributable to the Export and project finance business sector and EUR 0.4 billion to the Promotion of developing countries and emerging economies business sector.

In 2019, risk provisions for loan portfolio risks that cannot be allocated (stages 1 and 2) remained unchanged at EUR 0.6 billion: EUR 0.3 billion from stage 1 and EUR 0.2 billion from stage 2.

The **net losses from hedge accounting and other financial instruments at fair value through profit or loss** amounted to EUR 10 million (2018: net gains of EUR 426 million), and in financial year 2019 were characterised by negative, purely IFRS-related effects from the measurement of derivatives used for hedging purposes and by offsetting positive effects from the equity investment portfolio.

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 income of EUR 79 million (2018: EUR 105 million). This development is primarily due to the activities in the business sector Promotion of developing countries and emerging economies, which accounted for EUR 44 million (2018: EUR 92 million). Of DEG's contribution of EUR 24 million, EUR 32 million was attributable to exchange rate-induced increases in value.

The result from foreign currency translation had a negative effect with net expenses of EUR 6 million (2018: EUR 24 million) due to exchange rate changes, particularly with respect to 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 expenses of EUR 80 million (2018: income of EUR 325 million). The mark-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.

The result from the valuation of securities at fair value declined to EUR 0 million (2018: EUR 8 million).
In the case of securities not carried at fair value, developments in the financial markets resulted in a net positive difference of EUR 42 million between the carrying amount and the fair value (2018: negative difference of EUR 9 million). This development is partly attributable to increases in the value of covered bonds.

There were **net gains** of EUR 10 million (2018: EUR 24 million) **from securities and investments as well as from investments accounted for using the equity method**. Investments accounted for using the equity method contributed EUR 15 million to the result. This was attributable to the performance of the business sector Export and project finance and the business sector Promotion of developing countries and emerging economies. However, Export and project finance also recorded losses from the sale of loans.

Net other operating income was EUR 46 million, which was up on the previous year's figure (2018: EUR 5 million). Net reversals of provisions in the amount of EUR 37 million contributed to the positive result.

At EUR 159 million in 2019, KfW's domestic **promotional expense**, which has a negative impact on KfW Group's earnings position, was below both the prior-year level (2018: EUR 216 million) and projections (EUR 338 million).

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, which has a negative effect on its earnings position, in addition to passing on its funding conditions which are influenced by its triple-A rating. The volume of interest rate reductions was EUR 137 million in 2019, which was below both the prior-year figure (2018: EUR 185 million) and the projected figure (EUR 310 million). 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 expenses reported in net commission income and administrative expense were incurred in the amount of EUR 22 million (2018: EUR 30 million). This spending was aimed, among other things, at the sale of KfW's promotional products.

Accounting for the net income tax result of EUR –23 million (EUR 2018: positive net result of EUR 13 million), the **consolidated profit** of EUR 1,367 million was lower than in the previous year (EUR 1,636 million) but above expectations of EUR 844 million.

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 KfW uses derivative financial instruments solely 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 that are offset over the term as a whole. Against this backdrop, the IFRS effects from hedging relationships amounting to EUR –80 million (2018: EUR +325 million) are eliminated.

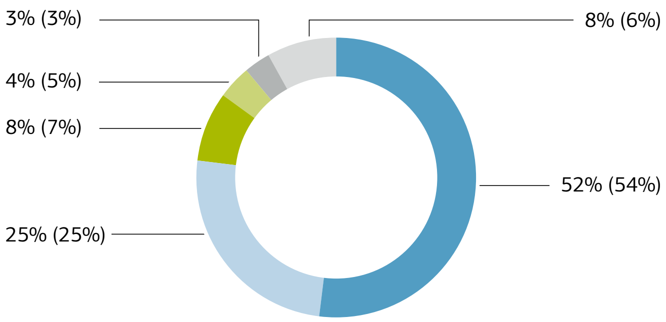
The reconciled earnings position amounted to a profit of EUR 1,447 million (2018: EUR 1,311 million). Overall, KfW Group achieved a result in financial year 2019 that exceeded its sustainable earnings potential of EUR 1.0 billion.

Development of net assets

Lending to banks and customers accounted for 77% of the group's assets as of 31 December 2019 (2018: 79%).

Assets

31 December 2019 (31 Dec. 2018)



The **volume of lending** is up on the previous year, at EUR 486.3 billion.

Volume of lending

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Loans and advances	391,550	386,453
Risk provisions for lending business	–1,670	–1,545
Net loans and advances	**389,881**	**384,908**
Contingent liabilities from financial guarantees	2,636	2,312
Irrevocable loan commitments	82,052	84,116
Loans and advances held in trust	11,679	12,209
Total	**486,248**	**483,545**

Loans and advances increased by EUR 5.1 billion in 2019, due in part to disbursements under the Energy-efficient Construction and Refurbishment programmes. Overall, disbursements in new lending business more than compensated for unscheduled repayments (EUR 11.6 billion; 2018: EUR 12.7 billion) and scheduled repayments. At EUR 389.9 billion, Net loans and advances still accounted for 80% of lending volume.

Contingent liabilities from financial guarantees increased from EUR 2.3 billion to EUR 2.6 billion. Irrevocable loan commitments were below the previous year's level, at EUR 82.1 billion. Within assets held in trust, the volume of loans and advances held in trust, which primarily comprised loans to promote developing countries financed by budget funds provided by the Federal Republic of Germany, decreased by EUR 0.5 billion to EUR 11.7 billion.

At EUR 19.8 billion, Other loans and advances to banks and customers were EUR 1.1 billion below the previous year's amount of EUR 20.9 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 37.8 billion, was above the previous year's level.

Securities and investments

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Bonds and other fixed-income securities	34,511	32,867
Shares and other non-fixed income securities	0	0
Equity investments	3,242	2,818
Shares in non-consolidated subsidiaries	43	43
Total	**37,795**	**35,729**

The securities portfolio, which increased by 5% in financial year 2019, accounted for a significant portion of securities and investments. The increase in the portfolio was almost completely due to the increase of EUR 1.5 billion to EUR 32.7 billion in Bonds and other debt securities, while the volume of money market securities rose by EUR 0.2 billion to EUR 1.8 billion. In addition, equity investments increased by EUR 0.4 billion to EUR 3.2 billion.

Derivatives with positive fair values, which are primarily used to hedge refinancing transactions, rose from EUR 14.8 billion in 2018 to EUR 16.2 billion. Value adjustments from macro hedging related to the underlying asset portfolios increased from EUR 9.1 billion to EUR 10.9 billion.

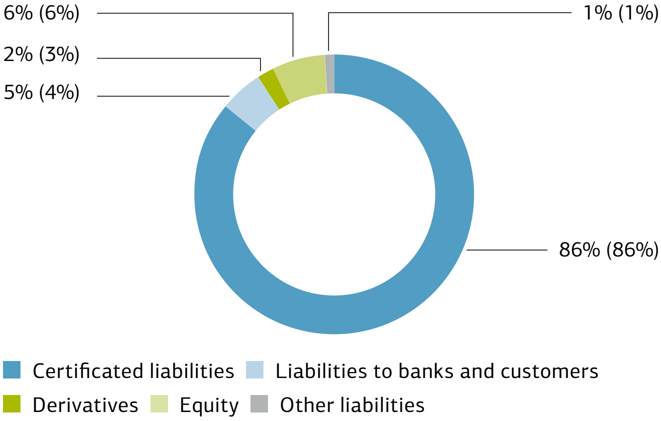
With the exception of balances with central banks, which increased by EUR 10.7 billion to EUR 17.5 billion, other asset line items changed only slightly.

Development of financial position

KfW Group's funding strategy in the national and 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 account for 86% of total assets (previous year: 86%).

Financial position

31 December 2019 (31 Dec. 2018)



Borrowings increased by EUR 16.9 billion to EUR 461.2 billion.

Borrowings

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Short-term funds	44,000	44,051
Bonds and notes	395,557	376,842
Other funding	21,663	18,211
Total	**461,221**	**439,104**

Funds raised in the form of certificated liabilities rose by EUR 17.6 billion to EUR 436.2 billion. This increase of EUR 11.8 billion was a result of an expansion of borrowings. KfW Group's principal sources of funding were medium and long-term bonds and notes issued by KfW. At year-end 2019, such funds amounted to EUR 395.6 billion (year-end 2018: EUR 376.8 billion) and accounted for 86% of borrowings. Short-term issues of commercial paper decreased by EUR 1.1 billion to EUR 40.6 billion. Total short-term funds, including demand deposits and term deposits, amounted to EUR 44.0 billion. Other funding for KfW, in addition to promissory note loans from banks and customers *(Schuldscheindarlehen)*, which decreased by EUR 1.0 billion to EUR 5.5 billion year on year, consisted mainly of cash collateral received of EUR 9.9 billion (year-end 2018: EUR 6.2 billion), primarily to reduce counterparty risk from the derivatives business and liabilities to the Federal Republic of Germany.

The carrying amounts of derivatives with negative fair values, which were primarily used to hedge loans, decreased by EUR 3.3 billion from EUR 12.4 billion, primarily due to changes in market parameters, and amounted to EUR 9.1 billion at year-end 2019.

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

At EUR 31.4 billion, **equity** was EUR 1.0 billion above the level of 31 December 2018 of EUR 30.3 billion. The increase resulted in particular from consolidated profit (EUR 1.4 billion). As of 31 December 2019, the equity ratio remained 6.2%.

Equity

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
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	18,742	17,371
Fund for general banking risks	600	600
Revaluation reserves	–918	–594
Total	**31,362**	**30,315**

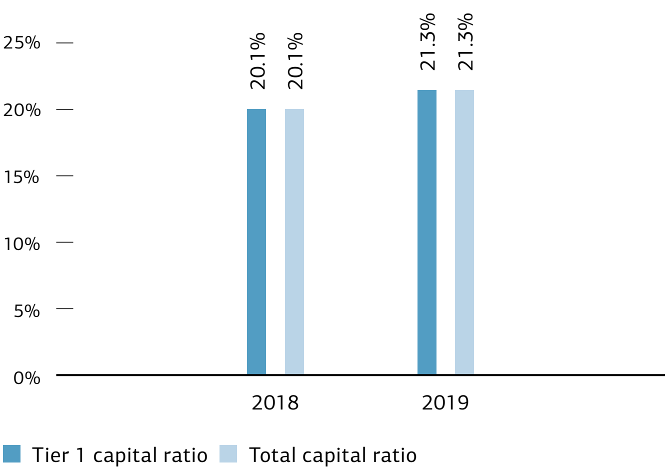
The consolidated profit was allocated to retained earnings.

Risk report

Overview of key indicators and further developments

Risks are reported on a group level in accordance with KfW Group's internal risk management. Selected indicators are presented below:

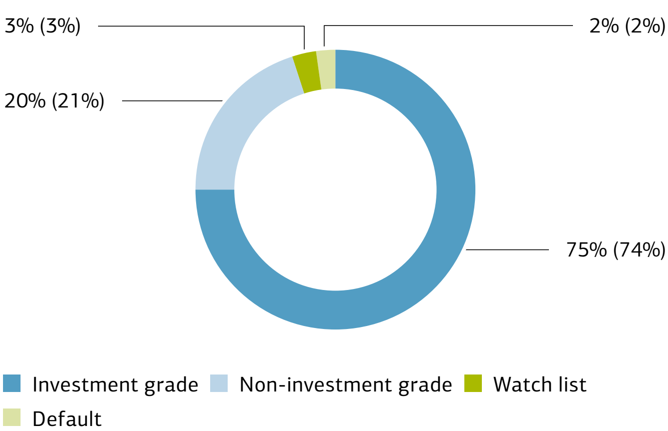
Regulatory capital ratios:



The increase in the capital ratios is attributable in particular to the increase in regulatory capital and to changes in the measurement of counterparty default risk.

Credit risk: Credit quality structure

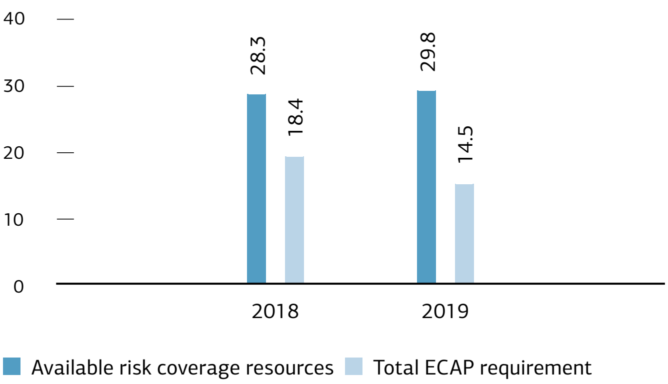
2019 (2018), Net exposure breakdown:



The share of investment grade net exposure increased slightly over the previous year to 75% of total net exposure.

Economic risk-bearing capacity:

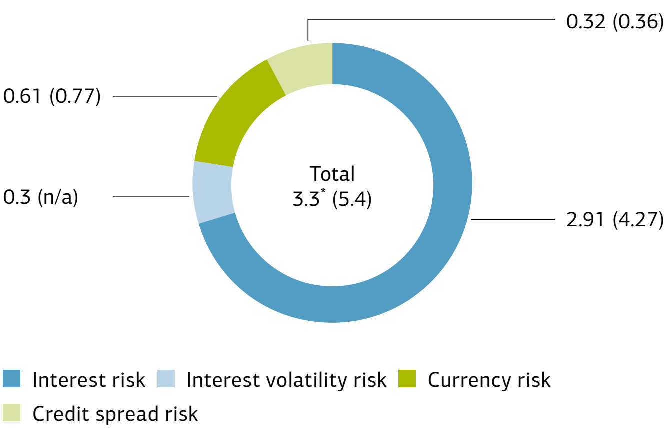
(EUR in billions)



Excess coverage rose in 2019, mainly due to the reduction in the confidence level from 99.99% to 99.90% as part of the further development of the risk-bearing capacity concept. Risk-bearing capacity was maintained at a solvency target of 99.90%.

Market price risk:

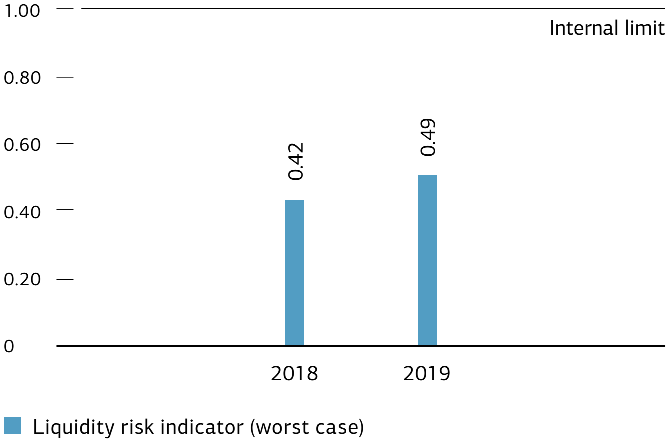
2019 (2018), ECAP (EUR in billions)



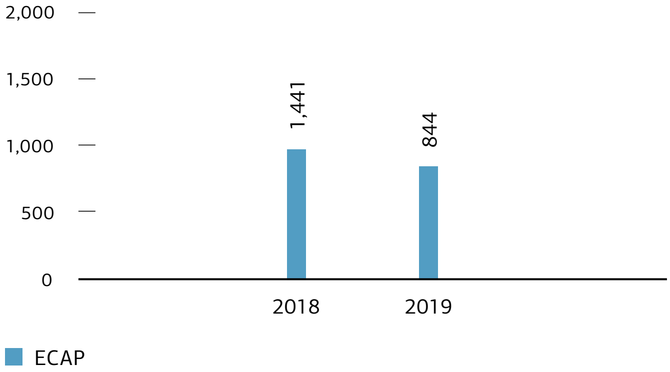
* After diversification

The capital requirement for market price risk decreased as a result of the implementation of an enhanced method for measuring market price risk, including the transition to a new system, as well as the reduction in the confidence level.

Liquidity risk:



Operational risk:
ECAP (EUR in millions)



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

The reduction of the confidence level to 99.90% in 2019 resulted in a decrease in the economic capital requirement (ECAP).

In financial year 2019, as in previous years, KfW Group refined the processes and instruments in its risk management and controlling, taking into account current banking supervisory requirements. This involved, in particular, the adjustment of the risk-bearing capacity concept in view of the requirements of the new guidelines for the supervisory assessment of internal bank risk-bearing capacity concepts and the implementation of the new system for measuring market price risk.

Basic principles and objectives of risk management

KfW Group has a statutory promotional mandate. Sustainable promotion is KfW Group's overarching purpose. The aim of risk management is for the group to take risks only to the extent that they appear manageable in the context of its current and anticipated earnings position and the expected development of the risks. KfW Group's risk/return management takes into account the business model of a promotional bank without the primary intention of generating a profit and without a trading book, with adherence to supervisory requirements constituting a fundamental prerequisite to the group's business activities.

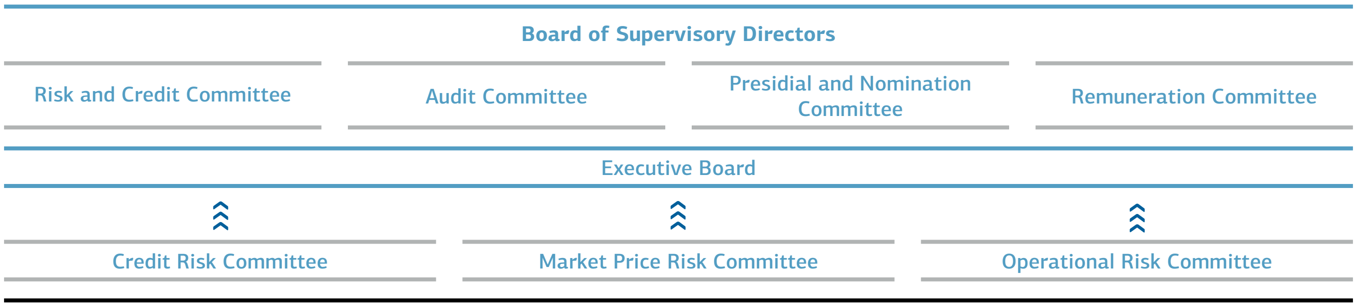
The promotional bank business model determines the group's risk culture, the underlying principle of which enables the group to implement the four regulatory-based elements of risk culture. Incentive structures for employees and their responsibilities are designed accordingly. Senior management specifies the desired code of conduct and sets an example in practicing it, with the desired dialogue established by means of communication with and through the relevant bodies.

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 the implementation of the latter. The 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 control and offers recommendations to the Board of Supervisory Directors concerning its approval of KfW's annual and consolidated financial statements.

Group risk management is carried out by various decision-making bodies, which are linked by their overlapping membership structures. 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. Working groups such as the Rating Systems Working Group, Collateral Working Group, Country Rating Working Group, Corporate Sector Risk Working Group, Market Price Risk Working Group, Hedge Committee and OpRisk Working Group support the committees. Committee resolutions are adopted by simple majority with middle and back office departments *(Marktfolge)* or Risk Controlling 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 in particular making important lending decisions in line with the credit approval policy, with KfW subsidiary 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 and the managing director of KfW Capital responsible for risk issues. 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 in particular 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 supports the committee in connection with methodological and procedural issues and decisions relating to collateral acceptance and valuation, in particular the (further) development of methods used, approval of validation results and adjustments to 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 is a group-wide expert panel which analyses sector and product-related credit risks in the corporate segment. The Credit Risk Committee acknowledges the decisions taken and reports submitted by the working groups and other important matters they have addressed, on the basis of the working groups' minutes.

Market Price Risk Committee

The Market Price Risk Committee, which 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 members of the committee entitled to vote also include the directors of Risk Controlling, Financial Markets, Accounting and Transaction Management, as well as the CROs of KfW IPEX-Bank and DEG. Internal Auditing and Compliance and Group Development and Economics 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 questions relating to the principles and methods applied for the management of market price and liquidity risks, and on funding and transfer pricing and valuation 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 by the Market Price Risk Working Group. In addition to acknowledging validation reports and decisions on changes to models, this working group also develops, evaluates, decides on and prepares decisions to be made by the Market Price Risk Committee on other methodological issues relating to market price and liquidity risks as well as measurement issues. The Market Price Risk Committee acknowledges the decisions taken and the reports submitted by the Market Price Risk Working Group and other matters it has addressed, on the basis of the working group's minutes.

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. Moreover, the managing director level of KfW IPEX-Bank, DEG and KfW Capital is represented on the committee. Internal Auditing participates in the meetings but is not entitled to vote. The committee makes 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. The committee meeting documents, together with the minutes and the resolutions and recommendations contained therein, are submitted 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 working group 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. Group-wide projects and working groups are in place to implement a group-wide approach, such as 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 front office departments and lies in particular with the Risk Controlling department.

Risk management approach of KfW Group

OVERVIEW

Strategy/objectives

Strategic objectives

Business strategy ‹‹‹ ››› Risk strategy (including risk appetite)

Securing KfW's promotional capacity by ensuring capital adequacy (ICAAP) and liquidity (ILAAP)

Governance

Processes and instruments

Risk committees & internal control procedures

Credit Risk Committee | Market Price Risk Committee | Operational Risk Committee

Direction front/back office

Process-integrated controls

Internal control system (ICS)

Direction internal control mechanisms

Direction Risk Management/Controlling*

Direction Compliance

Risk inventory | Risk assessment | Stress tests | Risk reporting

Internal capital adequacy assessment process (ICAAP)
Ensuring economic and normative risk-bearing capacity, avoiding excessive indebtedness

Internal liquidity adequacy process (ILAAP)

Credit risk

- Portfolio guidelines
- Risk guidelines
- Second vote or central voting (programme business)
- Limit management system
- Proactive collateral management
- Internal rating models
- Loan portfolio model
- Early warning procedure
- Intensive monitoring

Market price risk

- Proprietary models for interest, interest rate volatility, foreign currency and credit spread risks
- Limiting and budgeting

Investment risk

- Risk management process for equity investments at operational level
- Management of strategic equity investments

Operational risk

- Models for determining capital requirements (pillar II)
- Risk assessments
- Risk indicators
- Loss event analyses
- Emergency concepts/crisis team

Project risk

- Central project portfolio management
- Management of individual projects

Reputational risk

- Sustainability management
- Exclusion list and countries blacklist

Liquidity risk

- Proprietary models for liquidity risks
- Liquidity transfer pricing
- Limiting
- Scenario analyses
- Early warning procedure
- Emergency planning

Concentration risk

Risk strategy addresses intra- and inter-risk concentrations as well as profit concentrations

Intra-group risk

Group risk management is monitoring the subsidiaries' business activities according to the "look through" principle

Regulatory risk

Impact and scenarios analyses, including in multi-year capital planning

Model development and validation processes

Model inventory ‹‹‹ ››› Modelling guideline ‹‹‹ ››› Methodology principles

Direction Internal auditing

Process-independent review

Corporate and risk culture

New Products Process ("NPP")/changes in operational processes or structures / mergers and acquisitions

IT system landscape

* In addition to Risk Controlling, Credit Risk Management and Transaction Management in some cases also exercise control functions due to organisational reasons.

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, KfW IPEX-Bank, DEG and KfW Capital.

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 the group and then subjects them to a materiality evaluation. 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 2019 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 or across various risk types are taken into account in the risk inventory.

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 models used for group-wide risk measurement and management are regularly validated in accordance with appropriate principles and guidelines, and are refined where necessary. These include the models for measuring and managing credit, equity investment, market price, liquidity, project and operational risks, as well as the models for financial reporting measurement.

The risk management approach is set out in the group's procedural rules. The procedural rules stipulate the framework for the application of uniform policies and procedures to identify, measure, control and monitor risk. The rules and regulations laid out in the procedural rules are binding for the entire group and are accessible to employees through their publication on the intranet. 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.

INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS

The group's internal capital adequacy assessment process ("ICAAP") is characterised by two perspectives:

The aim of the ICAAP's normative perspective is in particular the continuity of operations. To this end, the regulatory and supervisory capital requirements of Pillar I in accordance with the Capital Requirements Regulation ("CRR") and the German Banking Act *(Kreditwesengesetz – "KWG")* are to be ensured both on an ongoing basis and in a longer-term view (normative capital planning). In addition to a base scenario, the total capital ratio is also considered in adverse scenarios. This is intended to enable early identification of any capital bottlenecks. Achievement of the strategic risk-bearing capacity objectives is also monitored in KfW's planning and management process. To avoid excessive debt, the leverage ratio is integrated into the normative perspective as a further control variable.

In 2019, the group developed its economic risk-bearing capacity concept further in response to the revision of the banking supervisory risk-bearing capacity guidelines. One significant change concerned the reduction of the confidence level for risk measurement from 99.99% to 99.90%, whereby the group follows a widely accepted industry standard. The strategic capitalisation objective and the still accepted lower limits on risk-bearing capacity were raised as part of the risk strategy in order to maintain the security level of economic risk-bearing capacity. The economic perspective of the ICAAP serves to protect creditors from economic loss. This is achieved by comparing the capital available as of a reporting date (available financial resources) with the risk assumed as of the same date (economic capital requirement or ECAP for all material risks to capital). Both capital and risk figures are present value-based and static, i.e., they do not take into account new business or expected results. Available financial resources are based on regulatory capital, adjusted for impaired assets and accrued profits. The amount of economic capital required is largely determined by the confidence level for risk measurement.

The multi-year capital planning process does not include a regular forecast of economic risk-bearing capacity, although an indicative forecast of economic risk-bearing capacity may be produced if necessary, if future developments which may have a material impact on risk-bearing capacity are identified via a list of questions.

The economic perspective of the ICAAP is reviewed annually to ensure its appropriateness. The results of this review are taken into account in the assessment of risk-bearing capacity.
Both ICAAP perspectives include regularly performed stress tests in the form of simulations of adverse economic conditions (downturn and stress scenarios). A traffic light system, established in this context with thresholds for normative and economic risk-bearing capacity, indicates a need for action as part of operational and strategic management in the event of critical developments.

Budgets based on total risk exposure in accordance with Art. 92 CRR 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 process. In addition to the requirements induced by business sector and area 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 material risk types as their central control and limit variable and are monitored monthly.

Normative risk-bearing capacity

Key regulatory figures (pursuant to advanced IRB approach)

	31 Dec. 2019	31 Dec. 2018[1]
	EUR in millions	EUR in millions
Total risk exposure in accordance with Art. 92 CRR	138,750	140,988
– Credit risk	*131,477*	*133,758*
– Market price risk	*1,732*	*1,431*
– Operational risk	*5,541*	*5,798*
Regulatory capital	29,526	28,297
– Tier 1 capital	*29,526*	*28,278*
– Tier 2 capital	*0*	*19*
Tier 1 capital ratio	21.3%	20.1%
Total capital ratio	21.3%	20.1%

[1] Due to effects from adjusting events, total risk exposure as of 31 December 2018 increased slightly by EUR 155 million (0.11%) compared to the previous year's report.

KfW received an initial partial approval as of 30 June 2017 to calculate the regulatory capital ratios in accordance with the advanced IRB approach. The aim is to obtain additional approval for other portfolio segments by 2022. Meanwhile, portfolio segments not yet approved are evaluated with the credit risk standardised approach (CRSA). The increase in the capital ratio is largely attributable to the increase in regulatory capital and to changes in the measurement of counterparty default risk. At 21.3%, the total capital ratio at year-end 2019 remained above the overall capital requirement.

Minimum requirements for total capital ratios

	31 Dec. 2019	31 Dec. 2018
Total SREP capital requirements (TSCR)	**13.5%**	**13.8%**
Capital conservation buffer	*2.5%*	*1.875%*
Countercyclical capital buffer	*0.156%*	*0.114%*
Other systemic buffer	*0.33%*	*-*
Overall capital requirement (OCR)	**16.5%**	**15.7%**

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 capital with its available financial resources. The basis for available financial resources is regulatory capital in accordance with Art. 25–91 (Part Two) CRR, which is adjusted for previously unrecognised accrued profits, hidden burdens on securities, some capital deduction items and any tier 2 capital that may be available.
KfW Group bases its calculation of the economic capital requirement on a time frame of one year. The economic capital requirement for various types of risks is aggregated by adding them up, with no allowance made for diversification effects.

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 in connection with derivative transactions and credit valuation adjustment risk ("CVA" risk) in relation to derivative exposures. The economic capital requirement for credit risk is quantified by the Risk Controlling department, largely with the help of statistical models. For counterparty and migration risks, 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. The economic capital requirement for CVA risk is based on the CVA charge of Pillar I, which is adjusted for economically relevant aspects (including consideration of other risk-relevant items and the use of internal ratings). For settlement risks, a buffer determined on the basis of different quantification approaches, which is reviewed 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 (consisting of the jointly analysed sub-risk types: interest risk, as well as tenor and cross-currency basis spread risks) of the banking book, foreign currency risk, credit spread risk for securities and interest rate volatility 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 historical simulation. Ultimately, the economic capital requirement is determined by total value-at-risk ("VaR"), which takes into account diversification effects between the various types of market price risk.

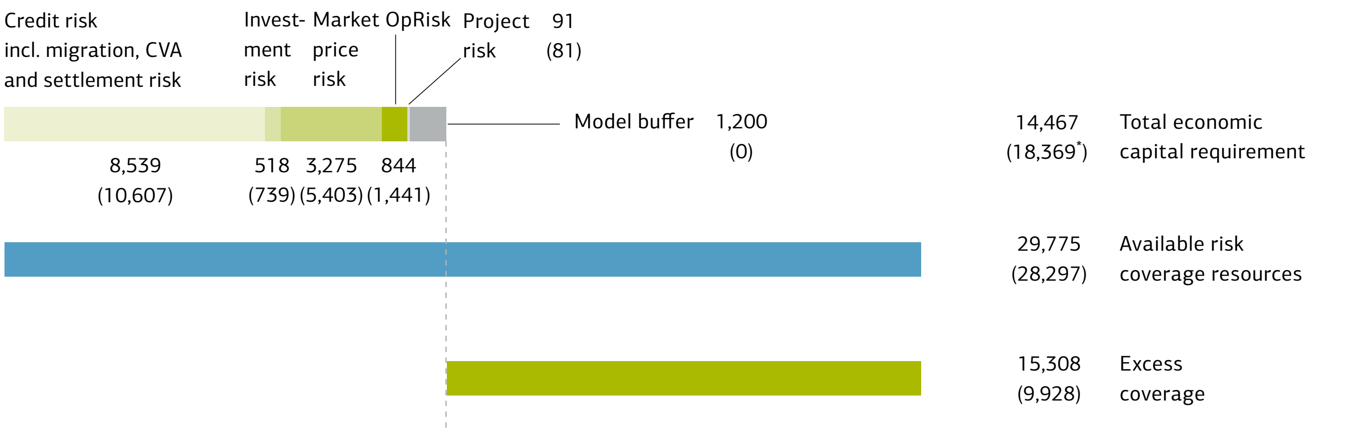
The economic capital requirement for **operational risk** is calculated using an internal statistical model, which was derived from regulatory requirements for advanced measurement approaches. It takes a risk-sensitive approach to internal and external event data and risk scenarios. The capital requirement is calculated at group level, taking into account diversification effects, and then allocated to the business sectors. Moreover, the measurement of the quality of operational risk management within the group can generate premiums 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 projects and general assumptions about potential losses in the project portfolio are included in risk measurement.

In addition, as a result of the annual ICAAP adequacy assessment, a **model buffer** was applied to cover model weaknesses and foreseeable methodological changes in economic risk-bearing capacity.

Using this method, the economic risk-bearing capacity as of 31 December 2019 satisfied a confidence level of 99.90%. The excess coverage of the available financial resources beyond the total capital requirement as of 31 December 2019 of EUR 15,308 million increased compared to 31 December 2018 (EUR 9,928 million). This increase is due to the decline in the total capital requirement, which is mainly attributable to the reduction in the confidence level from 99.99% to 99.90% in the course of revising the risk-bearing capacity concept, and is also attributable to the implementation of enhanced market price risk measurement (see "Market price risk" section). On the other hand, available financial resources have increased in particular due to the accrued profit for 2019. In addition, available financial resources now also include the second half-year profit for 2018, which was not yet included in regulatory capital as of 31 December 2018 and was consequently not included in the available financial resources based on the previous definition.

Economic risk-bearing capacity as of 31 December 2019
EUR in millions



In brackets: figures as of 31 December 2018, solvency level 99.99%
* Incl. hidden burdens of EUR 98 million

The Group manages **liquidity risks** primarily on the basis of internal risk indicators. Moreover, 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. No capital backing is currently provided as part of calculating risk-bearing capacity. The materiality of reputational risk is primarily due to the fact that KfW is a government-owned institution with a high moral responsibility and, as such, is subject to corresponding expectations in terms of ethics, governance and compliance standards. Materiality is thus not based on observed or potential decreases in KfW Group's net assets, earnings or liquidity.

Each risk identification 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 addressed by including safety margins in the design of the model, and a supplementary model buffer in the calculation of risk-bearing capacity. This is one reason why KfW Group carries out stress tests with both the credit risk models and the market price risk models. The group continues to develop its risk models and processes in line with current banking regulations.

Stress and scenario calculations

To ensure the early indicator function and proactive focus in the ICAAP, KfW Group monitors, on a quarterly basis, different scenarios (baseline or expected scenario), a downturn scenario (slight economic slowdown) and a stress scenario (deep recession) as well as their respective effects on risk-bearing capacity. These analyses show the group's resilience and ability to act in the event of the occurrence of one of these scenarios. The baseline and stress scenarios also take the leverage ratio into account.

The baseline scenario includes projected business performance, expected comprehensive income and other effects influencing normative risk-bearing capacity, such as foreseeable changes in the capital structure and methodological developments.

In the downturn and stress scenarios, effects on earnings and changes in capital requirements during the forecast period (in the economic perspective directly related to risk-bearing capacity as of the balance sheet date) are simulated, assuming negative economic development scenarios of varying severity. The effects of a severe global recession emanating from the eurozone are depicted in the stress scenario. In both scenarios, KfW Group currently assumes an overall 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, currencies and credit spreads, as a result of which the economic capital requirement for the corresponding types of risk will rise. Losses from securities prices as well as from operational and project risk further reduce capital in the stress scenario.

Overall, the group meets the economic risk-bearing capacity requirements, including the confidence level of 99.90% in the scenarios analysed. The regulatory capital ratios and the leverage ratio exceed the expected capital requirements.

Further stress tests are regularly carried out in addition to the economic scenarios to examine the resilience of KfW Group's economic and normative risk-bearing capacity. In addition to the sensitivity analyses and standard stress tests, current potential macroeconomic dangers form the basis for varying scenario stress tests. The focus in 2019 was on scenarios of a crisis of confidence in the EU, flagging economic growth in China, an Iran-Middle East crisis and a possible further deterioration of the global economy. In addition, the concentration and inverse stress tests show how concentration risks and other potential dangers could jeopardise KfW Group's business model. In 2019, 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 risks[1)] in the context of its promotional mandate. The majority of final borrower default risks are borne by the on-lending institutions in the domestic promotional lending business. Due to the business model, this results in a large proportion of bank risks in the portfolio. Other main risks result from promotional activities in the area of start-up finance for SMEs and equity investments. Particularly in these segments of domestic promotion, KfW Group bears the risk stemming from final borrowers. In addition, KfW Group faces risks in the business sectors Export and project finance as well as Promotion of developing countries and emerging economies.

Debtor level	Sovereigns	Banks	Enterprises	Other
Major rating procedures (Probability of default)	– Country rating	– Bank rating	– Corporate rating – SME rating	– Retail – Structured products – Start-up rating – Investment fund rating – Special financing – Self-employment rating
Business level	**Exposure at default**			
	Loss given default			
Portfolio level	**Loan portfolio model**			

Validation and further development processes

[1)] 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.

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 scorecards[2)] and generally follow a uniform model architecture consisting of a machine rating, checklist, group logic and a manual override. Simulation and cash flow-based rating procedures are used for significant parts of special financing and structured products, some of which were licensed from 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-ticket retail positions (e.g. from the area of education financing) are valued using an automated 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 for these exposures are updated regularly, at least once per year. With the approval of the supervisory authority, the previously enhanced and validated rating procedure for banks was implemented in July 2019. In addition, further developments were initiated as a result of new regulatory requirements (including rating procedures for corporations and countries), the design of which is to be completed by the beginning of 2020.

The probability of default is mapped on a uniform master scale for the entire KfW Group for the 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 validated and further developed.

Exposure at default (EAD) and valuation of collateral influence 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 EAD and LGD are also subject to regular validation and further developed as needed, with new regulatory requirements also addressed.

[2)] 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.

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, while taking into account the special nature of KfW Group's promotional business. 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. For non-performing loans and also to a large extent for watch-list exposures[3)], process responsibility lies with restructuring units, to ensure involvement of specialists and 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, DEG and KfW Capital trust activities, are managed directly by each subsidiary. Internal interface regulations are in place in the relevant business sectors to ensure control of responsibilities and allocation. Restructuring also cooperates with the front office departments and the central Legal Affairs department.

In the event of a crisis in the banking sector, the bank 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.

[3)] 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.

Information on default risk and default risk concentrations (gross carrying amounts) as of 31 December 2019

		Loans and advances to banks			Loans and advances to customers[1]		
		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	167,073	0	0	34,522	0	0
	Rating 5–8	84,117	0	0	28,774	60	0
Non-investment grade	Rating 9–15	29,785	6	0	30,913	1,348	0
Watch list	Rating 16–18	454	259	0	3,546	3,300	0
Default	Rating 19–20	0	0	209	0	0	17,335
Total		**281,429**	**265**	**209**	**97,755**	**4,708**	**17,335**

		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	24,103	0	0	31,909	0	0
	Rating 5–8	9,892	0	0	32,451	11	0
Non-investment grade	Rating 9–15	444	0	0	18,952	91	0
Watch list	Rating 16–18	0	0	0	839	564	0
Default	Rating 19–20	0	0	77	0	0	310
Total		**34,440**	**0**	**77**	**84,151**	**667**	**310**

[1] Loans and advances to customers also include the retail business, for which the stage is not derived based on the current rating but on the basis of negative criteria and 30 days past due status. Risk concentrations arise in the event of negative criteria or 30 days past due status. If one of these criteria is met, the customer is placed on the watch list. In contrast, the stage 1 share of the retail segment without significant deterioration in credit risk is largely allocated to “non-investment grade”.

Information on default risk and default risk concentrations (gross carrying amounts) as of 31 December 2018

		Loans and advances to banks			Loans and advances to customers[1]		
		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] Loans and advances to customers also include the retail business, for which the stage is not derived based on the current rating but on the basis of negative criteria and 30 days past due status. Risk concentrations arise in the event of negative criteria or 30 days past due status. If one of these criteria is met, the customer is placed on the watch list. In contrast, the stage 1 share of the retail segment without significant deterioration in credit risk is largely allocated to "non-investment grade",

Credit risks and related credit protection of financial instruments measured at amortised cost as of 31 December 2019

	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	281,661	115	0	26
Loans and advances to customers	118,370	16,277	42	15,685
Securities and investments	34,511	77	0	77
Off-balance sheet transactions	85,055	301	0	230
Total	**519,597**	**16,770**	**42**	**16,018**

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

Credit risks and related credit protection of financial instruments measured at amortised cost as of 31 December 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	206	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.

KfW Group did not take possession of any assets previously held as tangible collateral in 2019.

Portfolio structure

The interaction of the risks associated with the individual exposures in KfW Group's loan portfolio[4)] 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, the Risk Controlling department measures risk concentrations by individual borrower, sector and country. Risk concentrations are primarily reflected in the economic capital requirement. The results of these measurements form the main basis for managing the loan portfolio.

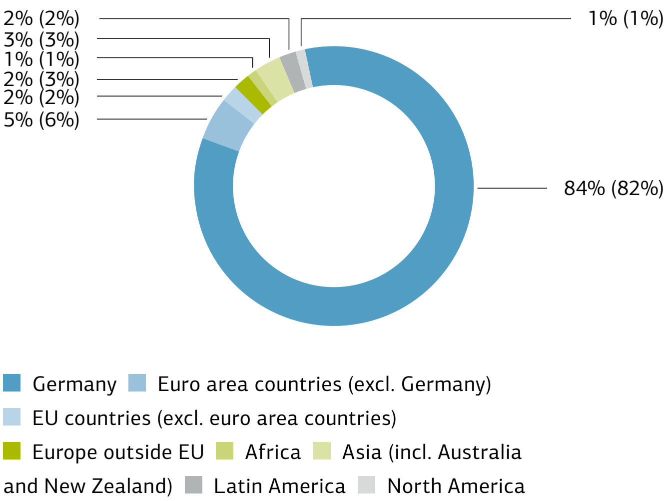
4) The loan portfolio includes loans as well as securities and investments in performing business. The non-performing portfolio is only included in the presentation of credit quality.

Regions

The increase over the previous year in the euro area's share of the total economic capital requirement to 89% (31 Dec. 2018: 88%) resulted primarily from method adjustments in accounting for collateral. This resulted in a significant increase in economic capital requirements, in Germany in particular – above all in the on-lending business (mainly in energy transition and housing programmes).

Economic capital requirement by region

31 December 2019 (31 Dec. 2018)

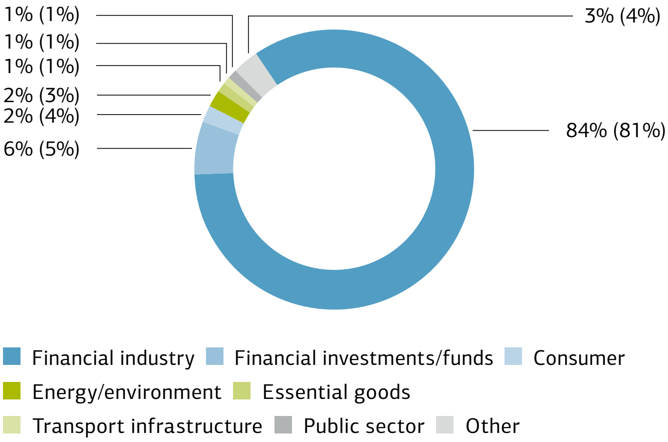


Sectors

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 share of the economic capital requirement increased overall, due primarily to the adjustments to methods described above. This particularly affected banks with large volumes of on-lending business.

Economic capital requirement by sector

31 December 2019 (31 Dec. 2018)

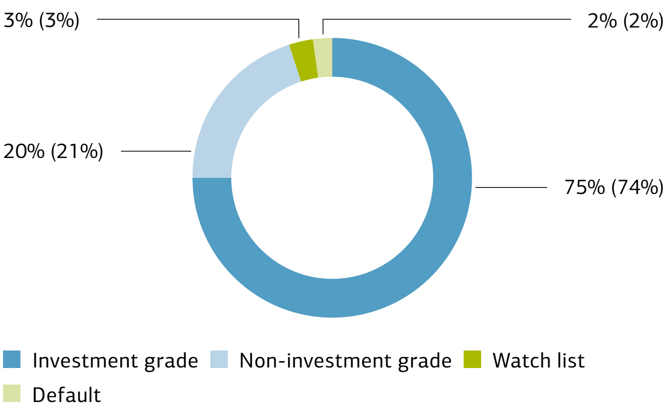


Credit quality

As credit quality is a major factor influencing economic capital requirements, analysing the credit quality structure involves examining the distribution of net exposure[5] by credit quality category. The higher proportion of investment grade exposure in total net exposure was primarily the result of new business. The watch list proportion is stable at 2.7% (previous year: 2.8%), while the default proportion of 1.7% rose slightly to 1.9%.

Credit quality by net exposure

31 December 2019 (31 Dec. 2018)



[5] 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 5.9 billion as of 31 December 2019. Accounting for the mark-to-market valuation of the securities reported at fair value and impairments, the portfolio also had a book value (including pro rata interest) of around EUR 5.9 billion. The following tables show the composition of the securitisation portfolio by asset class, rating grade and geographical distribution.

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

	31 Dec. 2019	31 Dec. 2018
	%	%
Europe	99.7	99.5
World	0	0
North America	0.3	0.5
Africa	0	0
Asia	0	0

Exposure based on par values

	CLO	RMBS	CMBS	ABCP	Other securiti-sations	Total as of 31 Dec. 2019	Total as of 31 Dec. 2018
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Investment grade	0	1,052	3	1,807	2,994	5,856	5,381
Non-investment grade	0	0	0	0	67	67	93
Watch list	0	0	0	0	0	0	0
Default	7	0	0	0	0	7	15
	7	**1,052**	**3**	**1,807**	**3,061**	**5,930**	**5,488**

The portfolio volume increased over the volume of 31 December 2018 (nominal EUR +0.4 billion). The increase relates exclusively to the investment grade portfolio. In the geographical breakdown of the underlying asset pool, the entire portfolio remains almost fully attributable to Europe, with Germany accounting for the lion's share.

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:

- interest risk (consisting of the jointly analysed sub-risk types: interest risk, as well as tenor and cross-currency basis spread risks);
- interest rate volatility risk (newly defined sub-risk type since 1 March 2019);
- foreign currency risk; and
- issuer-related spreads for securities (credit spread risks).

Market price risk within the group required a total of EUR 3.3 billion in economic capital as of 31 December 2019. This is EUR 2.1 billion less than the previous year. The changes are mainly due to the switch to a new risk system on 1 March 2019 and the reduction in the confidence level mentioned above. The switch also involved diversified means of calculating the total ECAP requirement for market price risk across all market risk sub-types, significant changes to methods and extended modelling of options (in particular, the implied floors of lending transactions). KfW Group market price risk breaks down as follows:

Economic capital requirement for market price risk

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Interest risk[1)]	2,910	4,273
Interest risk	2,998	3,562
Tenor basis spread risk	209	711
Cross-currency basis spread risk	359	
Interest rate volatility risk	304	-
Currency risk	611	769
Credit spread risk	318	361
Diversification	–868	-
Market price risk	**3,275**	**5,403**

[1)] Due to diversification effects in the interest risk, the risk sub-types do not add up to the total interest risk.

Value-at-risk approach

The economic capital requirement is calculated using a value-at-risk ("VaR") calculation across the various types of market price risk using a uniform method. Historical simulation is used as the VaR model. Historical simulation is based on market data time series comprising the previous three years (751 trading days). The uniform holding period is 12 months, with time scaling based on a one-day holding period. In addition, scaling to the target quantile (99.9%) is carried out on the basis of a 97.5% quantile determined using historical simulation.

VaR indicators are determined for each of the following types of risk: interest risk, tenor and cross-currency basis spread risks, currency risk, interest rate volatility risk and credit spread risk. The total VaR is also calculated taking account of diversification effects between the aforementioned risk types. The total VaR, interest risk, interest rate volatility risk, credit spread risk and currency risk are limited.

Interest risk

Yield curves defined as risk factors serve as the basis for historical simulation to quantify interest risks. These implicitly include interest risk as well as tenor and cross-currency basis spread risks. In contrast, interest rate volatility and credit spread risks are explicitly not included in interest risk, but are modelled separately and reported using separate key VaR indicators. The capital requirement for interest risk decreased by EUR 1,363 million to EUR 2,910 million as of the reporting date, 31 December 2019.

Interest rate volatility risk

The interest rate volatility risk is based on changes in the market values of modelled interest rate options (e.g. termination rights). The economic capital requirement for these risks is calculated in the same way as for other types of risk, using historical simulation (see Value at Risk section). With regard to the lending business, interest volatility risk results from "floors at 0" anchored in loan agreements. Interest rate volatility risk is measured as a side effect of the original business activity and limited by means of an ECAP sub-limit. The capital requirement for interest rate volatility risk had risen by EUR 304 million as of 31 December 2019.

Currency risk

The economic capital requirement for currency positions is calculated in the same way as for interest risk, using historical simulation. The capital requirement for currency risk decreased by EUR 158 million to EUR 611 million as of the reporting date, 31 December 2019.

Credit spread risk

Risk measurement is carried out for the securities portfolio. The economic capital requirement for this risk type is calculated in the same way as for other risk types, using historical simulation. The economic capital requirement for credit spread risk as of 31 December 2019 was EUR 318 million. Credit spread risk declined by EUR 43 million year on year.

Stress testing

In addition to the calculation of the ECAP requirement based on the VaR model of historical simulation, the effects of extreme market situations (scenarios) on the present value and VaR target variables are determined by means of stress tests. The new regulatory requirements for present value stress testing ("IRRBB") are also met.

LIQUIDITY RISK

Liquidity risk is the risk of a lack of liquidity on the part of an institution or market, or of more expensive funding. Liquidity risk thus comprises insolvency risk, market liquidity risk and funding risk.

– Insolvency risk: Risk that payment obligations cannot be met, cannot be met on time or cannot be met in full.

– Market liquidity risk: Risk of (value) losses if assets cannot be traded on the market due to lack of liquidity, cannot be traded in due time, in full or in sufficient quantity or cannot be traded at prevailing market conditions.

– Funding risk: Risk of lower income due to more expensive funding (liabilities) that cannot be passed on to borrowers.

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

The internal liquidity adequacy assessment process (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. 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 funding risk are examined annually as part of the risk inventory; they were not classified as material as of 31 December 2019. The funding risk is limited indirectly by limiting the maturity gap. Insolvency risks are mainly limited through economic liquidity risk ratios and limits for liquidity potential and liquidity gaps. 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.

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 baseline 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 indicators are calculated and reported to the Market Price Risk Committee on a monthly basis. The following table shows the risk indicators for the scenarios as of 31 December 2019:

KfW liquidity risk indicators

	31 Dec. 2019 Indicator	31 Dec. 2018 Indicator
Normal case	0.10	0.00
Stress case	0.24	0.13
Worst case (institution-specific)	0.31	0.17
Worst case	0.49	0.42

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

Current funding environment

KfW Group raised a total volume of EUR 80.6 billion on the international capital markets in financial year 2019 (2018: EUR 76.1 billion). It issued a total of 157 individual transactions in 12 different currencies. Around 78% of its long-term funding was in the two main funding currencies: the euro and the US dollar. The share of bonds denominated in euros decreased again – to 52% in 2019 (2018: 61%); those denominated in US dollars amounted to 26% (2018: 27%).

The programme volume of the Euro Commercial Paper ("ECP") programme designed for global investors amounted to EUR 70 billion. The volume issued under the ECP programme was lower in 2019 than in the previous year. The outstanding volume here amounted to EUR 33.8 billion at the end of 2019 (year-end 2018: EUR 35.1 billion). The issue volume under the US Commercial Paper ("USCP") programme was also lower year on year in 2019. The USCP programme, 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 6.7 billion at the end of 2019 (year-end 2018: USD 6.8 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 Central Services (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, recorded loss events and any measures introduced as a result are reported to the relevant departments. 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 risks are identified in risk assessments 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 to 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 844 million in economic capital as of 31 December 2019. This is EUR 597 million less than as of 31 December 2018. This reduction in economic capital is due to the adjustment of the confidence level from 2019 onwards.

Business continuity management is implemented if a business interruption occurs due to internal or external events. This is an integrated management process which covers 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).

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, in order to be able to guarantee the required availability and reduce business risks. These include emergency workstations, emergency plans, communication tools and alerts/alarms. KfW Group's crisis team takes responsibility 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 using models specified for this purpose. 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 strategic equity investments in accordance with Article 2 (4) of the KfW Law (mandated transactions). The Federal Government mandates such 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 processes as well as authorisation by the Executive Board and – in accordance with the KfW Bylaws –

authorisation by the Board of Supervisory Directors. Moreover, acquiring a strategic equity investment in excess of 25%, creating or increasing such an equity investment or fully disposing of it requires authorisation by the Federal Ministry of Finance in accordance with Section 65 (3) of the Federal Budget Code *(Bundeshaushaltsordnung – "BHO")*. Strategic equity investments and their individual risks are monitored and 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 risk relevance for the group and the objective of consistent group management, the risks of KfW IPEX-Bank, DEG and KfW Capital 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 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 primarily managed in a decentralised manner. The framework for this purpose includes sustainability management with a group-wide sustainability mission statement, which uses a multidimensional approach to address central areas of action in the banking business and operations and as an employer. 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). Managing project risk is part of project management and takes place in both the project planning and execution stages.

The Central Project Management Office ("CPMO") supports the projects in fulfilling their objectives and achieving their targets. The CPMO provides scaled specifications and support services according to project size. As the central authority for project portfolio management, the CPMO provides the methodological framework for implementation of projects within the group and is responsible for the evaluation and presentation of the risk situation of the project portfolio and the department portfolios for a specified number of projects. Compliance with this framework and these requirements by the aforementioned projects is also monitored and supported.

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 to be 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 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.

Moreover, KfW actively keeps track of changes in its legal environment, which makes it possible to identify new regulatory requirements and to determine any necessary action.

Additional internal control 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) requirements[6], in particular those set forth in the KWG and MaRisk, and the market standard COSO model[7].

The KfW Executive Board holds overall responsibility for the group's internal control system. At KfW IPEX-Bank, KfW Capital and DEG, the respective company management holds overall responsibility. Design and implementation at the different corporate levels are 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 minimising risks. A KfW Group information and communication policy is aimed at comprehensively providing all stakeholders with the information they need in the required detail to make decisions. Appropriate monitoring and audit mechanisms are in place to 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 are intended to 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.

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 Executive Board bears the overall responsibility for compliance within the group. The Executive Board delegates the associated tasks to the Compliance department. The officers appointed by the Executive Board for the relevant areas of responsibility are located in the Compliance department. These are in particular the group officers for securities compliance, money laundering and fraud prevention (central unit in accordance with Section 25h of the German Banking Act *(Kreditwesengesetz – "KWG")*.

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 context, group compliance has 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. There are therefore binding rules and procedures that influence the day-to-day implementation of values and the corporate culture, which are updated regularly and on an ad hoc basis to reflect current law as well as market requirements. The aim is to manage and assess compliance risks

[6] See Section 25a (1) no. 1 KWG, MaRisk AT 4.3, and Sections 289 (5), 315 (2) no. 5, 324, and 264d HGB.
[7] COSO = Committee of Sponsoring Organizations of the Treadway Commission

as part of non-financial risks (NFRs) by means of key performance indicators (KPIs) to be developed (e.g. for information security risk, money laundering, fraud, financial sanctions, securities compliance, data protection, etc.) and to establish a risk management cycle based on current management philosophy regarding financial risks (credit risk).

Within the scope of its duties as second line of defence, Compliance is responsible for and authorised to implement statutory or regulatory requirements and Executive Board decisions, to analyse individual cases/irregularities, to coordinate necessary measures and, where applicable, to initiate ad hoc measures to limit damage. In relation to all other areas of the group, the Compliance department performs its tasks autonomously and independently and is not subject to any instructions, in particular with regard to analysis (including evaluation of results), monitoring activities, defining and implementing rules and measures, and reporting. In order to perform its duties, Compliance has a complete and unrestricted right to information, inspection and access to all premises, documents, records, audio recordings and systems.

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 performed an audit in the reporting year of the decentralised risk management processes and central aspects of risk management and risk control which were relevant group-wide. Focal points included audits of projects regarding the EU General Data Protection Regulation (GDPR), as well as assessing reporting and payment transactions.

Moreover, Internal Auditing continued to monitor the ongoing development of risk measurement procedures in 2019 by attending meetings of decision-making bodies (as a guest).

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 global economic growth to pick up only slightly in 2020, given that global real gross domestic product ("GDP") is projected to increase by 3.1% year on year, following growth of 2.9% in 2019 according to the IMF estimate. Experts forecast divergent development between industrialised nations and developing countries/emerging economies, as defined by the International Monetary Fund ("IMF"). Real GDP in industrialised countries as a whole will probably increase more slowly in 2020 than in 2019. According to the IMF in its October issue of the World Economic Outlook 2019, this trend applies in particular to the US, where the fiscal stimulus is no longer expected to have an expansionary effect, but rather a neutral one, and to Japan, where the effects of the VAT increase will probably weigh on private consumption despite fiscal countermeasures. Developing countries and emerging economies in the aggregate may develop in the opposite direction compared to industrialised nations, large emerging economies such as Brazil, Mexico, Russia and India, in particular, are expected to post higher annual real GDP growth rates than in 2019, while countries such as Turkey and Iran are likely to have overcome their recessions. Annual economic growth in developing countries and emerging economies as a whole for 2020, however, will continue to lag behind the 2011-2018 average of 5.0%.

Gross domestic product at constant prices, year-on-year change

	2019 estimate[1)]	2020 forecast[2)]	2011-2018 average
	in %	in %	in %
Global economy*	2.9	3.1	3.6
Industrialised countries*	1.7	1.5	1.9
Developing countries and emerging economies*	3.7	4.2	5.0

Sources:
1) IMF (2020), World Economic Outlook. An Update to the Key WEO Projections, January 20, 2020
2) Forecasts using the World Economic Outlook Database, October 2019

* Aggregation of annual GDP growth rates at each country's constant prices based on the shares of each country's GDP valued at purchasing power parity ("PPP") in the corresponding aggregate. Grouped into industrialised countries and emerging economies based on IMF classification. Average calculated as the geometric mean of annual growth rates.

There are certain risks to this baseline scenario according to the IMF, which believes that global real GDP growth may be lower in 2020 due to various developments: (a) a further escalation of trade tensions and the associated increase in political uncertainty; (b) a rise in risk premiums in the financial markets, which is likely to tighten financial conditions, particularly for economies with budget and current account deficits; (c) increased vulnerability to external shocks in countries that have posted increases in private (household and corporate) and public debt; and (d) geopolitical disputes and extreme weather conditions (climate change) that adversely affect productivity growth (e.g., by disrupting supply chains).

For the **euro area**, KfW expects price-adjusted GDP to grow by 1.0% in 2020. The anticipated growth rate will therefore not reach the previous year's level and is also below the average for the period from 2011 to 2018. As regards GDP demand-side components, private consumption is likely to make the largest percentage-point contribution to price-adjusted GDP growth (0.8 percentage points). This forecast is based on the assumption that employment in the euro area will continue to grow in 2020. According to the European Commission, the uncertainty associated with the ongoing trade policy tensions is a factor that will dampen the growth of price-adjusted GDP in 2020. This factor increases the likelihood that growth in gross fixed capital formation will decline and that net exports will not contribute to growth.

In **Germany**, price-adjusted GDP in 2020 is expected to grow by 0.9% compared to the previous year (price and calendar-adjusted GDP 2020: +0.5% year on year). In light of the forecasts for the global economy described above, KfW assumes that net exports will slow price-adjusted GDP growth in 2020.

In contrast, KfW expects consumption and construction investment to make the greatest contributions to growth in 2020 on the expenditure side of price-adjusted GDP. The latter is based on the assumption that the proportion of the working population whose place of work is in Germany will continue to rise in 2020.

Gross domestic product at constant prices, year-on-year change

	2019	2020 forecast	2011-2018 average
	in %	in %	in %
Euro area	1.2	1.0	1.3
Germany	0.6	0.9	1.9
USA	2.3	2.0	2.2

Sources for the table: Eurostat, Destatis, BEA

In KfW's opinion, risks particularly relevant to the euro area and Germany that could lead to lower than expected growth in price-adjusted GDP in 2020 are the following: an escalation of global trade policy tensions, including the possibility of US special tariffs on car and car part imports from the European Union; a disorderly Brexit or new conflicts in the negotiations on long-term relations between the European Union and the UK, which are likely to begin in 2020; and Italy's national debt, which is a permanent source of uncertainty as regards confidence among the financial market participants in the European Monetary Union's and thus also Germany's financial markets.

For 2020 KfW assumes that average money and capital market interest rates will be lower than in 2019 in the euro area and the US particularly in the **financial market environment** given the declining growth rates of real GDP in these regions.

For the euro area, KfW expects the deposit rate of the European Central Bank (ECB) to average –0.60% in 2020. This lower figure compared to 2019 (–0.44%) is projected because, as in the ECB staff projections, the inflation rate – measured by the annual inflation rate of the Harmonised Index of Consumer Prices (HICP) – is expected to be lower than the average for 2019. Such development normally results in central banks moving to a more expansionary monetary policy. Moreover, the environment of low inflation rates, which are not compatible with the ECB's inflation target of "below, but close to, 2%", is likely to lead the ECB, as announced in its "Introductory Statements" to the press conferences on its monetary policy decisions at the end of 2019, to continue net purchases of securities at a monthly rate of EUR 20 billion for as long as necessary. The lower deposit rate, together with the net purchases of securities resumed in November 2019 (which tend to have a dampening effect on interest rates), can be expected to result in lower average EUR swap rates for medium and longer terms in 2020 than in 2019. This assumption is made particularly in view of the fact that market participant expectations of rising key interest rates are likely to remain very limited given the real GDP growth KfW expects for the euro area, which is assumed to be lower than the average for this decade before 2019 (2011-2018). The yield curve (the spread between ten and two-year swap rates) is expected to flatten slightly on average in 2020 according to KfW assumptions.

For the US, KfW expects the US Federal Reserve to make two further key interest rate cuts in 2020 given the anticipated lower real GDP growth compared with 2019. The Federal Reserve's projections show that the members of the Federal Open Market Committee (FOMC) do not expect key rates to change at year-end 2020 from year-end 2019. However, given the decline in real GDP growth assumed for 2020 compared to 2019, KfW – unlike the FOMC members – believes that the average annual inflation rate in the years up to 2022 will not

exceed the Federal Reserve's 2% target, as measured by the annual inflation rate of the core components of the Personal Consumption Expenditures Price Index (core rate of the "PCE" deflator). KfW believes that the yield curve (spread between ten and two-year USD swap rates) is likely to be somewhat steeper on average in 2020 than in 2019 as the two-year swap rates are expected to fall more sharply than the ten-year rates.
The primary upside and downside risks to the above forecasts that were identifiable at the time of writing this report are the outcome of the trade war between the US and China, the results of the US presidential election and the development of the related campaign, and the effects of an agreed, postponed or even cancelled Brexit.

KfW has assessed the impact of Brexit on the various business sectors of KfW Group and developed options for action based on the conservative assumption of a hard Brexit without a transition period.

In particular, the accreditation process for new EU entities of KfW business partners affected by Brexit has been largely completed. The same applies to the contractual negotiations on the structure of framework agreements for OTC derivatives and to the transfer of existing portfolios to these EU entities. As regards central clearing via a central counterparty in the UK, KfW has concluded that it would only be indirectly affected if there were any impact on business partners. Accordingly, even in the unlikely case of a hard Brexit, KfW does not expect any restrictions on its ability to act with respect to its derivatives business and its funding. KfW considers the potential impact on credit risk to be acceptable overall. In KfW's opinion, the group's necessary preparations have progressed so far that major restrictions on the business sectors are not to be expected.

New business projections

Overview

As the central control variable for its net assets, KfW Group projects new business volume of EUR 77.0 billion for 2020 – close to the 2019 level. This forecast reflects the continuation of the growth trend in the Promotion of developing countries and emerging economies and Export and project finance business sectors, and the stabilisation of the commitment volume for promotion of the German economy in the low-interest environment compared to the past few years. The commitment volume in the business sector Financial markets is expected to decline significantly from 2019 due to the focus on green bonds.

Domestic business

The business sector **Mittelstandsbank & Private Kunden (SME Bank & Private Clients)** is divided by client group into two segments: SME Bank and Private Clients. The SME Bank business segment expects demand for commercial financing to decline in 2020 due to the deteriorating economic outlook and the persistent low interest rates.
The Private Clients business segment expects demand for housing-related financing to remain comparable to that of previous years. The main reasons are as follows: (1) low interest rates and rising incomes favour investment in residential property; (2) climate protection and energy transition are boosting demand in the Energy-efficient Construction and Refurbishment housing programmes; (3) demographic trends require increasing investment in needs-based housing development; and (4) the affordable housing crisis entails further funding potential.
In view of the sustained high demand for the educational funding anchored in the segment, Private Clients expects such promotion to continue at its existing level.
The **main challenge** in the prolonged low interest environment is in passing on the negative funding rates to the financing partners in the on-lending scheme to ensure that promotional loans remain attractive. The reorganisation of promotion for energy-efficient residential and non-residential buildings also requires further systematic development of the promotional offering. Moreover, digitalisation of promotional business increasingly requires a high level of standardisation and machine readability of promotional products and processes in order to enable the digital provision of promotional information/services on relevant platforms and portals. The Mittelstandsbank & Private Kunden (SME Bank & Private Clients) business sector plans a total commitment volume of EUR 35.5 billion for 2020.

In the Municipal and Social Infrastructure segment of the **business sector Individualfinanzierung & Öffentliche Kunden (Customised Finance & Public Clients)**, the strained budget and debt situation of some municipalities, combined with limited capacities in the construction industry, continues to restrict their investment opportunities. Overall, demand for promotional funds is expected to remain stable, particularly in the context of the digitalisation needed in municipalities.
Individual financing with financing partners in Germany and Europe as well as global funding of promotional institutions of the German federal states will likely continue to be characterised by a sound refinancing situation at partner banks and the current low interest rates. There is lively demand for global loans to promote German small and medium-sized enterprises (SMEs) in their leasing investments, with only selective demand for global loan financing expected in other European countries. Moderate demand is currently projected for the refinancing of export loans, which will likely be influenced by major projects in the German export industry.
The persistent low-interest environment is clearly the greatest challenge in maintaining the attractiveness of products with regard to global loans for Europe and global funding of promotional institutions of the German federal states, as well as for customised corporate finance.
The business sector plans to continue its promotion in 2020 with a new business volume of EUR 10 billion. Growth impetus is expected to come from measures implemented under the future investment programme designed to counter the effects of an imminent economic slowdown.

The **KfW Capital subsidiary** expects a commitment volume of EUR 230 million in financial year 2020. The achievement of the projected volume could be hampered by an economic downturn and an accompanying decline in demand for venture capital.

Financial markets
The business sector **Financial markets** ended its capital market-based promotional activities for micro, small and medium-sized enterprises as of 31 December 2019.

The business sector is planning new business in the amount of EUR 0.4 billion in the green bond portfolio for financial year 2020. The green bond portfolio to fund suitable environmental and climate protection projects has a target volume of up to EUR 2 billion, of which 80% (EUR 1.6 billion) had already been invested by 30 December 2019.

International business
Despite the globally deteriorating economic outlook , there are still regions with growth potential in Europe, as well as among developing countries and emerging markets relevant for the **Export and project finance** business sector. The sector continues to face challenges such as economic sanctions in markets such as Russia. In addition to potential protectionist efforts, geopolitical risks (conflicts between the US and Iran, the US and North Korea, the US and China, Russia and Ukraine, the UK and the EU, and the situation in Syria) can adversely affect world trade and thus financing opportunities. Overall, KfW sees sufficient potential for German and European exporters and enterprises that invest in their competitiveness, on the basis of which financing approaches for the Export and project finance business sector can be derived.
There is additional potential for new business, particularly in technological trends such as broadband and smart infrastructure. Further potential can be found in established sectors, finance arranging activities, earlier entry into complex projects and major underwritings and syndications.
The Export and project finance business sector expects a total commitment volume of EUR 19 billion for 2020.

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 is expected to experience dynamic business growth to continue in the next few years. KfW Development Bank will continue to support projects of the German Federal Government and international institutions for development policy and international cooperation in 2020. The German Federal Government and the European Commission assume responsibility in the area of international environmental and climate protection and are involved in a large number of climate initiatives. Given the ongoing displacement and migration trends, refugee aid and reducing causes of displacement are also high on the political agenda of German and European development cooperation. The Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung - "BMZ") also supports the G20 Compact with Africa initiative through reform partnerships with currently six selected countries.
Official Development Assistance (ODA) budget funds for development cooperation and international climate finance from both the Federal Government's budget and the European Commission continue to increase. The BMZ focuses on alleviating poverty, securing food supply, education and good governance, in addition to climate and environmental protection, refugee aid and reducing the causes of displacement. The regional focus is primarily on Africa and the Middle East.
In connection with the refugee and crisis context, the Sustainable Development Goals (SDGs) and the Paris Agreement on climate change, the European Commission has developed an "EU External Investment Plan". At the same time, the European Commission and the member states are developing a range of promotional instruments for European development cooperation (the Neighbourhood, Development and International Cooperation Instrument of the Multiannual Financial Framework/MFF 2021-2027). This initiative focuses, among other things, on increased mobilisation of private capital, greater visibility for European development cooperation and closer cooperation between European promotional institutions.
The quality requirements for development cooperation are also increasing, coupled with high demands for transparency and information from policymakers and the public regarding the results, effects and risks of development cooperation.
Against the backdrop of planned projects of the German Federal Government and international institutions, KfW Development Bank expects a new business volume of EUR 9.8 billion for 2020.

Stagnant economic growth in developing countries and emerging economies in which **DEG** pursues its commitment is likely to persist in 2020 for the time being. The reasons for this being the US-Chinese trade tensions and the weakness of industrialised nations, as well as other country-specific causes (e.g. Argentina's recession).

In this challenging economic environment, new business is intended to generate an effective and profitable portfolio of around EUR 12 billion by 2024, by means including the following:
a) an expanded range of services, including the creation of a broad local currency offering, increased offer of supplementary capital such as Tier II instruments, mezzanine financing and corporate bonds;
b) expansion of business support services, particularly in the areas of environmental and social issues, climate and resource protection, good corporate governance and vocational and further training; and
c) DEG private sector involvement in the focus region of Africa to support Federal Government initiatives as part of "Compact with Africa".

DEG plans a new commitment volume of EUR 2 billion for financial year 2020.

Funding projections

KfW issues bonds with maturities of up to 30 years to fund its promotional activities worldwide and is assessed by rating agencies as having excellent credit quality (triple A rating) thanks to the explicit direct guarantee of the Federal Government. KfW has achieved a stable position in the capital markets with its diversified long term-oriented **funding strategy**. The product offering in the bond issuance business will continue to be focused on investors' needs. KfW's benchmark bonds in euros and US dollars will continue to account for the highest share of total volume. Further diversification takes place in various products depending on the market.

Long-term funding via the capital markets of approximately EUR 75 billion is projected for 2020, which is slightly below the previous year's funding volume (EUR 81 billion).

Earnings projections

In the current group **earnings projections** for 2020, KfW expects Consolidated profit (before IFRS effects) of approximately EUR 0.8 billion based on anticipated macroeconomic conditions. The expected result remains below the strategic objective of EUR 1 billion. Net interest income (before promotional expense) is expected to be at the level of 2019. Total net interest income is likely to remain adversely affected in 2020 by the ongoing low-interest environment. KfW expects that the income generated by return on equity, in particular, will continue to decline. The aim is to largely offset this decline with additional income from interest margins. Opportunities and risks for consolidated profit may arise primarily for the treasury result from deviating market conditions in conjunction with KfW's positioning.

KfW plans to keep net commission income for the budget period at the level achieved in 2019.

Administrative expense projections for 2020 are based on the Delta cost-cutting project requirements. KfW expects group costs to grow to around EUR 1.4 billion in comparison to 2019. Strategic projects, such as KfW Development Bank's growth case and the further development of KfW IPEX-Bank, are the main reason for the expected increase in costs. Although these put pressure on Administrative expense, they will generate higher income in the medium to long term, and are therefore not out of line with the Delta project. The expected cost-income ratio (CIR) before promotional expense is budgeted at 48% for 2020. The macroeconomic scenario on which the projections are based envisages an increase in risk provisions, with the projected standard risk costs unlikely to be fully utilised.

KfW expects promotional expense of EUR 0.3 billion in 2020 (2019: EUR 0.2 billion), although implementation depends on 2020 market conditions.

Overall conclusion

In view of the above-mentioned macroeconomic conditions and the challenges presented by the persistent low-interest environment, KfW expects new business volume of EUR 77.0 billion at the level of 2019 and a related consolidated profit of EUR 0.8 billion for 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 Governance Kodex des Bundes – “PCGK”) and apply them at KfW. The Corporate Governance Report of KfW contains the declaration of compliance with the recommendations of the PCGK.

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 2019 Sustainability report. The report adheres to the Global Reporting Initiative (GRI) standards and can soon be accessed online at https://www.kfw.de/PDF/Download-Center/Konzernthemen/Nachhaltigkeit/englisch/Nachhaltigkeitsbericht-2019_EN.pdf

Consolidated financial statements

Consolidated statement of comprehensive income

Income statement

	Notes	2019 EUR in millions	2018 EUR in millions
Interest income from the effective interest method		2,767	2,836
Other interest income		1,151	851
Interest income, total	(22)	**3,918**	**3,687**
Interest expense	(22)	1,571	1,459
Net interest income		**2,347**	**2,228**
Risk provisions for lending business[1)]	(7), (13), (23)	–174	–3
Net interest income after risk provisions		**2,173**	**2,225**
Commission income	(10), (24)	524	387
Commission expense	(24)	25	25
Net commission income		**499**	**362**
Net gains/losses from hedge accounting	(8), (25), (63), (64)	–1	480
Net gains/losses from other financial instruments at fair value through profit or loss	(26)	–9	–54
Net gains/losses from risk provisions in the securities business	(7), (27)	1	0
Net gains/losses from disposal of financial instruments measured at amortised cost	(28)	–6	2
Net gains/losses from investments accounted for using the equity method	(6), (29)	15	22
Administrative expense	(30)	1,328	1,418
Net other operating income or loss	(31)	46	5
Profit/loss from operating activities		**1,391**	**1,623**
Taxes on income	(32)	23	–13
Consolidated profit		**1,367**	**1,636**

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

Consolidated statement of comprehensive income

	2019	2018
	EUR in millions	EUR in millions
Consolidated profit	**1,367**	**1,636**
Changes recognised directly in equity	**–320**	**155**
Change in own credit risk of liabilities designated at fair value through profit or loss	–14	157
Defined benefit pension obligations	–323	0
Deferred taxes on defined benefit pension obligations	17	–1
Consolidated comprehensive income	**1,047**	**1,791**

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, changes in actuarial gains and losses for defined benefit pension obligations, and changes in deferred taxes reported depending on the underlying transaction.

Consolidated statement of financial position

Assets

	Notes	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Cash reserves	(35)	28,195	17,465
Loans and advances to banks	(7), (11), (12), (36), (39), (64)	281,912	280,413
Loans and advances to customers	(7), (11), (12), (37), (39), (64)	129,416	126,878
Risk provisions for lending business	(7), (13), (38)	–1,670	–1,545
Value adjustments from macro fair value hedge accounting	(8), (40), (64)	10,887	9,071
Derivatives designated for hedge accounting	(8), (41), (63), (64), (65)	10,859	9,512
Other derivatives	(7), (8), (42), (65)	5,383	5,274
Securities and investments	(7), (14), (15), (43), (63)	37,795	35,729
Investments accounted for using the equity method	(6), (44)	609	514
Property, plant and equipment	(16), (45)	1,021	958
Intangible assets	(17), (46)	188	225
Income tax assets	(47)	703	579
Other assets	(10), (48)	723	716
Total		**506,022**	**485,790**

Liabilities and equity

	Notes	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Liabilities to banks	(7), (18), (49), (63), (64), (66)	14,899	8,220
Liabilities to customers	(7), (18), (50), (63), (64), (67)	10,131	12,303
Certificated liabilities	(7), (18), (51), (63), (68)	436,191	418,581
Value adjustments from macro fair value hedge accounting	(8), (52), (64)	77	98
Derivatives designated for hedge accounting	(8), (53), (63), (64), (65)	6,674	9,891
Other derivatives	(7), (8), (54), (65)	2,453	2,529
Provisions	(13), (19), (55)	3,335	3,028
Income tax liabilities	(56)	358	284
Other liabilities	(10), (57)	542	540
Equity	(20), (58)	31,362	30,315
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		18,742	17,371
Fund for general banking risks		600	600
Revaluation reserves	(7), (20)	–918	–594
Total		**506,022**	**485,790**

Consolidated statement of changes in equity

Consolidated statement of changes in equity in financial year 2019

	As of 1 Jan. 2019	Changes in consolidated group	Appropriation of consolidated comprehensive income 2019	Reclassification of revaluation reserves to retained earnings	As of 31 Dec. 2019
	EUR in millions	**EUR in millions**	**EUR in millions**	**EUR in millions**	**EUR in millions**
Subscribed capital	3,750	0	0	0	3,750
less uncalled outstanding contributions	–450	0	0	0	–450
Capital reserve	8,447	0	0	0	8,447
Reserve from the ERP Special Fund	1,191	0	0	0	1,191
Retained earnings	17,371	0	1,367	4	18,742
Statutory reserve under Article 10 (2) KfW Law	*1,875*	*0*	*0*	*0*	*1,875*
Special reserve under Article 10 (3) KfW Law	*10,092*	*0*	*1,280*	*0*	*11,372*
Special reserve less the special loss account from provisioning pursuant to Section 17 (4) of the D-Mark Balance Sheet Law	*21*	*0*	*0*	*0*	*21*
Other retained earnings	*5,383*	*0*	*87*	*4*	*5,474*
Fund for general banking risks	600	0	0	0	600
Revaluation reserves	–594	0	–320	–4	–918
Valuation results from financial instruments (after tax)	*0*	*0*	*0*	*0*	*0*
Valuation result from the change in own credit risk of liabilities designated at fair value through profit or loss	*–21*	*0*	*–14*	*–4*	*–40*
Actuarial gains and losses from defined-benefit pension obligations (after tax)	*–573*	*0*	*–306*	*0*	*–879*
Equity	**30,315**	**0**	**1,047**	**0**	**31,362**

KfW’s net income amounting to EUR 1,280 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 column Reclassification of revaluation reserves to retained earnings includes a reclassification in the amount of EUR 4 million from revaluation reserves to retained earnings recorded directly in equity due to a disposal within the liabilities measured at fair value.

The following tables as well as Notes 20 and 58 provide details on the Consolidated statement of changes in equity.

Development of revaluation reserves in financial year 2019

	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
As of 1 Jan. 2019	**–5**	**–29**	**12**	**–603**	**30**	**–594**
Changes recognised directly in equity						
Decrease due to disposals and reclassification to Retained earnings	0	0	–4	0	0	–4
Increase due to disposals and reclassification to Retained earnings	0	0	0	0	0	0
Change in own credit rating for liabilities designated at fair value through profit or loss	3	13	–30	0	0	–15
Changes in revaluation reserves due to changes in actuarial valuation parameters	0	0	0	–323	17	–306
Total changes recognised directly in equity	**3**	**13**	**–34**	**–323**	**17**	**–324**
As of 31 Dec. 2019	**–2**	**–16**	**–22**	**–926**	**47**	**–918**

Consolidated statement of changes in equity in financial year 2018

	As of 31 Dec. 2017	IFRS 9 transition 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
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 pension obligations (after tax)	*–572*	*0*	*–572*	0	*–1*	*–573*
Equity	**28,742**	**–218**	**28,524**	**0**	**1,791**	**30,315**

Development of 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 Jan. 2017	**277**	**0**	**0**	**0**	**–603**	**32**	**–295**
IFRS 9 transition 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**

Change in the revaluation reserves from actuarial gains and losses for defined benefit pension obligations including the related deferred taxes in financial year 2019

	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. 2019	**–603**	**30**	**–573**
Changes recognised directly in equity	**–323**	**17**	**–306**
Changes in revaluation reserves due to changes in actuarial valuation parameters	–323	17	–306
As of 31 Dec. 2019	**–926**	**47**	**–879**

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

Consolidated statement of cash flows

	2019 EUR in millions	2018 EUR in millions
Consolidated profit	**1,367**	**1,636**
Non-cash items included in consolidated profit and reconciliation to cash flow from operating activities:		
Depreciation, amortisation, impairment and reversal of impairment losses (receivables, property, plant and equipment, securities and investments) and changes in risk provisions for lending business	402	–190
Changes in other provisions	119	200
Other non-cash expenses and income	–9	112
Profit/loss from the disposal of securities and investments and property, plant and equipment	0	0
Other adjustments	–2,314	–2,176
Subtotal	**–435**	**–418**
Changes in assets and liabilities from operating activities after adjustment for non-cash items:		
Loans and advances to banks	–1,506	–5,924
Loans and advances to customers	–2,677	912
Securities	–1,996	–2,098
Other assets relating to operating activities	–3,378	–134
Liabilities to banks	6,682	2,247
Liabilities to customers	–2,160	2,405
Certificated liabilities	17,580	12,292
Other liabilities relating to operating activities	–3,371	–5,066
Interest and dividends received	3,918	3,687
Interest paid	–1,571	–1,459
Income tax paid	–33	–81
Cash flow from operating activities	**11,054**	**6,363**
Property, plant and equipment/Intangible assets:		
Cash proceeds from disposals	5	1
Cash payments for acquisitions	–163	–104
Securities and investments (equity investments):		
Cash proceeds from disposals/Cash payments for acquisitions	–165	118
Cash flow from investing activities	**–324**	**15**
Cash proceeds from/Cash payments for capital increases/decreases	0	0
Changes from other financing activities	0	0
Cash flow from financing activities	**0**	**0**
Cash and cash equivalents as of the end of the previous period	**17,465**	**11,087**
Cash flow from operating activities	11,054	6,363
Cash flow from investing activities	–324	15
Cash flow from financing activities	0	0
Cash and cash equivalents as of the end of the period	**28,195**	**17,465**

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 –2,347 million (2018: EUR –2,228 million). The cash payments for the repayment portion of lease liabilities included in Cash flow from operating activities amounted to EUR 11 million in financial year 2019. The cash payments for the interest portion of lease liabilities are reported under Interest paid.

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 3 March 2020[1], no significant events have occurred since the reporting date (31 Dec. 2019).

As of the reporting date, KfW Group comprises KfW and five subsidiaries that are fully consolidated. 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 2019 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 2019, except for some associated companies accounted for using the equity method, where financial statements as of 30 September 2019 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 2019

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”. KfW Group has applied the standard since 1 January 2019. All leases that were recognised as operating leases in accordance with IAS 17 until 31 December 2018 are thus recognised for the first time this reporting year in accordance with the provisions of IFRS 16. As the transition was made using the modified retrospective approach, the prior-year comparative figures were not restated.

As a result of the introduction of IFRS 16, KfW as lessee must report each right of use in Property, plant and equipment and the associated lease obligation in Other liabilities. The lessee shall measure the lease liabilities at the present value of the lease payments not paid at that date, discounted at the lessee’s incremental borrowing rate. The incremental borrowing rate is the rate of interest that a lessee would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. Accordingly, KfW determines the incremental borrowing rate of the basis of the refinancing rate it uses for its own issues.

The capitalised rights of use correspond to the amount of lease liabilities at the time of initial application. Depreciation, amortisation and impairments of rights of use are subsequently reported in Administrative expense. Interest expenses from discounting the rights of use and the interest compounded on lease liabilities are included in Other interest expense.

The initial application of IFRS 16 did not result in any effects to be recorded in equity for KfW Group. The only minimal effects on net assets, financial position and results of operations arise exclusively from the “leasing buildings” class.

The following table shows the reconciliation of the minimum lease payments from operating leases in accordance with IAS 17 disclosed as of 31 December 2018 to the lease liabilities in accordance with IFRS 16 recognised as of 1 January 2019:

Reconciliation of recognised lease liabilities

	EUR in millions
Minimum lease payments from operating leases as of 31 Dec. 2018	80
Utilisation of application options and other adjustments within the scope of initial application of IFRS 16	3
Effects of discounting using the incremental borrowing rate	–1
Lease liabilities as of 1 Jan. 2019	**82**

The weighted average incremental borrowing rate applied to determine lease liabilities as of 1 January 2019 is 0.38% p.a.

The lease liabilities of EUR 69 million recognised as of 31 December 2019 in accordance with the new accounting standards are offset by capitalised rights of use in the amount of EUR 68 million as of the reporting date.

The amendments to IFRIC 23 “Uncertainty over Income Tax Treatments” (June 2017) regarding IAS 12 “Income Taxes”, applied for the first time, did not have any effect on the group’s net assets, financial position and results of operations.

The amendments to IAS 28 “Investments in Associates and Joint Ventures” (October 2017, “Long-term Interests in Associates and Joint Ventures”), 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 IFRS 2015 – 2017 cycle (Dec. 2017) did not have any impact on the group’s net assets, financial position and results of operations.

The amendments to IAS 19 “Employee Benefits” (February 2018, “Plan Amendment, Curtailment or Settlement”), applied for the first time, 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

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. The amendments do not have any impact on KfW Group’s net assets, financial position and results of operations.

The IASB also issued “Amendments to References to the Conceptual Framework in IFRS Standards” in March 2018, along with the revised framework. These amendments are to be applied for financial years beginning on or after 1 January 2020. The amendments do not, however, have any impact on KfW Group’s net assets, financial position and results of operations.

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

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 expected to be applied for financial years beginning on or after 1 January 2021.

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 2020.

As a result of the change in reference rates in the course of the Benchmark Rate Reform, the IASB is currently working on amending standards in order to limit unintended effects on banks' financial statements. Phase one of these amendments was adopted by the IASB in September 2019; early application in 2019 was possible. Adoption of Phase 2 is expected in 2020.

KfW is making extensive preparations for the amendments under the Benchmark Rate Reform. Related project activities were set up that cover the following subject areas:
- Product design for new business
- Handling existing business if reference rates cease to be available
- Impact on measurement of financial instruments
- Effects in the context of hedge accounting

KfW is refraining from early application of the amendments to the standards in the 2019 consolidated financial statements.

(3) Changes to significant accounting policies and estimates

Except for the changes mentioned in the section above that are due to the first-time application of new or amended IRFS/IFRIC no changes to significant accounting policies and estimates have been made in the reporting period.

(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 lending business), 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), determining remaining terms of leases, 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 consolidated group companies are eliminated. Intercompany profits between fully consolidated companies are also eliminated.

Investments in associates and joint ventures are accounted for using the equity method. The group's share of the profits or losses of associates as well as joint ventures 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.

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, financial liabilities and derivatives) are to be assigned to a category that determines their subsequent measurement.

Classification of financial assets at initial recognition thus determines their subsequent measurement. 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 flow criterion is assessed for each individual financial asset as the second step. The cash flows of financial instruments are then to be assessed as to whether they are consistent with a basic lending arrangement and thus solely constitute 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 into 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 thus meets 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 not on the objective of holding and selling the assets in equal measure.

Both cases of exception are assigned to the “hold to sell” business model. The holdings 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. All non-derivative 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. For the group, this category covers funding reported in Liabilities to banks and customers and 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, and all other financial assets 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. Such classes are based on products (e.g., loans and advances to banks are broken down separately into money-market transactions and loans and advances) or on the line items of the statement of financial position. 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 financial instruments:

- 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 Regulation (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 discounted 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, they will be assigned to stage 3 based on the default rating at the time of purchase.

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 negative factors or 30-days-past-due status.

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 '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 stages 2 or 3 as well as reversion back from stages 2 and 3 are possible. Periods of good conduct are taken into account in backward migration. The periods of good conduct are generally based on regulatory requirements (e.g., definition of default). Additional periods of good conduct were also defined for the retail business, based on previous past-due status (> 30 days) or default. These range from 90 days to two years, depending on the specifics of the case.

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 one-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 two levels for defaulted transactions (“NPL”). The lifetime PDs are derived from the one-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. The adjustment is made 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 in order that internal costs and downturn components for IFRS 9 are not included in the calculation of expected credit losses.

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 (write-off). In the non-retail business, this is not performed until there is no longer a 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 the total amount 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. 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.

In the case of a 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 in accordance with 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 write-off for non-substantial contractual modifications that do not result in (partial) derecognition. 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 intensive and problem loan management as part 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 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 issuances 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 is not designated to the fair value measurement category at initial recognition, a provision is recognised for expected losses from a financial guarantee as part of a subsequent assessment, applying IFRS 9 rules for risk provisioning. KfW Group does not voluntarily designate financial guarantee contracts for measurement at fair value.

Provisions for expected losses from financial guarantees 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 the issuances 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, not all economic hedging relationships qualify for hedge accounting or the fair value option. In these cases, the risk-mitigating impact of the derivatives used for hedging purposes 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 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. The procedure for determining the remaining lifetime was optimised in 2019, resulting in a changed amortisation process without the optimisation having any effect on results over the remaining lifetime.

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 in liabilities 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 hedging relationships are not 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 is 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. They include fees for the administration of German Financial Cooperation for the promotion of developing countries and emerging economies, 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 Group has no items that require recognising customer acquisition or contract fulfilment 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 becomes 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 funding advantages to the ultimate borrowers in funding projects eligible for promotion. 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 amortized under the effective interest method are recognised under Commission income.

(13) Risk provisions for lending business

Risk provisions for lending business include the provisions for losses on loans and advances 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 one-year expected credit loss (stage 1) or the lifetime expected credit loss (stage 2 and stage 3). Additions to and reversals of risk provisions are recognised in Risk provisions for lending business in the income statement.

Impaired loans are written off against Loan loss provisions if they are deemed uncollectible. Recoveries on loans already written off as well as write-offs are reported 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 reduced by the amount of risk provisions in the securities business recognised as of the reporting date.

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 interest-bearing 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 interest-bearing 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, provided they do not result from changes in own credit risk.

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 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 (*Gesamtversorgung*), 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 (*Gesamtversorgung*). 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 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.

Cash reserves also include cash proceeds from assets held in trust. The resulting payment obligations are reported under Liabilities to customers.

Notes to the statement of comprehensive income

(22) Net interest income

Analysis of Net interest income by class

	2019 EUR in millions	2018 EUR in millions
Interest and similar income from loans and advances to banks and customers	6,355	6,768
Similar income from financial guarantees	22	19
Interest income from securities and investments	154	177
Interest income from hedges recognised in the statement of financial position	–3,650	–4,068
Other interest income	–114	–60
Interest income from the effective interest method	**2,767**	**2,836**
Interest and similar income from loans and advances to banks and customers	–23	–17
Interest income from securities and investments	66	56
Interest income from Other derivatives	1,108	812
Other interest income	**1,151**	**851**
Interest income, total	**3,918**	**3,687**
Interest and similar expense for liabilities to banks and customers	217	235
Interest expense for certificated liabilities	6,947	7,317
Interest expense for derivatives	–5,780	–6,314
Other interest expense	188	221
Interest expense, total	**1,571**	**1,459**
Net interest income	**2,347**	**2,228**

Expenses for granting promotional loans below market rates – due to additional promotional funds in the form of interest rate reductions with an impact on KfW's earnings position – amount to EUR 137 million (2018: EUR 185 million) and are reported in Other interest expenses. 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 279 million (2018: EUR 313 million).

Interest income from stage 3 loans in the amount of EUR 33 million (2018: EUR 26 million) is reported under Interest and similar income from loans and advances to banks and customers.

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 net interest expenses from all derivatives irrespective of whether they are used for 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).

Gross analysis of negative interest contributions

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Interest income (gross)	4,156	3,874
Negative interest from financial assets	–237	–187
Interest expense (gross)	1,713	1,545
Negative interest from financial liabilities	–141	–86
Net interest income	**2,347**	**2,228**

The negative interest contributions contained in Interest income resulted from balances with central banks, loans and advances to banks and customers, and securities and investments. The positive interest contributions in Interest expense are largely due to liabilities to banks and customers and certificated liabilities.

(23) Risk provisions for lending business

Analysis of Risk provisions by transaction

	2019	2018
	EUR in millions	EUR in millions
Expenses for additions to risk provisions	718	883
Direct write-offs	36	31
Expenses for risk provisions	**755**	**914**
Income from the reversal of risk provisions	520	839
Income from recoveries of amounts previously written off	77	77
Income from risk provisions	**597**	**916**
Net gains/losses from non-substantial contractual modifications	**–10**	**5**
Other risk provisions for lending business	**–6**	**–10**
Total	**–174**	**–3**

(24) Net commission income

Analysis of Commission income

	2019	2018
	EUR in millions	EUR in millions
Revenue from contracts with customers	**518**	**379**
from mandate contractual arrangements with the Federal Government	461	335
Fee income from mandate agreements, processing activities and services	16	13
Fee income from the lending business	39	31
Trust activities	2	0
Other commission income	**6**	**8**
Financial guarantee contracts	1	2
Other	5	5
Commission income, total	**524**	**387**

Commission income by segment in financial year 2019

2019	Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)* EUR in millions	Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients)* EUR in millions	KfW Capital EUR in millions	Export and project finance EUR in millions	Promotion of developing countries and emerging economies EUR in millions	Financial markets EUR in millions	Head office EUR in millions	KfW Group EUR in millions
Commission income	**210**	**14**	**0**	**33**	**266**	**0**	**1**	**524**
of which Federal Government	205	11	0	0	245	0	0	461
%	98%	77%	0%	0%	92%	0%	0%	88%

Commission income by segment in financial year 2018

2018	Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)* EUR in millions	Individualfinanzierung & Öffentliche Kunden (*Customised Finance & Public Clients)* EUR in millions	KfW Capital EUR in millions	Export and project finance EUR in millions	Promotion of developing countries and emerging economies EUR in millions	Financial markets EUR in millions	Head office EUR in millions	KfW Group 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

	2019	2018
	EUR in millions	EUR in millions
Revenue in current period resulting from services performed in the previous period(s)	42	5

Analysis of Commission expense by class

	2019 EUR in millions	2018 EUR in millions
Commission expense for lending business	13	14
Commission expense for credit derivatives	0	0
Other commission expense	12	11
Commission expense	**25**	**25**

Net commission income

	2019 EUR in millions	2018 EUR in millions
Commission income	**524**	**387**
Commission expense	**25**	**25**
Total	**499**	**362**

(25) 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
	2019 EUR in millions	2018 EUR in millions	
Micro fair value hedges	**17**	**38**	Net gains/losses from hedge accounting
Interest risk	0	31	–
Interest-currency risk	18	7	–
Macro fair value hedges	**–18**	**442**	Net gains/losses from hedge accounting
Interest risk	–18	442	–
Total	**–1**	**480**	Net gains/losses from hedge accounting

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

	2019 EUR in millions	2018 EUR in millions
Hedging of securities and investments	5	3
Hedging of liabilities to banks and customers	–1	0
Hedging of certificated liabilities	12	34
Hedging of subordinated liabilities	0	0
Subtotal: Effectiveness of hedges	**16**	**37**
Amortisation of value adjustments	1	1
Total	**17**	**38**

Gross analysis of valuation gains/losses from micro fair value hedge accounting: Comparison of hedged items and hedging instruments in financial year 2019

	Hedged items EUR in millions	Hedging instruments EUR in millions	Effectiveness of hedges EUR in millions
Hedging of securities and investments	204	–199	5
Hedging of liabilities to banks and customers	–44	44	–1
Hedging of certificated liabilities	–5,156	5,168	12
Total	**–4,996**	**5,013**	**16**

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

	Hedged items EUR in millions	Hedging instruments EUR in millions	Effectiveness of hedges 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 net gains/losses from macro fair value hedge accounting: Comparison of hedged items and hedging instruments in financial year 2019

	Hedged items EUR in millions	Hedging instruments EUR in millions	Effectiveness of hedges EUR in millions
Net gains/losses from macro fair value hedge accounting	2,428	–2,446	–18

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

	Hedged items	Hedging instruments	Effectiveness of hedges
	EUR in millions	EUR in millions	EUR in millions
Net gains/losses from macro fair value hedge accounting	240	202	442

Net gains/losses from macro fair value hedge accounting comprise the valuation of hedging instruments 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.

(26) 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

	2019	2018
	EUR in millions	EUR in millions
Loans and advances to banks/customers	–14	3
Securities and investments	79	113
Assets	**65**	**116**
Liabilities to banks and customers	–33	30
Certificated liabilities	–373	315
Liabilities	**–406**	**345**
Financial derivatives not qualifying for hedge accounting	338	–500
Credit derivatives	0	0
Derivative financial instruments	**338**	**–500**
Foreign currency translation	–6	–14
Total	**–9**	**–54**

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 mainly attributable to derivatives in economic hedges. Economic hedges are 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

	2019	2018
	EUR in millions	EUR in millions
Net gains/losses from Loans and advances	–14	3
Total	**–14**	**3**

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

	2019	2018
	EUR in millions	EUR in millions
Bonds and other fixed-income securities	0	0
Shares and other non-fixed income securities	0	8
Equity investments	79	105
Total	**79**	**113**

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

	2019	2018
	EUR in millions	EUR in millions
Borrowings	–406	345
Hedging instruments	387	–469
Total (effectiveness of economic hedges)	**–19**	**–124**

(27) Risk provisions in the securities business

Analysis of Risk provisions by transaction

	2019 EUR in millions	2018 EUR in millions
Expenses for additions to risk provisions	4	6
Expenses for risk provisions	**4**	**6**
Income from the reversal of risk provisions	4	6
Income from risk provisions	**4**	**6**
Total	**1**	**0**

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

	2019 EUR in millions	2018 EUR in millions
Income from disposal of financial instruments measured at amortised cost	1	2
Expenses from disposal of financial instruments measured at amortised cost	–6	0
Total	**–6**	**2**

Income and expense from disposal resulted from the sale of loans on the secondary market.

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

	2019 EUR in millions	2018 EUR in millions
Net gains/losses from investments accounted for using the equity method	15	22

(30) Administrative expense

Analysis of Administrative expense

	2019 EUR in millions	2018 EUR in millions
Wages and salaries	594	548
Social security contributions	81	75
Expenses for pension provision and other employee benefits	73	148
Personnel expense	**749**	**771**
Other administrative expenses	447	526
Depreciation, amortisation and impairment of property, plant and equipment and intangible assets	133	122
of which impairments of rights of use arising from leases	*13*	*n/a*
Non-personnel expense	**580**	**647**
Total	**1,328**	**1,418**

The salaries of 418 employees in external offices are included in the current Personnel expense.

In 2018, the Other administrative expense item included rental expenses arising from operating leases in the amount of EUR 16 million.

(31) Net other operating income or loss

Analysis of Net other operating income or loss

	2019 EUR in millions	2018 EUR in millions
Other operating income	71	52
Other operating expense	25	47
Total	**46**	**5**

Other operating income primarily includes income from the reversal of other provisions in the amount of EUR 46 million (2018: EUR 33 million).

The Other operating expense item includes contributions payable by KfW IPEX-Bank to the restructuring fund for banks in the amount of EUR 11 million (2018: EUR 15 million). KfW is not obligated to contribute to the fund in accordance with Section 2 of the Restructuring Fund Act *(Restrukturierungsfondsgesetz – "RStrukFG")*.

(32) Taxes on income

Analysis of Taxes on income by component

	2019 EUR in millions	2018 EUR in millions
Current taxes on income	33	61
Deferred taxes	–9	–74
Total	**23**	**–13**

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

Income tax reconciliation

	2019 EUR in millions	2018 EUR in millions
Profit/loss from operating activities (before taxes)	1,391	1,623
Group income tax rate	0%	0%
Calculated income tax expense in financial year	**0**	**0**
Effects of tax rate differentials within the group	406	62
Effect of tax rate changes	0	0
Effects of previous year taxes recorded in the reporting year	39	–4
Effects of non-deductible taxes on income	5	4
Effects of non-deductible business expenses	4	5
Effects of tax-free income	0	–1
Trade tax add-ons/reductions	1	1
Permanent accounting differences	–378	12
Effects of changes in recognised deferred tax assets	–54	–92
Reported taxes on income	**23**	**–13**

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 fact that this status predominantly determines the 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%.

Segment reporting

(33) 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)*	– 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)*	– 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	– Investments in German and European venture capital and venture debt funds
Export and project finance	– 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	– 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	– 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	– Central interest rate and currency management – Strategic equity investments

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 lending business calculated on the basis of the market interest rate method[1]. The item also includes the imputed return on equity allocated according to 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 funding[2] 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.

[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.

Promotional expense is understood to mean certain expenses from the two business sectors Mittelstandsbank & Private Kunden *(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. Promotional expense primarily consists of additions of the interest rate reductions accounted for at present value[1)] 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 centres[2)]. Administrative expense (before promotional expense) includes depreciation on property, plant and equipment and amortisation of intangible assets.

– 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, net gains/losses from risk provisions in the securities business, the net gains/losses from the 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 into account. Deferred taxes are allocated to the Head office.

– The reported economic capital requirement covers all types of risk according to the definition of economic capital requirement in the risk report section of the group management report. In contrast to the previous year, the solvency level used of 99.99% was lowered to 99.90% (see the details in the risk report).

– In accordance with the internal management reporting system, segment assets are not reported 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.

[1)] 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.

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

Segment reporting by business sector for financial year 2019

	Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)*	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	**35,979**	**7,217**	**156**	**22,080**	**10,648**	**1,402**	**0**	**–175**	**77,307**
Net interest income (before promotional expense)	383	91	–1	744	389	359	521	–2	2,484
Net commission income (before promotional expense)	210	13	0	33	260	–3	0	0	512
Administrative expense (before promotional expense)	416	75	6	248	443	82	51	0	1,320
Operating result before valuation (before promotional expense)	**177**	**29**	**–7**	**529**	**207**	**274**	**470**	**–2**	**1,677**
Risk provisions for lending business	–57	6	0	–10	–120	1	6	0	–174
Valuation result	4	32	13	6	10	5	–23	0	47
Profit/loss from operating activities (before promotional expense)	**125**	**67**	**6**	**525**	**96**	**279**	**453**	**–1**	**1,549**
Promotional expense	142	7	0	0	0	0	10	0	159
Taxes on income	0	0	0	25	3	0	–5	0	23
Consolidated profit	**–17**	**60**	**6**	**499**	**94**	**279**	**448**	**–1**	**1,367**
Economic capital requirement	**5,818**	**594**	**158**	**720**	**1,048**	**618**	**5,511**	**0**	**14,467**

[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 1.6 million, KfW Capital: EUR 0.8 million, Export and project finance: EUR 6.0 million and Promotion of developing countries and emerging economies: EUR 7.0 million.

Segment reporting by business sector for financial year 2018

	Mittelstandsbank & Private Kunden *(SME Bank & Private Clients)*	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.

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 on-lending bank. The other amounts in this column result from minimal consolidation effects.

(34) 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 financial year 2019

	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	1,269	440	640	–2	2,347
Net commission income	211	40	248	0	499
Segment income	**1,480**	**480**	**888**	**–2**	**2,846**

Segment reporting by region for 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**

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

(35) Cash reserves

Analysis of Cash reserves by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Cash	0	0
Balances with central banks	28,195	17,465
Total	**28,195**	**17,465**

(36) Loans and advances to banks

Analysis of Loans and advances to banks by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Money-market transactions	13,029	12,023
Loans and advances	264,984	262,074
Promissory note loans	23	22
Other receivables	3,876	6,293
Total	**281,912**	**280,413**

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. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Direct loans to banks	72,827	73,472
On-lent customer loans with full underwriting borne by the on-lending commercial bank	190,910	187,392
On-lent customer loans with partial underwriting borne by the on-lending commercial bank	1,827	1,974
Direct and on-lent subordinated loans	334	267
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.	–914	–1,030
Total	**264,984**	**262,074**

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

(37) Loans and advances to customers

Analysis of Loans and advances to customers by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Money-market transactions	870	771
Loans and advances	126,567	124,379
Promissory note loans	1,540	1,131
Other receivables	439	596
Total	**129,416**	**126,878**

An adjustment to the carrying amount totalling EUR 64 million (31 Dec. 2018: EUR 84 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. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Direct loans to customers	123,975	121,655
On-lent customer loans without underwriting borne by the on-lending commercial bank	242	209
Customer loans on-lent through insurance companies with full underwriting borne by the on-lending insurance company	710	667
Direct subordinated loans and subordinated loans on-lent through commercial banks and insurance companies	1,704	1,932
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.	–64	–84
Total	**126,567**	**124,379**

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.

(38) Risk provisions for lending business

Analysis of Risk provisions for lending business by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Loans and advances to banks	**242**	**195**
of which stage 1	124	122
of which stage 2	24	33
of which stage 3	93	39
Loans and advances to customers	**1,428**	**1,350**
of which stage 1	184	199
of which stage 2	186	176
of which stage 3	1,058	975
Provisions for losses on loans and advances	**1,670**	**1,545**
Provisions for credit risks	**73**	**73**
of which stage 1	36	40
of which stage 2	28	28
of which stage 3	10	6
Total	**1,743**	**1,618**

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

Development of Risk provisions for lending business in financial year 2019

	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. 2019	**122**	**33**	**39**	**199**	**176**	**975**	**40**	**28**	**6**
Transfer from stage 2 and stage 3 to stage 1	10	–10	0	30	–30	0	1	–1	0
Transfer from stage 1 and stage 3 to stage 2	–2	2	0	–10	20	–11	–2	2	0
Transfer from stage 1 and stage 2 to stage 3	–1	–10	11	–7	–46	53	0	–2	2
Additions	58	18	55	110	141	237	84	10	6
Utilisation	0	0	–7	0	0	–147	0	0	0
Reversals	–65	–9	–5	–138	–78	–123	–87	–10	–4
Net present value effect	0	0	2	0	0	63	0	0	0
Exchange rate and other changes	2	1	–1	0	2	10	1	0	0
As of 31 Dec. 2019	**124**	**24**	**93**	**184**	**186**	**1,058**	**36**	**28**	**10**

Development of Risk provisions for lending business in 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
Net present value effect	0	0	2	0	0	52	0	0	0
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**

In the reporting year, EUR 65 million (31 Dec. 2018: 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 (31 Dec. 2018: EUR 71 million).

(39) Development of gross carrying amounts in lending business

Analysis of gross carrying amounts in lending business by class in financial year 2019

	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. 2019	**279,816**	**453**	**127**	**95,650**	**4,445**	**17,159**	**85,421**	**370**	**211**
Transfer from stage 2 and stage 3 to stage 1	140	–141	1	354	–354	0	3	–3	0
Transfer from stage 1 and stage 3 to stage 2	–100	101	–1	–1,656	1,885	–230	–56	56	0
Transfer from stage 1 and stage 2 to stage 3	–77	–68	145	–279	–357	637	–3	–11	13
Additions	218,472	39	3	17,379	134	280	2,274	5	0
of which recently purchased or issued financial assets	*195,517*	*27*	*0*	*10,673*	*5*	*104*	*1,685*	*0*	*0*
of which current business	*22,955*	*12*	*3*	*6,706*	*129*	*176*	*589*	*5*	*0*
Disposals	–216,909	–126	–64	–14,682	–1,090	–607	–2,156	–36	–10
of which financial assets written off	*–216,909*	*–126*	*–51*	*–14,672*	*–1,090*	*–493*	*–2,156*	*–36*	*–10*
of which default on receivables	*0*	*0*	*–13*	*–10*	*0*	*–114*	*0*	*0*	*0*
Changes from non-substantial contractual modification	0	0	0	–7	–1	–1	0	0	0
Exchange rate and other changes	88	5	–2	997	47	97	–1,333	285	95
As of 31 Dec. 2019	**281,429**	**265**	**209**	**97,755**	**4,708**	**17,335**	**84,151**	**667**	**310**

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 2 million as of the reporting date (31 Dec. 2018: EUR 55 million).

Analysis of gross carrying amounts in lending business by class in 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
of which recently purchased or issued financial assets	*116,350*	*29*	*0*	*14,646*	*7*	*13*	*1,044*	*5*	*1*
of which current business	*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
of which financial assets written off	*–154,224*	*–115*	*–57*	*–23,337*	*–1,049*	*–798*	*–1,070*	*–60*	*–8*
of which default on receivables	*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**

(40) Value adjustments from macro fair value hedge accounting

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Value adjustments to assets under macro fair value hedge accounting	10,887	9,071

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

(41) Derivatives designated for hedge accounting

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Micro fair value hedge accounting	10,840	9,354
Macro fair value hedge accounting	19	157
Total	**10,859**	**9,512**

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Interest-related derivatives	3,822	2,869
Currency-related derivatives	7,038	6,643
Total	**10,859**	**9,512**

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

(42) Other derivatives

Analysis of Other derivatives with positive fair values by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Interest-related derivatives	4,314	3,738
Currency-related derivatives	1,069	1,536
Other derivatives	0	0
Total	**5,383**	**5,274**

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

Under Other derivatives are derivatives with positive fair values of EUR 37 million (31 Dec. 2018: EUR 200 million) attributable to embedded derivatives that are bifurcated.

(43) Securities and investments

Analysis of Securities and investments by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Bonds and other fixed-income securities	34,517	32,874
Equity investments	3,242	2,818
Shares in non-consolidated subsidiaries	43	43
Total securities and investments by class	**37,802**	**35,735**
Risk provisions for securities and investments	–6	–7
Total	**37,795**	**35,729**

Development of Risk provisions for securities and investments in financial year 2019

	Impairments for expected losses from securities and investments		
	Stage 1 EUR in millions	Stage 2 EUR in millions	Stage 3 EUR in millions
As of 1 Jan. 2019	**6**	**1**	**0**
Additions	4	0	0
Reversals	–4	0	0
As of 31 Dec. 2019	**6**	**0**	**0**

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

	Impairments for expected losses from securities and investments		
	Stage 1 EUR in millions	Stage 2 EUR in millions	Stage 3 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 financial year 2019

	Stage 1	Stage 2	Stage 3
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2019	**32,732**	**35**	**91**
Transfer from stage 2 and stage 3 to stage 1	4	–4	0
Additions	15,380	0	0
of which recently purchased or issued financial assets	*15,364*	*0*	*0*
of which current business	*17*	*0*	*0*
Disposals	–13,957	–30	–13
of which financial assets written off	*–13,957*	*–30*	*–13*
Exchange rate and other changes	281	–1	0
As of 31 Dec. 2019	**34,440**	**0**	**77**

Development of gross carrying amounts of the securities and investments measured at amortised cost in 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
of which recently purchased or issued financial assets	*13,719*	*0*	*0*
of which current business	*145*	*0*	*0*
Disposals	–11,662	–155	–9
of which financial assets written off	*–11,662*	*–155*	*–9*
Exchange rate and other changes	68	–7	0
As of 31 Dec. 2018	**32,732**	**35**	**91**

(44) Investments accounted for using the equity method

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Investments accounted for using the equity method	609	514
Total	**609**	**514**

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

(45) Property, plant and equipment

Analysis of Property, plant and equipment by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Land and buildings	872	848
Plant and equipment	80	78
Rights of use arising from leases	68	n/a
Other property, plant and equipment	1	32
Total	**1,021**	**958**

There were no additions in 2019 to rights of use arising from leases. Payments in advance and assets under construction are presented in Other property, plant and equipment.

Development of Property, plant and equipment in financial year 2019

	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. 2019	**1,379**	**–421**	**958**
Additions/reversals of impairment losses	130	0	130
Disposals	–22	18	–4
Depreciation	0	–63	–63
Impairment losses	0	0	0
Carrying amount as of 31 Dec. 2019	**1,487**	**–466**	**1,021**

Development of Property, plant and equipment in financial year 2018

	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. 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**

(46) Intangible assets

Analysis of Intangible assets by class

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Software	131	171
Purchased software	*90*	*117*
Internally generated software	*41*	*54*
Other intangible assets	58	54
Total	**188**	**225**

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

Development of Intangible assets in financial year 2019

	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. 2019	**439**	**–214**	**225**
Changes in consolidated group	0	0	0
Additions/reversals of impairment losses	33	0	33
Transfers	0	0	0
Disposals	–6	6	0
Amortisation	0	–59	–59
Impairment losses	0	–11	–11
Carrying amount as of 31 Dec. 2019	**466**	**–277**	**188**

Development of Intangible assets in 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**

(47) Income tax assets

Analysis of Income tax assets by type

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Current income tax assets	45	21
Deferred income tax assets	658	559
Total	**703**	**579**

Current income tax assets result from creditable taxes (investment income tax/solidarity surcharge) and tax receivables from advance tax payments during financial year 2019.

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. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Loans and advances to banks and customers (incl. risk provisions)	73	69
Securities and investments	20	33
Intangible assets	15	15
Other derivatives (liabilities)	329	251
Provisions	79	58
Other statement of financial position items	0	0
Tax loss carryforwards	142	132
Subtotal	**658**	**559**
Offset against deferred tax liabilities	0	0
Total	**658**	**559**

(48) Other assets

Analysis of Other assets by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Other assets and receivables	696	670
Prepaid expenses and deferred charges	27	46
Total	**723**	**716**

Prepaid expenses 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

	2019 EUR in millions	2018 EUR in millions
As of 1 Jan.	19	0
Additions	7	19
Disposals	–19	0
As of 31 Dec.	**7**	**19**

(49) Liabilities to banks

Analysis of Liabilities to banks by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Money-market transactions	3,165	0
Promissory note loans	1,679	1,931
Other financial liabilities	10,055	6,288
Total	**14,899**	**8,220**

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

(50) Liabilities to customers

Analysis of Liabilities to customers by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Money-market transactions	202	2,312
Promissory note loans	3,796	4,514
Other financial liabilities	6,133	5,478
Total	**10,131**	**12,303**

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

(51) Certificated liabilities

Analysis of Certificated liabilities by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Money-market issues	40,633	41,740
Bonds and notes	395,557	376,842
Total	**436,191**	**418,581**

(52) Value adjustments from macro fair value hedge accounting

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Value adjustments to liabilities under macro fair value hedge accounting	77	98

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.

(53) Derivatives designated for hedge accounting

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Micro fair value hedge accounting	2,727	6,296
Macro fair value hedge accounting	3,947	3,595
Total	**6,674**	**9,891**

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Interest-related derivatives	4,206	5,029
Currency-related derivatives	2,468	4,862
Total	**6,674**	**9,891**

(54) Other derivatives

Analysis of Other derivatives with negative fair values by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Interest-related derivatives	984	889
Currency-related derivatives	1,470	1,640
Total	**2,453**	**2,529**

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

Under Other derivatives are derivatives with negative fair values of EUR 23 million (31 Dec. 2018: EUR 13 million) attributable to embedded derivatives that are bifurcated.

(55) Provisions

Analysis of Provisions by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Provisions for pensions and similar commitments	2,523	2,148
Provisions for credit risks	73	73
Other provisions	739	807
Total	**3,335**	**3,028**

Development of Provisions for pensions and similar commitments in financial year 2019

	Defined benefit obligations	Early retirement	Partial retirement	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2019	**2,041**	**93**	**14**	**2,148**
Additions	107	1	5	113
Current service cost	*64*	*1*	*5*	*70*
Past service cost	*0*	*0*	*0*	*0*
Interest cost	*43*	*0*	*0*	*43*
Other additions	*0*	*0*	*0*	*0*
Actuarial gains and losses	323	0	0	323
Changes in demographic assumptions	*0*	*0*	*0*	*0*
Changes in financial assumptions	*325*	*0*	*0*	*325*
Changes in experience adjustments	*–2*	*0*	*0*	*–2*
Utilisation	–47	–10	–4	–62
Reversals	0	0	0	0
Transfers	0	0	0	0
Contributions by members (recognised in equity)	1	0	0	1
Changes in consolidated group	0	0	0	0
As of 31 Dec. 2019	**2,424**	**84**	**14**	**2,523**

The average expected residual term of the defined benefit pension obligations is 20.7 years as of 31 December 2019 (31 Dec. 2018: 19.0 years).

Development of Provisions for pensions and similar commitments in 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
Current service cost	*65*	*75*	*5*	*146*
Past service cost	*0*	*0*	*0*	*0*
Interest cost	*39*	*0*	*0*	*39*
Other additions	*0*	*0*	*0*	*0*
Actuarial gains and losses	0	0	0	0
Changes in demographic assumptions	*15*	*0*	*0*	*15*
Changes in financial assumptions	*–77*	*0*	*0*	*–77*
Changes in experience adjustments	*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**

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. 2019	31 Dec. 2018
Technical discount rate	1.34	2.07
Rate of salary increases	2.20	2.20
Rate of pension increases	2.50	2.50
Rate of staff turnover	1.84	1.83

The technical discount rate as of 31 December 2019 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 2019

	Difference	Change in defined benefit obligations	Difference	Change in defined benefit obligations
		EUR in millions		EUR in millions
Life expectancy	+1 year	107	–1 year	–106
Technical discount rate	+0.25%	–119	–0.25%	129
Rate of salary increases	+0.50%	19	–0.50%	–18
Rate of pension increases	+0.50%	166	–0.50%	–95
Rate of staff turnover	+1.00%	–4	+1.00%	4

Sensitivity of defined benefit pension obligations as of 31 December 2018

	Difference	Change in defined benefit obligations	Difference	Change in defined benefit obligations
		EUR in millions		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

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 financial year 2019

	Obligations to employees	Other provisions	Total
	EUR in millions	EUR in millions	EUR in millions
As of 1 Jan. 2019	**33**	**774**	**807**
Additions	7	50	57
Interest cost	*0*	*1*	*1*
Other additions	*7*	*49*	*57*
Utilisation	–3	–72	–75
Reversals	0	–51	–51
As of 31 Dec. 2019	**37**	**702**	**739**

The Obligations to employees column shows 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 24 million (31 Dec. 2018: EUR 59 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 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**

(56) Income tax liabilities

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Current income tax liabilities	33	31
Deferred income tax liabilities	325	253
Total	**358**	**284**

Current income tax liabilities as of 31 December 2019 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.

Composition of deferred tax liabilities by statement of financial position item

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Other derivatives (assets)	308	245
Other statement of financial position items	17	8
Total	**325**	**253**

(57) Other liabilities

Analysis of Other liabilities by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Other financial liabilities	399	437
Deferred income	74	104
Lease liabilities	69	n/a
Total	**542**	**540**

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

Development of liabilities from contractual rights

	2019 EUR in millions	2018 EUR in millions
As of 1 Jan.	35	40
Additions	16	8
Disposals	–14	–13
As of 31 Dec.	**37**	**35**

(58) Equity

Analysis of Equity

	31 Dec. 2019 EUR in millions	31 Dec. 2018 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
Reserve from the ERP Special Fund	1,191	1,191
Retained earnings	18,742	17,371
Statutory reserve under Article 10 (2) KfW Law	*1,875*	*1,875*
Special reserve under Article 10 (3) KfW Law	*11,372*	*10,092*
Special reserve less the special loss account from provisioning pursuant to Section 17 (4) of the D-Mark Balance Sheet Law	*21*	*21*
Other retained earnings	*5,474*	*5,383*
Fund for general banking risks	600	600
Revaluation reserves	–918	–594
Valuation result from the change in own credit risk of liabilities designated at fair value through profit or loss	*–40*	*–21*
Actuarial gains and losses from defined benefit pension obligations (after tax)	*–879*	*–573*
Total	**31,362**	**30,315**

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

(59) 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 financial year 2019

	ACO assets	ACO liabilities	FVM assets	FVM liabilities	FVD liabilities	Derivatives designated for hedge accounting	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
Interest income	5,829[1)]	0	594	557	0	–3,062	3,918
Interest expense	–137	–6,150	241	–276	–478	5,273	–1,528
Risk provisions for lending business	–174	0	0	0	0	0	–174
Commission income	6	0	0	0	0	0	6
Commission expense	–11	–5	–1	0	0	0	–18
Net gains/losses from hedge accounting	2,609	–5,177	0	0	0	2,567	–1
Net gains/losses from other financial instruments at fair value through profit or loss	0	0	787	–384	–406	0	–3
Net gains/losses from disposal of financial instruments measured at amortised cost	–6	0	0	0	0	0	–6
Net other operating income	0	0	0	0	0	0	0
Change in revaluation reserves	0	0	0	0	–18	0	–18
Total	**8,116**	**–11,332**	**1,621**	**–103**	**–902**	**4,778**	**2,177**

1) This includes interest income amounting to EUR 22 million from financial guarantees.

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

	ACO assets	ACO liabilities	FVM assets	FVM liabilities	FVD liabilities	Derivatives designated for hedge accounting	Total
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	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 instruments 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**

(60) 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 2019

	Loans and advances to banks	Loans and advances to customers	Risk provisions for lending business	Value adjustments from macro fair value hedge accounting	Derivatives used 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	281,902	119,798	–1,670	10,887	0	0	34,511	445,429	93.9
FVM	9	9,618	0	0	0	5,383	3,285	18,295	3.9
Derivatives designated for hedge accounting	0	0	0	0	10,859	0	0	10,859	2.3
Total	**281,912**	**129,416**	**–1,670**	**10,887**	**10,859**	**5,383**	**37,795**	**474,583**	**100.0**

Financial liabilities by measurement category as of 31 December 2019

	Liabilities to banks	Liabilities to customers	Certificated liabilities	Value adjustments from macro fair value hedge accounting	Derivatives used 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	14,644	8,667	424,897	77	0	0	448,285	95.3
FVM	0	0	0	0	0	2,453	2,453	0.5
FVD	255	1,464	11,294	0	0	0	13,013	2.8
Derivatives designated for hedge accounting	0	0	0	0	6,674	0	6,674	1.4
Total	**14,899**	**10,131**	**436,191**	**77**	**6,674**	**2,453**	**470,425**	**100.0**

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 used 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 used 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**

(61) 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 2019

	Fair value	Carrying amount (statement of financial position)	Difference
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to banks	290,315	281,670	8,645
Loans and advances to customers	132,383	127,988	4,395
Value adjustments from macro fair value hedge accounting	n/a	10,887	–10,887
Derivatives designated for hedge accounting	10,859	10,859	0
Other derivatives	5,383	5,383	0
Securities and investments	37,837	37,795	42
Assets	**476,778**	**474,583**	**2,195**
Liabilities to banks	14,960	14,899	60
Liabilities to customers	10,360	10,131	229
Certificated liabilities	437,630	436,191	1,439
Value adjustments from macro fair value hedge accounting	n/a	77	–77
Derivatives designated for hedge accounting	6,674	6,674	0
Other derivatives	2,453	2,453	0
Liabilities	**472,076**	**470,425**	**1,652**

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 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**

(62) 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 2019

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unobservable 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	9	9
Loans and advances to customers – FVM	0	9,432	185	9,618
Derivatives designated for hedge accounting	0	10,859	0	10,859
Other derivatives – FVM	0	4,546	837	5,383
Securities and investments – FVM	251	2,192	842	3,285
Subtotal of financial assets measured at fair value	**251**	**27,030**	**1,874**	**29,154**
Fair values of financial assets carried at amortised cost				
Loans and advances to banks – ACO	1	16,475	273,830	290,305
Loans and advances to customers – ACO	0	906	121,860	122,765
Securities and investments – ACO	27,410	3,917	3,226	34,553
Subtotal of fair values of financial assets carried at amortised cost	**27,411**	**21,298**	**398,915**	**447,624**
Total	**27,661**	**48,327**	**400,789**	**476,778**

Financial liabilities measured at fair value or for which the fair value is indicated in the Notes, as of 31 December 2019

	Quoted market price	Valuation method based on observable market data (model)	Valuation method based in part on market unobservable 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	255	0	255
Liabilities to customers – FVD	0	1,464	0	1,464
Certificated liabilities – FVD	8,138	3,139	16	11,294
Derivatives designated for hedge accounting	0	6,674	0	6,674
Other derivatives – FVM	0	2,404	49	2,453
Subtotal of financial liabilities measured at fair value	**8,138**	**13,936**	**66**	**22,140**
Fair values of financial liabilities carried at amortised cost				
Liabilities to banks – ACO	0	14,703	1	14,704
Liabilities to customers – ACO	0	8,870	26	8,896
Certificated liabilities – ACO	376,435	49,900	2	426,336
Subtotal of fair values of financial liabilities carried at amortised cost	**376,435**	**73,472**	**29**	**449,936**
Total	**384,573**	**87,408**	**95**	**472,076**

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 unobservable 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 unobservable 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**

Change of valuation method used for financial assets and 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 financial year 2019

	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	16	0
Certificated liabilities – FVD	0	0

Change of valuation method used for financial assets and 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 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
Certificated liabilities – FVD	0	0

Development of financial assets measured at fair value using valuation methods based in part on unobservable data in

	Loans and advances to banks – FVM	Loans and advances to customers – FVM
	EUR in millions	EUR in millions
As of 1 Jan. 2019	**17**	**186**
A. Changes recognised in the income statement		
Net interest and commission income	0	–2
Contracts still valid at year-end	*0*	*–1*
Net gains/losses from hedge accounting	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from other financial instruments at fair value through profit or loss	0	–27
Contracts still valid at year-end	*0*	*–27*
Total changes recognised in the income statement	**0**	**–28**
B. Changes recognised directly in equity		
Change of valuation method used	0	0
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Additions	0	51
Disposals	–8	–25
Total changes recognised directly in equity	**–8**	**25**
Exchange rate changes	0	2
Other changes	0	0
As of 31 Dec. 2019	**9**	**185**

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Derivatives designated for hedge accounting and other derivatives	Securities and investments – FVM	Total
EUR in millions	EUR in millions	EUR in millions
575	**778**	**1,556**
0	0	–2
2	*0*	*1*
0	0	0
0	*0*	*0*
214	39	226
283	*31*	*288*
214	**39**	**224**
–1	16	14
0	143	143
–1	–127	–128
0	23	74
0	–25	–59
–1	**14**	**30**
21	11	34
29	0	29
837	**842**	**1,874**

Development of financial assets measured at fair value using valuation methods based in part on unobservable data in

	Loans and advances to banks – FVM	Loans and advances to customers – FVM
	EUR in millions	EUR in millions
As of 1 Jan. 2018	**29**	**252**
A. Changes recognised in the income statement		
Net interest and commission income	0	–4
Contracts still valid at year-end	*0*	*0*
Net gains/losses from hedge accounting	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from other financial instruments at fair value through profit or loss	0	3
Contracts still valid at year-end	*0*	*–26*
Total changes recognised in the income statement	**0**	**–1**
B. Changes recognised directly in equity		
Change of valuation method used	0	0
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Additions	0	52
Disposals	–12	–118
Total changes recognised directly in equity	**–12**	**–67**
Exchange rate changes	1	2
Other changes	0	0
As of 31 Dec. 2018	**17**	**186**

financial year 2018

Derivatives designated for hedge accounting and other derivatives	Securities and investments – FVM	Total
EUR in millions	EUR in millions	EUR in millions
631	**688**	**1,600**
–3	0	–6
–1	*0*	*0*
0	0	0
0	*0*	*0*
–70	18	–49
–25	*20*	*–31*
–73	**18**	**–56**
0	66	66
0	0	0
0	66	66
0	32	84
0	–36	–166
0	**63**	**–16**
–3	6	5
19	3	22
575	**778**	**1,556**

Development of financial liabilities measured at fair value using valuation methods based in part on unobservable data

	Liabilities to banks – FVD	Liabilities to customers – FVD
	EUR in millions	EUR in millions
As of 1 Jan. 2019	**0**	**0**
A. Changes recognised in the income statement		
Net interest and commission income	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from hedge accounting	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from other financial instruments at fair value through profit or loss	0	0
Contracts still valid at year-end	*0*	*0*
Total changes recognised in the income statement	**0**	**0**
B. Changes recognised directly in equity		
Change in revaluation reserves	0	0
Contracts still valid at year-end	*0*	*0*
Change of valuation method used	*0*	*0*
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Additions	0	0
Disposals	0	0
Total changes recognised directly in equity	**0**	**0**
Exchange rate changes	0	0
Other changes	0	0
As of 31 Dec. 2019	**0**	**0**

in financial year 2019

Certificated liabilities – FVD	Derivatives designated for hedge accounting and other derivatives	Total
EUR in millions	EUR in millions	EUR in millions
55	**97**	**152**
0	0	0
0	*0*	*0*
0	0	0
0	*0*	*0*
2	–75	–73
2	*–73*	*–71*
3	**–75**	**–73**
0	0	0
0	*0*	*0*
–42	–1	–43
0	0	0
–42	–1	–43
0	0	0
0	–1	–1
–42	**–2**	**–44**
1	0	1
0	29	29
16	**49**	**66**

Development of financial liabilities measured at fair value using valuation methods based in part on unobservable data

	Liabilities to banks – FVD	Liabilities to customers – FVD
	EUR in millions	**EUR in millions**
As of 1 Jan. 2018	**0**	**0**
A. Changes recognised in the income statement		
Net interest and commission income	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from hedge accounting	0	0
Contracts still valid at year-end	*0*	*0*
Net gains/losses from other financial instruments at fair value through profit or loss	0	0
Contracts still valid at year-end	*0*	*0*
Total changes recognised in the income statement	**0**	**0**
B. Changes recognised directly in equity		
Change in revaluation reserves	0	0
Contracts still valid at year-end	*0*	*0*
Change of valuation method used	*0*	*0*
Transfers from “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Transfers to “Quoted market price” and “Valuation method based on observable market data (model)”	0	0
Additions	0	0
Disposals	0	0
Total changes recognised directly in equity	**0**	**0**
Exchange rate changes	0	0
Other changes	0	0
As of 31 Dec. 2018	**0**	**0**

in financial year 2018

Certificated liabilities – FVD	Derivatives designated for hedge accounting and other derivatives	Total
EUR in millions	EUR in millions	EUR in millions
160	**86**	**246**
0	1	1
0	*1*	*1*
0	0	0
0	*0*	*0*
–21	–15	–35
–5	*–12*	*–17*
–21	**–13**	**–34**
–4	0	–4
–2	*0*	–2
–88	–1	–89
4	2	6
–92	–3	–95
0	–1	–1
0	5	5
–92	**3**	**–89**
8	2	11
0	19	19
55	**97**	**152**

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 December 2019

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 +2,000 basis points
		Internal spread	–6 to +45 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)
		Risk costs	+/– 10%
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	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 December 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)
		Risk costs	+/– 10%
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	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.

Sensitivity analysis for the financial assets measured at fair value using valuation methods based in part on unobservable data as of 31 December 2019

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Loans and advances to customers – FVM	203	185	166
Other derivatives – FVM	843	837	831
Securities and investments – FVM	956	842	758
Total	**2,001**	**1,864**	**1,755**

Sensitivity analysis for the financial liabilities measured at fair value using valuation methods based in part on unobservable data as of 31 December 2019

	Best case scenario	Reported value	Worst case scenario
	EUR in millions	EUR in millions	EUR in millions
Certificated liabilities – FVD	16	16	16
Other derivatives – FVM	49	49	50
Total	**65**	**66**	**66**

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 – FVM	201	186	169
Other derivatives – FVM	580	575	569
Securities and investments – FVM	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 – FVD	55	55	55
Other derivatives – FVM	96	97	98
Total	**151**	**152**	**153**

(63) Disclosures on micro fair value hedge accounting

Disclosures on hedged items in micro fair value hedge accounting by risk type – 2019

	Carrying amount of hedged items	Accumulated hedge fair value adjustment (fair value of the hedged risk for the hedged item)	Hedge fair value adjustment to be amortised (discontinued hedge relationships)	Statement of financial position items in which the hedged items are reported	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	26,301	428	0	Securities and investments	204
Interest-currency risk					
Bonds	219	1	0	Securities and investments	0
Liabilities and equity					
Interest risk					
Promissory note loans	2,254	412	3	Liabilities to banks; liabilities to customers	–44
Certificated liabilities	141,458	4,613	649	Certificated liabilities	–3,162
Interest-currency risk					
Promissory note loans	0	0	0	Liabilities to banks; liabilities to customers	0
Certificated liabilities	148,741	4,003	–2	Certificated liabilities	–1,993

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

	Carrying amount of hedged items	Accumulated hedge fair value adjustment (fair value of the hedged risk for the hedged item)	Hedge fair value adjustment to be amortised (discontinued hedge relationships)	Statement of financial position items in which the hedged items are reported	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 – 2019

	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)	Average interest rate of hedging instruments
	EUR in millions	EUR in millions		EUR in millions	%
Assets					
Interest risk					
Interest-related transactions: interest rate swap	140,692	3,802	Derivatives designated for hedge accounting	–199	1.4
Interest-currency risk					
Currency-related transactions: cross-currency interest rate swap	154,793	7,038	Derivatives designated for hedge accounting	0	1.8[1)]
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	28,641	260	Derivatives designated for hedge accounting	3,202	1.6
Interest-currency risk					
Currency-related transactions: cross-currency interest rate swap	70,799	2,468	Derivatives designated for hedge accounting	2,011	3.2[1)]

[1)] Cross-currency interest rate swaps are primarily used to hedge interest risks, but also to hedge foreign currency risks. The difference between the average interest rate of the interest rate swaps and the cross-currency interest rate swaps results from the different interest rate of the hedged currencies, among other factors.

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 changes in hedging instruments 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[1)]
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[1)]

[1)] Cross-currency interest rate swaps are primarily used to hedge interest risks, but also to hedge foreign currency risks. The difference between the average interest rate of the interest rate swaps and the cross-currency interest rate swaps results from the different interest rate of the hedged currencies, among other factors.

Analysis of par values of hedging instruments by hedge relationship according to remaining terms as of 31 December 2019

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	3,134	500	6,955	78,760	51,342
Interest-currency risk					
Currency-related transactions: cross-currency interest rate swap	7,404	260	33,313	95,471	18,345
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	363	135	2,887	17,221	8,034
Interest-currency risk					
Currency-related transactions: cross-currency interest rate swap	1,028	288	27,987	31,712	9,785

Analysis of par values of hedging instruments by hedge relationship according to remaining terms as of 31 December 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

(64) Disclosures on macro fair value hedge accounting

Disclosures on hedged items in macro fair value hedge accounting by risk type – 2019

	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: Carrying amount before value adjustment from macro fair value hedge accounting	Statement of financial position items in which the hedged items are reported: Value adjustment from macro fair value hedge accounting	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
Interest risk						
Assets	*193,602*	*10,887*	*764*	*Loans and advances to banks; loans and advances to customers*	*Value adjustment from macro fair value hedge accounting*	*2,405*
Liabilities and equity	*0*	*77*	*77*	*Liabilities to banks; liabilities to customers*	*Value adjustment from macro fair value hedge accounting*	*23*

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: Carrying amount before value adjustment from macro fair value hedge accounting	Statement of financial position items in which the hedged items are reported: Value adjustment from macro fair value hedge accounting	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
Interest risk						
Assets	*171,009*	*9,071*	*1,359*	*Loans and advances to banks; loans and advances to customers*	*Value adjustment from macro fair value hedge accounting*	*212*
Liabilities and equity	*0*	*98*	*98*	*Liabilities to banks; liabilities to customers*	*Value adjustment from macro fair value hedge accounting*	*28*

Disclosures on hedging instruments in macro fair value hedge accounting by risk type – 2019

	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)
	EUR in millions	EUR in millions		EUR in millions
Assets				
Interest risk				
Interest-related transactions: interest rate swap	18,905	19	Derivatives designated for hedge accounting	96
Liabilities and equity				
Interest risk				
Interest-related transactions: interest rate swap	178,405	3,947	Derivatives designated for hedge accounting	–2,542

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)
	EUR in millions	EUR in millions		EUR in millions
Assets				
Interest risk				
Interest-related transactions: interest rate swap	19,973	157	Derivatives designated for hedge accounting	–244
Liabilities and equity				
Interest risk				
Interest-related transactions: interest rate swap	165,288	3,595	Derivatives designated for hedge accounting	446

Analysis of par values of hedging instruments according to remaining terms as of 31 December 2019

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	300	0	589	8,329	9,687
Liabilities and equity					
Interest risk					
Interest-related transactions: interest rate swap	1,825	1,375	13,076	85,198	76,930

Analysis of par values of hedging instruments by remaining terms as of 31 December 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

(65) Additional disclosures on derivatives

Analysis of derivatives by class

	Par value		Fair values 31 Dec. 2019		Fair values 31 Dec. 2018	
	31 Dec. 2019	31 Dec. 2018	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	490,412	454,253	8,134	5,188	6,593	5,913
Currency-related derivatives	200,301	196,941	8,072	3,916	7,993	6,494
Credit derivatives	0	10	0	0	0	0
Total	**690,714**	**651,203**	**16,205**	**9,104**	**14,586**	**12,407**

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

Analysis of derivatives by counterparty

	Par value		Fair values 31 Dec. 2019		Fair values 31 Dec. 2018	
	31 Dec. 2019	31 Dec. 2018	positive	negative	positive	negative
	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions	EUR in millions
OECD banks	677,606	638,428	15,368	8,978	13,987	12,165
Non-OECD banks	189	441	0	4	0	14
Other counterparties	10,554	9,966	816	28	586	74
Public sector	2,365	2,369	22	94	13	154
Total	**690,714**	**651,203**	**16,205**	**9,104**	**14,586**	**12,407**

The analysis includes financial and credit derivatives which are presented in the items Derivatives designated for hedge accounting and Other derivatives. Embedded derivatives that must be bifurcated are not included.

The economic hedge effect of financial derivatives with an aggregate principal amount of EUR 613.8 billion (31 Dec. 2018: EUR 585.0 billion) is reflected in the accounts; it was not possible to reflect the risk-mitigating impact of the remaining financial derivatives in the accounts (hedge accounting).

Unchanged from 31 December 2018, 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 1,197 million (31 Dec. 2018: EUR 2,851 million) was provided, which was recognised in Loans and advances to banks and customers.

Unchanged from 31 December 2018, KfW Group did not receive any collateral (in the form of securities) under derivative transactions that can be resold or repledged at any time without payments by the protection seller being past due.

However, liquid collateral totalling EUR 8,846 million (31 Dec. 2018: 4,978 million) was received, which was recognised in 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

	2019 EUR in millions	2018 EUR in millions
As of 1 Jan.	–93	–91
Addition	–23	–14
Reversal	14	13
Exchange rate changes	–2	–1
As of 31 Dec.	**–104**	**–93**

The net gains/losses from financial derivatives not qualifying for hedge accounting includes amortisation effects in the amount of EUR 8 million (2018: EUR 9 million).

(66) Additional disclosures on Liabilities to banks

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Carrying amount	255	240
Repayment amount at maturity	245	245
Difference	**–10**	**5**

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.

(67) Additional disclosures on Liabilities to customers

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Carrying amount	1,464	1,659
Repayment amount at maturity	2,234	2,765
Difference	**770**	**1,105**

Of the difference between the repayment amount at maturity and the carrying amount, EUR 772 million (31 Dec. 2018: 1,105 million) is attributable to borrowings for which the repayment amount builds up as a result of the capitalisation over time of interest due.

(68) Additional disclosures on Certificated liabilities

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

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Carrying amount	11,294	10,967
Repayment amount at maturity	12,267	12,905
Difference	**973**	**1,938**

Of the difference between the repayment amount at maturity and the carrying amount, 2,220 million (31 Dec. 2018: EUR 3,115 million) is attributable to borrowings for which the repayment amount builds up as a result of the capitalisation over time of interest due.

(69) Contractual payment obligations arising from financial instruments

Analysis of payment obligations by maturity range as of 31 December 2019[1)]

	Up to 1 month EUR in millions	More than 1 and up to 3 months EUR in millions	More than 3 months and up to 1 year EUR in millions	More than 1 and up to 5 years EUR in millions	More than 5 years EUR in millions	Total EUR in millions
Liabilities to banks and customers	9,537	2,763	574	1,406	12,457	26,736
Certificated liabilities	36,347	25,058	53,542	224,913	107,964	447,824
Net obligations arising from derivative financial instruments	–1,118	–561	–2,530	–6,928	–5,288	–16,425
thereof Gross obligations arising from derivative financial instruments	*26,520*	*22,764*	*44,307*	*90,134*	*31,102*	*214,827*
Obligations arising from on-balance sheet financial instruments	**44,766**	**27,260**	**51,586**	**219,391**	**115,132**	**458,135**
Obligations arising from off-balance sheet transactions	**87,327**	**0**	**0**	**0**	**0**	**87,327**
Total	**132,093**	**27,260**	**51,586**	**219,391**	**115,132**	**545,462**

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

Analysis of payment obligations by maturity range as of 31 December 2018[1)]

	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
thereof Gross obligations arising from derivative financial instruments	*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 liabilities under derivative financial instruments comprise payment obligations which are offset against the corresponding payment claims from derivative contracts; the gross liabilities are reported as liabilities under derivative financial instruments. Off-balance sheet transactions are generally allocated to the first maturity range.

The maturity analysis of lease liabilities as lessee is reported under Other notes (in the “Leasing transactions as lessee” section).

(70) Disclosures on repurchase agreements

Disclosures on repo transactions

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Carrying amount of securities sold under repo transactions that continue to be recognised in Securities and investments	217	126
Liabilities to banks (countervalue)	217	121

The fair value of interest-bearing securities sold under repo transactions that continue to be recognised in Securities and investments totals EUR 217 million (31 Dec. 2018: EUR 125 million). The fair value of the corresponding repayment obligations is EUR 217 million (31 Dec. 2018: EUR 121 million).

Moreover, as in 2018, 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.

As in 2018, the 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 being past due.

As in 2018, the group neither pledged nor accepted any liquid collateral.

Disclosures on reverse repo transactions

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Loans and advances to banks (countervalue)	2,274	3,027
Loans and advances to customers (countervalue)	0	0
Total	**2,274**	**3,027**

The fair value of interest-bearing securities purchased under reverse repos that are not recognised amounts to EUR 2,335 million (31 Dec. 2018: EUR 3,145 million).

Moreover, 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, unchanged from 31 December 2018.

The 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, unchanged from 31 December 2018.

As in 2018, the group neither pledged nor accepted any liquid collateral.

(71) 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 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, as a rule, perform multiple transaction payment netting with repo transactions, the requirements for the offsetting of financial assets and financial liabilities are not met for such KfW 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 2019

	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	21,416	6,044	15,372	7,419	7,920	33
Reverse repos	2,274	0	2,274	217	2,056	0
Total	**23,689**	**6,044**	**17,646**	**7,636**	**9,976**	**33**

Disclosures on financial liabilities with netting agreements as of 31 December 2019

	Carrying amount of financial liabilities before off-setting (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	17,839	8,858[1)]	8,981	7,419	1,185	376
Repos	217	0	217	217	0	0
Total	**18,056**	**8,858**	**9,198**	**7,636**	**1,185**	**376**

[1)] Thereof receivables from cash collateral for OTC derivatives with EUREX as the central counterparty in the amount of EUR 2,815 million

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 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 off-setting (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 [1)]	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**

[1)] Thereof receivables from cash collateral for OTC derivatives with EUREX as the central counterparty in the amount of EUR 3,863 million

Other notes

(72) Off-balance sheet transactions

Analysis by class

	31 Dec. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Irrevocable loan commitments	83,108	84,116
Financial guarantee contracts	1,375	1,145
Contingent liabilities from financial guarantees	1,275	1,166
Other contingent liabilities	2,048	1,711
Total	**87,806**	**88,139**

All off-balance-sheet transactions are disclosed in the Notes at their par values less any related provisions.

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 were made.

(73) 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. 2019 EUR in millions	31 Dec. 2018 EUR in millions
Loans and advances to banks	839	912
Loans and advances to customers	10,840	11,297
Securities and investments	5,196	4,623
Assets held in trust	**16,875**	**16,832**
Liabilities to banks	0	0
Liabilities to customers	16,875	16,832
Liabilities held in trust	**16,875**	**16,832**

EUR 12,494 million (31 Dec. 2018: EUR 12,439 million) of the assets held in trust is attributable to the business sector Promotion of developing countries and emerging economies. Additional transactions with the Federal Government as trustor in the amount of EUR 3,552 million (31 Dec. 2018: EUR 3,567 million) are transactions mandated by the German Federal Government in accordance with Article 2 (4) of the KfW Law and are included in Securities and investments.

Volume of administered loans granted (loans in the name and for the account of third parties)

	31 Dec. 2019	31 Dec. 2018
	EUR in millions	EUR in millions
Administered loans	18,646	17,975

(74) Leasing transactions as lessee

Disclosures on lessee agreements as of 31 December 2019

	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
Lease liabilities (undiscounted)	11	45	14	70

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

Contracts where the group is a lessee (including real estate leases) disclosed the previous year were classified as operating leases; the corresponding rental payments were included in Administrative expense in the previous year.

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.

(75) Average number of employees during the financial year

	2019	2018
Female employees	3,243	3,081
Male employees	3,462	3,294
Total	**6,705**	**6,376**
Staff not covered by collective agreements	*4,669*	*4,474*
Staff covered by collective agreements	*2,036*	*1,902*

(76) 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

	2019	2018
	EUR in thousands	**EUR in thousands**
Members of the Executive Board	3,643.2	3,132.1
Former members of the Executive Board and their surviving dependants	4,674.9	4,767.7
Members of the Board of Supervisory Directors	190.6	185.0
Total	**8,508.7**	**8,084.8**

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 financial years 2019 and 2018[1)]

	Salary		Other remuneration		Total		Additions to pension provisions[2)]	
	2019	2018	2019	2018	2019	2018	2019	2018
	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)	772.5	760.4	30.7	30.7	803.2	791.1	868.4	280.6
Dr Ingrid Hengster	555.7	544.1	37.0	36.7	592.7	580.8	954.7	371.7
Melanie Kehr[3)]	436.8	–	29.5	–	466.3	–	313.0	–
Bernd Loewen	613.2	597.6	40.1	39.4	653.3	637.0	1,168.1	123.2
Prof. Dr Joachim Nagel	535.0	526.7	27.1	35.1	562.1	561.8	808.6	376.5
Dr Stefan Peiß	543.1	534.6	22.5	26.8	565.6	561.4	1,017.8	72.9
Total	**3,456.3**	**2,963.4**	**186.9**	**168.7**	**3,643.2**	**3,132.1**	**5,130.6**	**1,224.9**

1) Amounts in the table are subject to rounding differences.
2) The discount rate for pension obligations decreased in 2019 due to the development in long-term capital market rates from 2.07% (31 Dec. 2018) to 1.34% (31 Dec. 2019).
3) From 1 March 2019

Responsibilities

The Presidial and Nomination Committee has discussed the Executive Board remuneration 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 remuneration 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 remuneration system.

The Presidial and Nomination Committee discussed remuneration issues during the reporting year, on 8 April 2019 and 11 December 2019, and on 11 December 2019 resolved an adjustment to Executive Board remunerations.

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 expenses.

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 2019.

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 past 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. One member of the KfW Executive Board who was first appointed to the Board in 2006 and subsequently reappointed also has the option of retiring at their own request at the age of 63. Dr Norbert Kloppenburg received a contractually granted and grandfathered temporary allowance from 1 November 2017 to 30 April 2019.

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 compensation 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 2019 and 2018:

Pension payments to former Executive Board members or their surviving dependants

	Headcount 2019	**EUR in thousands 2019**	**Headcount 2018**	**EUR in thousands 2018**
Former members of the Executive Board	18	3,694.3	19	3,875.7
Surviving dependants	9	980.6	10	892.0
Total	**27**	**4,674.9**	**29**	**4,767.7**

Provisions for pension obligations to former members of the Executive Board and their surviving dependants in the amount of EUR 72,896 thousand (31 Dec. 2018: EUR 69,601 thousand) were set up at the end of financial year 2019.

As in the previous year, no loans were granted to former Executive Board members or their surviving dependants in financial year 2019.

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, the 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 received no 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 2019; 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 financial year 2019

No.	Name	Dates of membership	Board of Supervisory Directors membership[1)]	Committee membership[1)]	Daily allowance[3)]	Total
		2019	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
1.	Olaf Scholz	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
2.	Peter Altmaier	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
3.	Doris Ahnen[2)]	1 Jan. –31 Dec.	5.1	0.5	0.2	5.8
4.	Sören Bartol	1 Jan. –31 Dec.	5.1	1.5	0.6	7.2
5.	Dr Holger Bingmann	1 Jan. –31 Dec.	5.1	0.5	0.6	6.2
6.	Volker Bouffier[2)]	1 Jan. –31 Dec.	5.1	1.2	0.0	6.3
7.	Robert Feiger	1 Jan. –31 Dec.	5.1	0.6	0.2	5.9
8.	Verena Göppert	1 Jan. –31 Dec.	5.1	0.0	0.0	5.1
9.	Olav Gutting	1 Jan. –31 Dec.	5.1	0.5	0.8	6.4
10.	Dr Louis Hagen	1 Jan. –31 Dec.	5.1	1.2	0.2	6.5
11.	Reinhold Hilbers[2)]	1 Jan. –31 Dec.	5.1	1.8	0.4	7.3
12.	Reiner Hoffmann	1 Jan. –31 Dec.	5.1	1.2	0.2	6.5
13.	Gerhard Hofmann	1 Jan. –31 Dec.	5.1	1.2	1.0	7.3
14.	Dr Bruno Hollnagel	1 Jan. –31 Dec.	5.1	0.0	0.6	5.7
15.	Andreas Ibel	1 Jan. –31 Dec.	5.1	0.0	0.2	5.3
16.	Bartholomäus Kalb	1 Jan. –31 Dec.	5.1	0.6	1.0	6.7
17.	Julia Klöckner	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
18.	Andrea Kocsis	1 Jan. –31 Dec.	5.1	0.0	0.0	5.1
19.	Stefan Körzell	1 Jan. –31 Dec.	5.1	1.2	0.4	6.7
20.	Dr Joachim Lang	1 Jan. –31 Dec.	5.1	1.2	0.0	6.3
21.	Lutz Lienenkämper[2)]	1 Jan. –31 Dec.	5.1	1.2	0.4	6.7
22.	Heiko Maas	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
23.	Dr Gerd Müller	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
24.	Dr Hans-Walter Peters	1 Jan. –31 Dec.	5.1	2.5	0.0	7.6
25.	Eckhardt Rehberg	1 Jan. –31 Dec.	5.1	1.8	0.2	7.1
26.	Dr Johannes-Jörg Riegler	1 Jan. –31 Dec.	5.1	0.6	1.0	6.7
27.	Joachim Rukwied	1 Jan. –31 Dec.	5.1	0.6	0.0	5.7
28.	Andreas Scheuer	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
29.	Helmut Schleweis	1 Jan. –31 Dec.	5.1	2.5	0.0	7.6
30.	Carsten Schneider	1 Jan. –31 Dec.	5.1	1.2	0.6	6.9
31.	Svenja Schulze	1 Jan. –31 Dec.	0.0	0.0	0.0	0.0
32.	Holger Schwannecke	1 Jan. –31 Dec.	5.1	1.5	0.0	6.6
33.	Edith Sitzmann[2)]	1 Jan. –31 Dec.	5.1	0.0	0.4	5.5
34.	Peter Strobel[2)]	1 Jan. –31 Dec.	5.1	0.0	0.6	5.7
35.	Heike Taubert[2)]	1 Jan. –31 Dec.	5.1	0.0	0.2	5.3
36.	Dr Florian Toncar	1 Jan. –31 Dec.	5.1	1.2	0.2	6.5
37.	Dr Martin Wansleben	1 Jan. –31 Dec.	5.1	0.5	0.0	5.6
Total			**153.0**	**26.8**	**10.0**	**189.8**

[1)] The amounts had not yet been paid out as of the reporting date 31 December 2019.
[2)] Amount governed by state law.
[3)] Amounts for financial year 2019 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 financial year 2018

No.	Name	Dates of membership	Board of Supervisory Directors membership[1]	Committee membership[1]	Daily allowance[4]	Total
		2018	EUR in thousands	EUR in thousands	EUR in thousands	EUR in thousands
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**	**185.0**

[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.

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 by KfW 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. There are currently no deductibles 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.

(77) Related party disclosures

Transactions between related parties and KfW Group must be disclosed in accordance with IAS 24 requirements. KfW Group's related parties include its subsidiaries which are not consolidated for reasons of immateriality, joint ventures, associates, KfW shareholders, interests held by the Federal Government over which it directly has significant influence, key management personnel and their family members. Natural persons in key management positions considered to be related parties in accordance with IAS 24 include the members of the Executive Board, the Directors of KfW and the members of the Board of Supervisory Directors, members of the management boards and, if applicable, of the supervisory boards of all consolidated subsidiaries and their close family members. Transactions with related parties are concluded at arm's length as part of operating activities.

KfW has exercised the relief option in accordance with IAS 24.25 for government-related entities.

Transactions with shareholders

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 2019 are covered by the rules and regulations set forth in the KfW Law. This also includes guarantees received for 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). Transactions with the Federal Government are, as a rule, offset by countertrade transactions with a third party. They do not constitute transactions within the meaning of IAS 24. For this reason, the treatment under IAS 24 is exclusively limited to business relationships with the Federal Government.

Key figures of the statement of financial position: KfW Group reported receivables in the amount of EUR 21.3 billion (31 Dec. 2018: EUR 21.9 billion) arising from business relationships with shareholders, resulting in particular from the promotional mandate. These include, for example, the holding arrangements and the BAföG government loans. Notes from the liquidity portfolio totalling EUR 3.3 billion

(31 Dec. 2018: EUR 3.3 billion) are held under Securities and investments. KfW reported claims for reimbursement from the Federal Government in the amount of EUR 626 million (31 Dec. 2018: EUR 613 million) under Other assets; these were offset in the same amount by liabilities relating to agency agreements. The assets were offset by liabilities in the amount of EUR 5.6 billion (31 Dec. 2018: EUR 4.9 billion). These primarily included the liabilities from dividend income to be paid to the Federal Government. Interest rate swaps are also contracted with the Federal Government to hedge interest risk positions. This resulted in a negative fair value of the hedging instruments of EUR 93 million (31 Dec. 2018: EUR 153 million).
Irrevocable loan commitments of around EUR 13 billion had been granted under BAföG government loans as of 31 December 2019 (31 Dec. 2018: EUR 13 billion). However, the group received loan commitments and guarantees from the shareholders in the amount of EUR 65 billion, including for the market funds business of the business sector Promotion of developing countries and emerging economies, for mandated transactions and for project and real estate financing.
Transactions with shareholders resulted in net interest income of EUR 30 million (2018: EUR 51 million). There were also agency agreements between the Federal Government and KfW, which are reflected in net commission income, in particular. Please refer to the information provided in the Notes on revenue from contracts with customers, net commission income and trust activities.

Transactions with interests held by the Federal Government
KfW maintains credit balances at Deutsche Bundesbank in the amount of EUR 28 billion (31 Dec. 2018: EUR 17 billion). This resulted in negative interest income of EUR 122 million (2018: EUR 65 million).
Transactions with the remainder of the interests held by the Federal Government primarily include loans in the amount of EUR 592 million (31 Dec. 2018: EUR 544 million) in the course of corporate financing; securities and investments of EUR 27 million (31 Dec. 2018: EUR 244 million) in the form of notes from the liquidity portfolio; and commitments and guarantees granted of EUR 137 million (31 Dec. 2018: EUR 227 million). This resulted in particular in net interest income in the amount of EUR 11 million (2018: EUR 18 million).

Transactions with group companies
Transactions with group companies resulted in loans of EUR 1 million (31 Dec. 2018: EUR 1 million). These were offset by other liabilities to tbg of EUR 36 million (31 Dec. 2018: EUR 26 million). Net interest income of EUR 6 million (2018: EUR 12 million) largely comprises dividend income.

Transactions with key persons
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. Under its promotional mandate, KfW primarily disbursed education financing grants or direct loans of EUR 11.7 thousand (31 Dec. 2018: EUR 16.6 thousand). 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.
Please refer to the remuneration report for details on remuneration of the Executive Board and the Board of Supervisory Directors.

(78) Auditor's fees

	2019 EUR in thousands	2018 EUR in thousands
Audit	3,880	5,209
Other attestation services	885	854
Tax advisory services	0	0
Other services	0	0
Total	**4,766**	**6,064**

(79) 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 made investments in ABS and ABCP transactions as part of liquidity management and financing climate and environmental protection projects, and until the end of 2019, such investments were also made to promote SME financing. Moreover, the business sector Financial markets also manages an existing portfolio to which no further investments are added. This portfolio currently consists of securities issued since 2001.

As of 31 December 2019, the carrying amount of the positions held totalled EUR 5.5 billion (31 Dec. 2018: EUR 5.3 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 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 pre-export financing structures.

As of 31 December 2019, the carrying amount of the positions held totalled EUR 3.0 billion (31 Dec. 2018: EUR 3.7 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 2019, the carrying amount of the positions held totalled EUR 0.2 billion (31 Dec. 2018: 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 December 2019

	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	2,856	5,606	20	238
Risk and other provisions	19	1	0	0
Max. risk of loss	**2,837**	**5,606**	**20**	**238**

Maximum risk of loss as of 31 December 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**

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.

(80) Disclosures on shareholdings

Subsidiaries included in the consolidated financial statements

Name/registered office	Capital share	Equity (IFRS) as of 31 Dec. 2019	Equity (IFRS) as of 31 Dec. 2018
	%	EUR in millions	EUR in millions
KfW IPEX-Bank GmbH, Frankfurt am Main	100.0	3,459	3,395
DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne	100.0	2,852	2,906
KfW Beteiligungsholding GmbH, Bonn	100.0	3,267	3,188
Interkonnektor GmbH, Frankfurt am Main	100.0	92	74
KfW Capital GmbH & Co. KG, Frankfurt am Main	100.0	241	24

Associates included in the consolidated financial statements using the equity method

Name/registered office	Capital share	Equity as of 30 Sept. 2019	Equity as of 30 Sept. 2018
	%	EUR in millions	EUR in millions
Microfinance Enhancement Facility S.A., Luxembourg	19.2	517	501
Green for Growth Fund, Southeast Europe S.A., Luxembourg	13.2	411	371
AF Eigenkapitalfonds für deutschen Mittelstand GmbH & Co KG, Munich	47.5	85	113
coparion GmbH & Co. KG, Cologne	16.4	84	45
Name/registered office	**Capital share**	**Equity as of 31 Dec. 2019**	**Equity as of 31 Dec. 2018**
	%	EUR in millions	EUR in millions
DC Nordseekabel GmbH und Co. KG, Bayreuth	50.0	760	602

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.

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).

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 will be 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, three joint ventures, seven 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 0.04% of KfW Group's total assets.

List of KfW Group shareholdings as of 31 December 2019

No.	Name	Place	Capital share in %	CC[1]	Exchange rate EUR 1.00 = CU as of 31 Dec. 2019[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	2,472,195	–54,571
2	Interkonnektor GmbH[6]	Frankfurt am Main	100.0	EUR	1.0000	81,874	–1,810
3	KfW Beteiligungsholding GmbH[6]	Bonn	100.0	EUR	1.0000	1,995,503	–220,412
4	KfW Capital GmbH & Co. KG[6]	Frankfurt am Main	100.0	EUR	1.0000	219,526	0
B. Subsidiaries not included in the consolidated financial statements							
5	Finanzierungs- und Beratungsgesellschaft mbH[6]	Berlin	100.0	EUR	1.0000	4,896	–105
6	tbg Technologie-Beteiligungsgesellschaft mbH[6]	Bonn	100.0	EUR	1.0000	66,099	6,082
C. Joint ventures not included in the consolidated financial statements							
7	Deutsche Energie-Agentur GmbH (dena)[5]	Berlin	26.0	EUR	1.0000	5,178	38
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	95,389	4,213
9	Berliner Energieagentur GmbH[5]	Berlin	25.0	EUR	1.0000	6,665	607
10	eCapital Technologies Fonds II GmbH & Co. KG[5]	Münster	24.8	EUR	1.0000	13,031	–545
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	1.1234	–2,152	165
2	Sperber Rail Holdings Inc.[5]	Wilmington, USA	100.0	USD	1.1234	378	233
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	4,078,858	0

List of KfW Group shareholdings as of 31 December 2019

No.	Name	Place	Capital share in %	CC[1]	Exchange rate EUR 1.00 = CU as of 31 Dec. 2019[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	16,278	663
B. Other shareholdings (only capital shares totalling at least 20%)							
2	Aavishkaar Frontier Fund	Ebène Cyber-City, Mauritius	20.8	USD	1.1234	24,509	–1,082
3	Ace Power Embilipitiya Pvt Ltd.	Colombo, Sri Lanka	26.0	LKR	203.6295	4,736,828	1,708,229
4	ACON Latin America Opportunities Fund IV-A, L.P.	Toronto, Canada	39.9	USD	1.1234	65,839	1,924
5	ACON Latin America Opportunities Fund-A, L.P.	Toronto, Canada	40.0	USD	1.1234	19,230	1,420
6	ACON Retail MXD, L.P.	Toronto, Canada	100.0	USD	1.1234	5,944	–3,136
7	Adobe Social Mezzanine Fund I, L.P.	Montreal, Canada	24.8	USD	1.1234	14,801	543
8	ADP Enterprises W.L.L.	Manama, Bahrain	23.3	EUR	1.0000	252,162	67,291
9	ADP II Holding 11 S.A.R.L.	Munsbach, Luxembourg	33.3	USD	1.1234	5)	5)
10	Advent Latin American Private Equity Fund III–B, L.P.	Wilmington, USA	100.0	USD	1.1234	1,640	119
11	AEP China Hydro Ltd.	Ebène Cyber-City, Mauritius	30.2	USD	1.1234	50,579	–5,056
12	AfricInvest III – SPV 1	Port Louis, Mauritius	21.8	EUR	1.0000	58,060	–606
13	Agrofundo Brasil VI Fundo de Investimento em Participações Multiestratégia	São Paulo, Brazil	29.9	BRL	4.5127	452,826	210,521
14	AO Bucharagips	Kogon, Uzbekistan	24.9	EUR	1.0000	1,363	1,010
15	Apis Growth 2 Ltd.	Ebène Cyber-City, Mauritius	25.6	USD	1.1234	39,903	2,391
16	Banque Nationale de Développement Agricole S. A.	Bamako, Mali	21.4	XOF	655.9570	53,154,335	7,978,244
17	Banyan Tree Growth Capital, LLC	Mauritius, Mauritius	27.0	USD	1.1234	34,843	–1,018
18	Benetex Industries Ltd.	Dhaka, Bangladesh	28.3	BDT	95.3767	5)	5)
19	Berkeley Energy Wind Mauritius Ltd.	Ebène Cyber-City, Mauritius	25.8	EUR	1.0000	64,261	–21,164
20	CGFT Capital Pooling GmbH & Co. KG	Berlin, Germany	40.0	EUR	1.0000	9,531	380
21	CoreCo Central America Fund I, L.P.	Wilmington, USA	22.0	USD	1.1234	28,329	–961
22	Crescera Investimentos Growth Capital Fund I-B, L.P.	George Town, Cayman Islands	20.0	USD	1.1234	31,373	4,581
23	Darby Latin American Private Debt Fund IIIA, L.P.	Toronto, Canada	37.6	USD	1.1234	9,377	–418
24	Deep Catch Namibia Holdings (Pty) Ltd.	Windhoek, Namibia	38.6	NAD	15.7158	124,629	13,329

List of KfW Group shareholdings as of 31 December 2019

No.	Name	Place	Capital share in %	CC[1]	Exchange rate EUR 1.00 = CU as of 31 Dec. 2019[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	34.6	USD	1.1234	37,948	–5,896
26	Emerald Sri Lanka Fund I Ltd.	Ebène Cyber-City, Mauritius	23.5	USD	1.1234	13,632	–921
27	Emerging Europe Leasing and Finance (EELF) B.V.	Amsterdam, Netherlands	25.0	EUR	1.0000	918	–23
28	EMF NEIF I (A), L.P.	Fareham, United Kingdom	28.1	USD	1.1234	28,376	–28,968
29	EMX Capital Partners, L.P.	Toronto, Canada	20.1	USD	1.1234	64,022	7,282
30	Frontier Bangladesh II, L.P.	George Town, Cayman Islands	20.0	USD	1.1234	17,031	–1,896
31	Grassland Finance Ltd.	Hong Kong, Hong Kong	24.9	CNY	7.8205	463,533	19,100
32	Kandeo Fund II (A), L.P.	Toronto, Canada	53.1	USD	1.1234	37,368	–1,205
33	Kendall Court Mezzanine (Asia) Bristol Merit Fund, L.P.	George Town, Cayman Islands	24.4	USD	1.1234	11,011	–1,761
34	Kibele B.V.	Amsterdam, Netherlands	22.3	USD	1.1234	[5]	[5]
35	Knauf Gips Buchara OOO	Bukhara, Uzbekistan	25.0	EUR	1.0000	20,258	5,194
36	Knauf Gypsum Philippines Inc.,	Makati, Philippines	25.0	PHP	56.9000	1,730,364	–224,471
37	Leiden PE II, L.P.	Toronto, Canada	26.6	USD	1.1234	52,034	487
38	Lereko Metier REIPPP Fund Trust	Sandhurst, South Africa	32.3	ZAR	15.7773	828,149	35,611
39	Lereko Metier Solafrica Fund I Trust	Johannesburg, South Africa	47.5	ZAR	15.7773	211,020	30,406
40	Lovcen Banka AD	Podgorica, Montenegro	27.5	EUR	1.0000	15,539	1,768
41	MC II Pasta Ltd.	Qormi, Malta	36.1	EUR	1.0000	[5]	[5]
42	Medisia Investment Holdings Pte Ltd.	Singapore, Singapore	32.7	USD	1.1234	114,042	30,915
43	Metier Retailability en Commandite Partnership	Sandhurst, South Africa	23.8	ZAR	15.7773	457,720	35,422
44	Navegar II (Netherlands) B.V.	Amsterdam, Netherlands	29.2	USD	1.1234	[5]	[5]
45	Operadora de Servicios Mega, S.A. de C.V., SOFOM E.R.	Zapopan, Mexico	21.9	MXN	21.2202	1,005,136	87,751
46	Orilus Investment Holdings Pte. Ltd.	Singapore, Singapore	33.0	USD	1.1234	79,936	–232
47	Russia Partners Technology Fund L.P.	George Town Cayman Islands	21.6	USD	1.1234	119,492	19,467
48	SEAF Central and Eastern Europe Growth Fund LLC	Wilmington, USA	23.9	USD	1.1234	87	–686
49	Sierra Madre Philippines I, L.P.	George Town, Cayman Islands	20.0	USD	1.1234	5,857	–1,427

List of KfW Group shareholdings as of 31 December 2019

No.	Name	Place	Capital share in %	CC[1]	Exchange rate EUR 1.00 = CU as of 31 Dec. 2019[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%)							
50	Stratus Capital Partners B, L.P.	Edinburgh, United Kingdom	75.0	USD	1.1234	19,902	–1,048
51	Stratus SCP Fleet Fundo de Investimento em Participações – Multiestratégia	São Paulo, Brazil	39.7	BRL	4.5127	44,065	305
52	Takura II Feeder Fund Partnership	Cape Town, South Africa	25.0	USD	1.1234	84,837	38,041
53	The Kibo Fund LLC.	Ebène CyberCity, Mauritius	20.0	USD	1.1234	46,434	5,257
54	Tolstoi Investimentos S.A.	São Paulo, Brazil	31.1	BRL	4.5127	[5]	[5]
55	TOO Isi Gips Inder	Inderborskij, Kazakhstan	40.0	EUR	1.0000	1,457	103
56	TOO Knauf Gips Kaptschagaj	Kapchagay, Kazakhstan	40.0	EUR	1.0000	15,244	7,031
57	Triple P SEA Financial Inclusion Fund LP	Singapore, Singapore	25.2	USD	1.1234	6,290	–1,442
58	Vietnam Opportunity Fund II PTE. Ltd.	Singapore, Singapore	32.0	USD	1.1234	[5]	[5]
59	Whitlam Holding PTE. Ltd.	Singapore, Singapore	38.7	USD	1.1234	53,064	24,125
60	Worldwide Group, Inc	Charlestown, Saint Kitts and Nevis	33.4	USD	1.1234	25,462	1,225
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	759,197	10,862
B. Joint ventures not included in the consolidated financial statements							
2	DC Nordseekabel Beteiligungs GmbH	Bayreuth	50.0	EUR	1.0000	63	5
3	DC Nordseekabel Management GmbH	Bayreuth	50.0	EUR	1.0000	114	7
Shareholdings of KfW Capital GmbH & Co. KG							
A. Subsidiaries not included in the consolidated financial statements							
1	KfW Capital Verwaltungs GmbH	Frankfurt am Main	100.0	EUR	1.0000	19	–7
B. Other shareholdings (only capital shares totalling at least 20%)							
2	Hedosophia Partners III SCSp	Luxembourg	20.0	EUR	1.0000	5,079	0

[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 financial reporting framework [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 2019 is available.
The data is based on the most recent annual financial statements of the investee (where available).

Attestations

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, 25 February 2020
KfW

Dr Günther Bräunig
(Chief Executive Officer)

Dr Ingrid Hengster

Melanie Kehr

Bernd Loewen

Prof. Dr Joachim Nagel

Dr Stefan Peiß

Independent auditor's report[1)]

To KfW

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, 2019, 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, 2019 to December 31, 2019, 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, 2019 to December 31, 2019. In accordance with the German legal requirements, we have not audited the content of the sections "Declaration of compliance" and "Non-financial statement" of the group management report.

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, 2019 and of its financial performance for the fiscal year from January 1, 2019 to December 31, 2019, 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. Our opinion on the group management report does not cover the sections "Declaration of compliance" and "Non-financial statement" of the group management report.

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.

[1)] Translation of the independent auditor's 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.

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.

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 und 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 sections "Declaration of compliance" and "Non-financial statement" of the group management report and the Corporate Governance Report, which we obtained prior to the date of this auditor's report, and the Letter from 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" and „Executive Board, Directors and Managing Directors of KfW Group" of the Annual Report, 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, 3 March 2020

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