One Bank, One Team, One UniCredit.

Capital and balance sheet management
Transform
Enhanced service model
Ethics and Respect
Team 23
Compliance
Grow and strengthen client franchise
Process optimisation
Sustainable results
Sustainability
Paperless bank
Growth engines
Customer experience
Disciplined risk management
"Go-to" bank for SMEs
"Do the right thing!"

2019
Annual Report

Banking that matters.

HypoVereinsbank
Member of UniCredit

Disclaimer
This edition of our annual report is prepared for the convenience of our English-speaking readers. It is based on the German original, which takes precedence in all legal respects.

Financial Highlights

Key performance indicators

	1/1–31/12/2019	1/1–31/12/2018
Net operating profit	€1,556m	€1,931m
Cost-income ratio (based on operating income)	65.4%	60.8%
Profit before tax	€1,361m	€736m
Consolidated profit	€810m	€483m
Earnings per share	€0.99	€0.58

Balance sheet figures/Key capital ratios

	31/12/2019	31/12/2018
Total assets	€303,598m	€287,334m
Shareholders' equity	€18,915m	€18,267m
Common Equity Tier 1 capital[1]	€14,987m	€16,454m
Core capital (Tier 1 capital)[1]	€14,987m	€16,454m
Risk-weighted assets (including equivalents for market risk and operational risk)	€85,454m	€82,592m
Common Equity Tier 1 capital ratio[1,2]	17.5%	19.9%
Core capital ratio (Tier 1 ratio)[1,2]	17.5%	19.9%
Leverage ratio in accordance with Commission Delegated Regulation[1,3]	4.3%	4.9%

1 31 December 2019: in accordance with approved financial statements.
2 Calculated on the basis of risk-weighted assets, including equivalents for market risk and operational risk.
3 Ratio of core capital to the sum total of the exposure values of all assets and off-balance-sheet items.

	31/12/2019	31/12/2018
Employees (in FTEs)	12,194	12,252
Offices	498	503

Ratings

	LONG-TERM	SHORT-TERM	OUTLOOK		CHANGE/ CONFIRMATION
Fitch Ratings					
Bank Ratings					
Derivative Counterparty Rating	BBB+	—	—		4/3/2020
Deposit Rating	BBB+	F2	—		4/3/2020
Issuer Default Rating	BBB+	F2	negative		19/11/2019
Stand-alone Rating	—	—	—	bbb+	19/11/2019
Issue Ratings (unsecured)					
Preferred Senior Unsecured Debt/Senior Preferred Debt Issuance Programme	BBB+	F2	—		4/3/2020
Non-preferred Senior Unsecured Debt	BBB+	F2	—		19/11/2019
Subordinated Debt	BBB	—	—		4/3/2020
Issue Ratings (secured)					
Public Pfandbriefe	AAA	—	stable		31/10/2019
Mortgage Pfandbriefe	AAA	—	stable		3/12/2019
Moody's					
Bank Ratings					
Counterparty Rating	A1	P-1	—		19/6/2018
Deposit Rating	A2	P-1	stable		3/8/2018
Issuer Rating	A2	—	stable		3/8/2018
Stand-alone Rating	—	—	—	baa2	31/5/2017
Issue Ratings (unsecured)					
Preferred Senior Unsecured Debt/Senior Unsecured	A2	P-1	stable		3/8/2018
Non-preferred Senior Unsecured Debt/Junior Senior Unsecured	Baa3	—	—		3/8/2018
Subordinated debt	Baa3	—	—		31/5/2017
Issue Ratings (secured)					
Public Pfandbriefe	Aaa	—	—		23/6/2015
Mortgage Pfandbriefe	Aaa	—	—		23/6/2015
Standard & Poor's					
Bank Ratings					
Resolution Counterparty Ratings	A–	A-2	—		12/12/2019
Issuer Credit Rating	BBB+	A-2	negative		12/12/2019
Stand-alone Rating	—	—	—	bbb+	12/12/2019
Issue Ratings (unsecured)					
Preferred Senior Unsecured Debt/Senior Unsecured	BBB+	A-2	—		12/12/2019
Non-preferred Senior Unsecured Debt/Senior Subordinated	BBB	—	—		12/12/2019
Subordinated debt	BBB–	—	—		12/12/2019

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Corporate structure

Legal corporate structure

UniCredit Bank AG (HVB), formerly Bayerische Hypo- und Vereinsbank Aktiengesellschaft headquartered in Munich, was formed in 1998 through the merger of Bayerische Vereinsbank Aktiengesellschaft and Bayerische Hypotheken- und Wechsel-Bank Aktiengesellschaft. It is the parent company of HVB Group. HVB has been an affiliated company of UniCredit S.p.A., Milan, Italy (UniCredit), since November 2005 and hence a major part of the UniCredit corporate group as a subgroup.

Since the shares held by minority shareholders of HVB were transferred to UniCredit compliant with Section 327a of the German Stock Corporation Act (Aktiengesetz – AktG), as resolved at the Annual General Meeting of Shareholders in June 2007 and entered in the Commercial Register on 15 September 2008, UniCredit has held 100% of the share capital of HVB. Thus, trading in HVB shares officially ceased. As a capital-market-oriented company, HVB remains listed on securities exchanges as an issuer of Pfandbriefe, bonds and certificates, among other things.

Organisation of management and control

Leadership function and Supervisory Board

The Management Board is the management body of HVB and consists of seven members as a basic rule. The Management Board is directly responsible for managing the Bank. It is obliged to act in the interests of the company and to sustainably increase its corporate value. Within the framework of its leadership function, it is responsible above all for corporate planning and strategic orientation, and for ensuring adequate risk management and risk control. The Management Board provides the Supervisory Board with reports at regular intervals, particularly on all issues relevant to corporate planning and strategic development, the course of business, the state of the Bank and its subsidiaries, including the risk situation, and significant compliance issues. The members of the Management Board are jointly responsible for managing the Bank and for the proper business organisation of HVB. The responsibilities of the Management Board of HVB are specified in a schedule of responsibility, which forms part of the Management Board's internal regulations. The Management Board's internal regulations also specify particularly the matters reserved for the Management Board and the requirements for adopting resolutions and the required majorities.

There were no changes to the Management Board in 2019.

The Supervisory Board of the Bank has twelve members and has an equal number of employee and shareholder representatives. The task of the Supervisory Board is to monitor and regularly advise the Management Board as it conducts its business. The Supervisory Board has adopted by-laws specifically defining the details of the work within the Supervisory Board, the creation of committees and their tasks and the tasks of the Chairman of the Supervisory Board. In addition, the by-laws state that certain types of transactions require the approval of the Supervisory Board.

Ms Beate Dura-Kempf resigned as employee representative on the Supervisory Board with effect from the end of 31 January 2019. She was succeeded by Ms Claudia Richter with effect from 8 February 2019 by court appointment. Furthermore, Mr Gianni Franco Papa resigned from the Supervisory Board with effect from the end of 2 June 2019. Mr Gianpaolo Alessandro was elected to the Supervisory Board at the Annual General Meeting held on 3 June 2019. Mr Gianpaolo Alessandro was elected the new Chairman of the Supervisory Board with effect from 3 June 2019. With effect from the end of 27 November 2019, Mr Francesco Giordano resigned from the Supervisory Board. He was succeeded by Mr Olivier Khayat, who was elected to the Supervisory Board at the Extraordinary Shareholders' Meeting held on 28 November 2019.

A list showing the names of all of the members of the Management Board and the Supervisory Board of HVB is given in the Note "Members of the Supervisory Board" and the Note "Members of the Management Board" in the notes to the 2019 consolidated financial statements.

Non-financial reporting
In the context of transposing the Corporate Social Responsibility Directive into German law, certain large companies have been obliged to add a non-financial statement to their group management reports since the 2017 financial year. This non-financial reporting covers labour, social and environmental issues (sustainability), respect for human rights and anti-corruption. As a fully consolidated subgroup of the UniCredit corporate group, HVB Group abstains from publishing its own non-financial statement in accordance with Section 315b (2) of the German Commercial Code (Handelsgesetzbuch – HGB). The non-financial statement is issued, with a discharging effect for HVB, by our parent company, UniCredit S.p.A., Milan, and can be found on UniCredit's website "A Sustainable Bank" (www.unicreditgroup.eu/en/a-sustainable-bank.html).

Overall bank management
HVB Group's objective is to generate a sustainable increase in corporate value. To take account of the need for value-based management, the principle of overall bank management is based on earnings, risk, liquidity and capital aspects. This principle is explained in more detail in the Risk Report (please refer in particular to "Overall bank management" within the section entitled "Implementation of overall bank management" in the Risk Report). The key performance indicators (KPIs) applied within the framework of the overall bank management at HVB Group are stated at the relevant places in the Financial Review.

Business model, main products, sales markets, competitive position and locations in the 2019 financial year
HVB Group is part of UniCredit, a pan-European commercial bank with integrated corporate & investment banking. It offers its broad customer base a banking network across Western, Central and Eastern Europe that is both regional and international in focus. Our integration into UniCredit enables its international network and economies of scale to be exploited. UniCredit has a divisionally and regionally diversified business model. It provides its customers access to banks in 13 core markets and 18 other countries worldwide.

As a universal bank, HVB with its subsidiaries is a provider of banking and financial services in Germany. It offers a comprehensive range of banking and financial products and services to retail, corporate and public-sector customers, international companies and institutional customers. HVB Group has 498 offices around the world – 348 of which are HVB offices in Germany which have been adapted to changing customer behaviour in recent years. In addition to its branch network, customers are served irrespective of their location in HVB's online branch in the retail banking business and through Business Easy in the corporate banking business. A breakdown of the locations of HVB Group's offices by region is shown in the Note "Offices" in the notes to the 2019 consolidated financial statements.

The business segments
HVB Group is divided into the following segments/business segments:
- Commercial Banking
- Corporate & Investment Banking (CIB)
- Group Corporate Centre
- Other

A detailed description of the individual segments/business segments, particularly regarding the customers allocated to them, the products and services offered, the organisational orientation as well as the competitive situation and the locations are contained in the Note "Method of segment reporting by business segment" and the Note "Components of segment reporting by business segment" in the notes to the 2019 consolidated financial statements.

Financial Review (Continued)

Transform 2019 and Team 23

We implemented our three-year group-wide Transform 2019 strategic plan, although the headwind that the industry faced in these years was stronger than we had anticipated. Our new four-year Team 23 strategic plan focuses on growth. We aim to increase and strengthen our customer base and drive forward productivity. In doing so, we intend to deliver sustainable yields, operate reliably with integrity and deal responsibly with resources and the environment; we will also aim to do more than "business as usual". To underpin our growth, in the next four years we will be investing more than previously in further digitalisation, automation and process optimisation, for example, through end-to-end activities. In addition, we will create growth opportunities through greater interaction between business segments and the standardisation of customer platforms. At the same time, a further adjustment of our staffing levels is planned. As in the past, we will do this also in the future through socially compatible measures, i.e. to a large extent via natural fluctuation and partial and early retirement solutions. Moreover, new employment prospects will be created by continuing to promote existing initiatives; severance packages will be concluded where this is not possible. An agreement to this effect was concluded between the senior management and the Central Works Council on 5 December 2019. Our four-year planning is thus embedded in the group-wide Team 23 strategic plan, which is based on four pillars: grow and strengthen client franchise, transform and maximise productivity, disciplined risk management and controls as well as capital and balance sheet management.

Corporate acquisitions and sales, and other major changes in the group of companies included in consolidation

The sale of the associated company SwanCap Partners GmbH accounted for using the equity method was completed with effect from the end of 30 April 2019 (closing).

On 1 August 2019, HJS 12 Beteiligungsgesellschaft mbH, a fully owned subsidiary of UniCredit Bank AG, reached an agreement with an international financial investor on the sale of the shares in Ocean Breeze Energy GmbH & Co. KG. The closing of the transaction took place on 12 December 2019.

In September 2019, HVB Gesellschaft für Gebäude mbH & Co. KG, a fully owned subsidiary of UniCredit Bank AG, reached an agreement with an international asset manager on the sale of the shares held by it in AGROB Immobilien AG. The closing of the transaction took place on 23 October 2019.

As a result of the respective closing, the companies named above left the group of consolidated companies of HVB Group.

Other changes in the group of companies included in consolidation are listed in the Note "Companies included in consolidation" in the notes to the 2019 consolidated financial statements.

Economic report

Underlying economic conditions

Global economic growth has slowed to 2.9% in 2019 compared with the previous year, according to the International Monetary Fund (IMF), although there were some geographical differences. While the USA reported solid growth for 2019, Europe and some emerging markets grew at a slower pace. One of the main reasons for the weaker global economy was a decline in world trade. In addition, economic growth in China contracted in the past year. Even though fiscal stimuli, such as infrastructure projects, are likely to have supported Chinese GDP growth and industrial production in 2019, the trade conflict with the USA and the slowdown in private investments is expected to have had a negative impact.

The US economy was one of the main drivers of growth in the global economy again in 2019, although real GDP growth in the US economy has slowed to 2.3% (from up 2.9% in the previous year according to the US Bureau of Economic Analysis (BEA)). In particular, the tensions between the USA and China and the increased uncertainty this caused undermined confidence among businesses, which we believe is why they postponed or cancelled their investment decisions. The export-oriented manufacturing industry even fell into a technical recession in mid-2019. This was offset by the Trump government's expiring fiscal stimulus, which was largely responsible for real GDP growth in 2018 and 2019 exceeding its long-term potential (of around 1.8% according to UniCredit Research). Moreover, a low level of unemployment of less than 4%, coupled with lower taxes, supported private consumption and provided further positive impetus for overall economic growth.

Growth in the GDP in the eurozone was weaker than expected on account of the lower performance figures recorded by Germany and Italy (1.2% in 2019 according to UniCredit Research compared with 1.9% in 2018 according to EuroStat). In this context, particularly the decline in global trade had a dampening effect, which was reflected in a significant gap in economic activity between the manufacturing industry and the services sector. Despite the ongoing tensions in the trade conflict between the USA and China and between the USA and Europe, the related protectionist measures and the uncertainty surrounding Brexit, investing activities in the eurozone remained fairly stable. Lower oil and energy prices bolstered growth in real household income and corporate profits.

By resuming its bond-buying programme in November last year (amounting to €20 billion per month), the European Central Bank (ECB) returned to a more expansionary monetary policy after letting its buying programme expire completely at the end of 2018. It also lowered the deposit rate to minus 0.5% and introduced a two-tier system for remunerating excess liquidity holdings. The inflation rate in the eurozone rose to 1.2% for 2019 as a whole (according to Eurostat), and was thus again below the ECB's target of close to but below 2.0% in this reporting year. In November 2019, the former head of the International Monetary Fund, Christine Lagarde, succeeded Mario Draghi, whose term of office ended in October.

Financial Review (Continued)

At country level (data according to national statistical offices), the GDP in Germany grew by 0.6% in 2019 compared with 1.5% in 2018, and also in France, growth declined to 1.2% in 2019 compared with 1.7% the previous year. Italy's economic growth also contracted to 0.2% in 2019 compared with 0.9% in 2018. The economic recovery in Spain has slowed further to 1.9% in 2019 after weaker but nevertheless strong growth of 2.6% in 2018.

The lower growth momentum in Germany was largely due to the decline in industrial production and weaker demand from abroad. By contrast, positive impetus for growth came from domestic demand. In addition to a solid increase in private consumer and government spending, GDP growth was supported predominantly by a boost from the construction industry whereas there was a noticeable decline in investments in equipment.

Sector-specific developments

In 2019, the ECB continued to pursue its accommodating monetary policy and was a major factor influencing interest rate levels and spread developments.

In September 2019, the ECB's Governing Council lowered the interest rate on the deposit facility by 10 basis points to minus 0.50%. In addition, the ECB also repeatedly adjusted its outlook for interest rates. Originally, an interest rate hike was not envisaged before the second half of 2020. However, the ECB's Governing Council then announced in September 2019 that it would not raise interest rates before the inflation outlook had risen to the 2.0% target level.

Furthermore, the ECB also decided in September to restart its net bond purchases at rate of €20 billion per month from November 2019. At December 2019, it had purchased €2.6 trillion in assets in total and will reinvest not only the monthly net bond purchases but also maturing assets. At the same time, the ECB has announced that it will continue the net purchases until shortly before the hike in the ECB's key interest rates.

In March 2019, the ECB announced a third series of targeted longer-term refinancing operations (TLTRO III) as a further measure and improved the conditions once again in September. New drawdowns with a term of three years have been possible since September 2019 for seven quarters until March 2021. The interest for TLTRO III is within the range of the main refinancing operations and the interest rate on the deposit facility, whereby the final interest rate will depend, as in the previous programmes, on the development in new loans extended to companies and households without real estate loans.

Furthermore, the ECB has introduced a two-tier system for the interest on reserve holdings which exempts a part of banks' holdings of excess liquidity from the negative deposit facility rate. European banks will thus be partially relieved of the negative interest on their deposits with the central bank.

With regard to political developments, progress in the area of the European deposit insurance scheme (EDIS) is particularly noteworthy. Following the introduction of the European banking supervision and bank resolution, EDIS is the missing link to completing the banking union. The German Federal Minister of Finance made appropriate proposals in November 2019. Germany's proposals envisage the gradual introduction of EDIS as a reinsurance system if, at the same time, several conditions are met, such as a further reduction of risk in banks' balance sheets and a change in the current regulatory treatment of government bonds. The discussion on the subject of EDIS in the Eurogroup in December 2019 showed that political talks on this are still at an early stage and an implementation of EDIS is questionable.

There is also basic political agreement on an enhanced role for the European Stability Mechanism (ESM). Among other things, the mandate of the ESM will be extended to include financial security for bank resolution by the European Single Resolution Board (SRB). In crisis situations, the ESM can provide a credit line to SRB of up to a maximum amount of €68 billion provided the available resources of the Single Resolution Fund have been fully utilised in advance.

The performance of European bank shares lagged behind the overall market in 2019. While the Euro STOXX 50 gained 25.0% in 2019, the STOXX Europe 600 Banks rose only 9.0% in the same period. This is attributable to macroeconomic and political uncertainty and to a further decrease in interest rates and interest expectations. However, the mood for bank shares brightened again from September onwards.

In the USA, the yield on ten-year US treasury bonds fell significantly from over 2.6% at the end of 2018 down to 1.9% at the end of 2019. The yield on the ten-year bonds of the Federal Republic of Germany also fell significantly in 2019 from a positive 17 basis points down to 71 negative basis points in August. The yield then rose again sharply to negative 19 basis points by the end of the year. In our opinion, the substantial decrease in the level of interest rates is attributable to growing political uncertainty and an expected interest rate cut by the Federal Reserve Bank (FED) and the ECB. The 3-month Euribor remained at negative 45 basis points until September but then rose again to negative 39 basis points. In 2019, the euro depreciated slightly against major currencies (US dollar, Swiss franc, Japanese yen and British pound).

Risk premiums for Italian government bonds narrowed sharply in 2019, particularly in the second half of the year. The spread between the ten-year Italian and German government bonds decreased by 90 basis points to 160 basis points at the end of 2019 compared with 250 basis points at the end of 2018. Risk premiums initially rose in the first half of 2019. The strong showing of the Lega in the European elections and the large losses of the Five-Star Movement (M5S) led to tensions between the coalition partners and an increase in risk premiums. At the same time, in a letter to the Italian finance minister, the EU Commission warned that Italy was running the risk of not complying with EU fiscal policy rules. After intensive negotiations between Brussels and Italy, Brussels declared at the beginning of July that it would not initiate an excessive deficit procedure, which clearly brightened the mood. A new government was formed in Italy in August after M5S members had supported a coalition with the Partito Democratico (PD) under Prime Minister Giuseppe Conte. The diminishing political risk resulted in a higher risk appetite on financial markets and a significant reduction in the risk premium for Italian government bonds and bank bonds of Italian banks.

Operating performance of HVB Group

All the statements regarding the operating performance of HVB Group in this Management's Discussion and Analysis refer to the structure of our income statement.

With effect from the end of 2019, HVB changed its measurement method and retrospectively introduced a fair value measurement of investment properties with subsequent correction. The retrospective adjustments are implemented in the following table. Further information on the changes in measurement methods can be found below under "Accounting and Valuation" in the notes to our 2019 consolidated financial statements.

Financial Review (Continued)

INCOME/EXPENSE	2019 € millions	2018 € millions	CHANGE € millions	 in %
Net interest	2,388	2,484	(96)	(3.9)
Dividends and other income from equity investments	24	25	(1)	(4.0)
Net fees and commissions	973	973	—	—
Net trading income	579	693	(114)	(16.5)
Net gains/(losses) on financial assets and				
liabilities at fair value	108	(110)	+ 218	
Net gains/(losses) on derecognition of financial				
instruments measured at cost	13	52	(39)	(75.0)
Net other expenses/income	742	845	(103)	(12.2)
of which: net valuation/disposal of investment properties	405	479	(74)	(15.4)
OPERATING INCOME	**4,827**	**4,962**	**(135)**	**(2.7)**
Payroll costs	(1,453)	(1,468)	+ 15	(1.0)
Other administrative expenses	(1,220)	(1,364)	+ 144	(10.6)
Amortisation, depreciation and impairment losses				
on intangible and tangible assets	(483)	(183)	(300)	>+ 100.0
Operating costs	**(3,156)**	**(3,015)**	**(141)**	**+ 4.7**
OPERATING PROFIT	**1,671**	**1,947**	**(276)**	**(14.2)**
Credit impairment losses IFRS 9	(115)	(16)	(99)	>+ 100.0
NET OPERATING PROFIT	**1,556**	**1,931**	**(375)**	**(19.4)**
Provisions for risks and charges	313	(919)	+ 1,232	
Restructuring costs	(363)	(14)	(349)	>+ 100.0
Net gains/(losses) on disposals on investments	(15)	26	(41)	
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	**1,491**	**1,024**	**+ 467**	**+ 45.6**
Impairment on goodwill	(130)	(288)	+ 158	(54.9)
PROFIT BEFORE TAX	**1,361**	**736**	**+ 625**	**+ 84.9**
Income tax for the period	(551)	(253)	(298)	>+ 100.0
PROFIT AFTER TAX	**810**	**483**	**+ 327**	**+ 67.7**
CONSOLIDATED PROFIT	**810**	**483**	**+ 327**	**+ 67.7**
attributable to the shareholder of UniCredit Bank AG	793	465	+ 328	+ 70.5
attributable to minorities	17	18	(1)	(5.6)

Net interest
At €2,388 million, net interest in the 2019 financial year was slightly lower than the previous-year figure (€2,484 million).

In the Commercial Banking business segment, net interest, at €1,466 million, remained constant compared with the previous year despite the still very low level of interest rates (2018: €1,468 million). In the CIB business segment, net interest declined by 10.1% to €891 million. It was negatively affected in particular by the persistently low interest rate environment. In the Group Corporate Centre business segment, there was a slight rise of €4 million to €60 million in net interest. In the Other business segment, net interest remained unchanged from the previous year at minus €5 million. Within the scope of Consolidation, net interest amounted to minus €24 million, which was slightly higher than the previous year at minus €26 million.

Dividends and other income from equity investments
Dividends and other income from equity investments came to €24 million in the reporting period. These result from income of €23 million from dividends and €1 million from companies accounted for using the equity method. Dividends and other income from equity investments totalling €25 million were generated in the previous year.

Net fees and commissions
In the 2019 reporting year, net fees and commissions is unchanged from the previous year at €973 million. While commission income from securities services for customers, at €566 million, remained at roughly the same level as in the previous year, income from payment transactions rose by €5 million to €298 million, from guarantees by €6 million to €127 million and from the sale of third-party products by €20 million to €105 million. By contrast, there were declines of €13 million to €147 million in fee and commission income from the lending business and of €15 million to €43 million in other commission income. Fee and commission expense comes to €313 million and roughly matches the previous year's level of €311 million.

Net trading income
There was a significant decline of €114 million, or 16.5%, to €579 million in net trading income. The increase in valuation adjustments also had a negative impact in this connection. This relates in particular to credit value adjustments and funding value adjustments in the context of the lower interest rate level in 2019.

Net gains/losses on financial assets and liabilities at fair value
This item reported a gain of €108 million after posting a loss of €110 million in the previous year. The increase in the result from financial liabilities designated at FVTPL from a loss of €95 million to a gain of €54 million is partly due to a positive market environment and an increase in the transaction volume in fixed income, equity and credit products. The net gain from hedge accounting, up from €13 million to €48 million, is largely attributable to the continued decline in interest over the year as the underlying fair value fluctuations have increased significantly with unchanged low hedge inefficiency so that the hedge result has increased in terms of amount.

Net gains/losses on derecognition of financial instruments measured at cost
This item reports a gain of €13 million, which represents a substantial year-on-year decline of €39 million. It mainly includes gains on the sale of assets measured at cost. These are generally intended to be held so that they are sold only in exceptional cases.

Net other expenses/income
Net other expenses/income amounts to €742 million and has decreased by €103 million, or 12.2%, compared with €845 million in the previous year. This includes netted results from the fair value measurement through profit and loss or the sale of investment properties in the amount of €405 million in 2019 (previous year: €479 million).The other expenses and income recognised in this item relate, among other things, to assets that were sold in the reporting year. This relates both to certain investment properties that were sold in 2019, which are reported here with their rental income and with their valuation results, as well as to income and expenses from the operation of the BARD Offshore 1 wind farm, which was handed over to the purchaser in December 2019. For details, please refer to the Note "Net other expenses/income" in the notes to the 2019 consolidated financial statements.

Financial Review (Continued)

Operating costs
Operating costs rose slightly from €3,015 million by €141 million, or 4.7%, to €3,156 million. This is mainly due to the sharp increase of €300 million to €483 million in depreciation, caused primarily by an unscheduled write-down of €315 million on the BARD offshore 1 wind farm; this was classified as "Non-current assets or disposal groups held for sale" at 30 June 2019 and thus written down to the expected selling price. By contrast, payroll costs were down a slight €1,468 million to €1,453 million. Other administrative expenses also fell by a substantial €144 million from €1,364 million to €1,220 million.

Operating profit (before credit impairment losses IFRS 9)
The operating profit of HVB Group fell from €1,947 million in the previous-year period by €276 million, or 14.2%, to €1,671 million in the reporting period. In contrast to previous years, the decline of €135 million in operating income was unable to be offset by lower operating costs in the reporting year as these had also risen by €141 million on account of the non-recurring effect in depreciation, mentioned above. As a result, the cost-income ratio (ratio of operating expenses to operating income) deteriorated from 60.8% at the end of 2018 to 65.4% now.

Credit impairment losses IFRS 9
The increase in the reporting year to minus €115 million from minus €16 million at the end of 2018 is the result of the expected normalisation of this variable. In absolute terms, it continues to reflect the positive economic development in Germany in recent years.

Provisions for risks and charges
In the 2019 reporting year, there was net income from the reversal of provisions for risks and charges of €313 million after net additions of €919 million in the previous-year period. In April 2019, the Bank reached a settlement with the US and New York authorities to conclude the proceedings for violations of US financial sanctions in the period from 2002 to 2012. The amounts payable according to the settlement were lower than the provisions set up for it, which means that it was possible to reverse the excess. The net additions to provisions for risks and charges in 2018 were largely due to the increase in provisions for this matter.

Restructuring costs
The implementation of the four-year Team 23 strategic plan entailed net restructuring costs of €363 million in the reporting year. This amount includes expenses for the recognition of restructuring provisions in connection with measures to boost efficiency and earnings in the multi-year plan 2020–2023 (see the section entitled "Transform 2019 and Team 23" in this Management's Discussion and Analysis). By contrast, the restructuring provision newly set aside in the previous year and the remaining balance of the provision for Transform 2019 were reversed in this item and recognised as income. These provisions essentially cover the provisioning requirements for early retirement or severance payments. In addition, this item includes costs borne for restructuring at UniCredit Services S.C.p.A. which relate to subareas at the company that provide services for HVB Group. UniCredit has concentrated certain activities in this company to leverage synergies within the Group. As UniCredit Services S.C.p.A. charges its costs for services provided on to the service recipient, the restructuring costs are offset by lower costs in the future when costs are charged onwards because HVB Group directly benefits from the lower costs resulting from restructuring measures. Net restructuring costs of €14 million were recognised in the previous year.

Net gains/losses on disposals of investments
This item reports a net loss of €15 million, which is largely attributable to the sale of SwanCap Partners GmbH, an associated company accounted for using the equity method, the subsidiary Ocean Breeze Energy GmbH & Co. KG (company operating the BARD Offshore 1 wind farm), and shares in the subsidiary AGROB Immobilien AG.

Profit before tax and impairment on goodwill
In the 2019 reporting year, HVB Group generated a good profit before tax and impairment on goodwill of €1,491 million, which is a sharp €467 million or 45.6% up on the previous-year period. When comparing figures with the previous year, the non-recurring effects described above should be taken into account. While the sale of the BARD Offshore 1 wind farm entailed charges and restructuring costs in the reporting year, a substantial amount of provisions were set aside in the previous year that were able to be partially reversed in the reporting year.

Impairment on goodwill

In the reporting year, the remaining goodwill of €130 million was completely written off for the Commercial Banking business segment. In the previous year, goodwill of €288 million allocated to the CIB business segment was written off. Further information is provided in this context in the Note "Impairment on goodwill" in the notes to the 2019 consolidated financial statements.

Profit before tax, income tax for the period and consolidated profit

In the 2019 reporting year, HVB Group generated a good profit before tax of €1,361 million.

Income tax expense amounted to €551 million in the reporting period and was thus €298 million higher than the income tax expense in the previous-year period (€253 million). Effects from the release of tax provisions had a tax-reducing effect on the tax expense of the previous year.

After deducting income tax, HVB Group generated a consolidated profit of €810 million in the reporting period, which is significantly higher than the consolidated profit of the previous-year period (€483 million).

Return on allocated capital

The profitability ratio return on allocated capital (RoAC) shows the consolidated profit of HVB Group (accruing to the HVB shareholder) as a ratio of allocated capital. With RoAC, allocated capital is determined on the basis of the average risk-weighted assets (including equivalents for market risk and operational risk) whereby 12.5% equity is allocated to the average risk-weighted assets. In the reporting year, this ratio improved to 7.5% after 4.9% in the previous year.

Appropriation of net income

In the 2019 financial year, the profit disclosed in the annual financial statements of HVB, which forms the basis for the appropriation of profit, amounts to €3,288 million. This consists of the net income of €1,051 million generated in the reporting year less the transfer to other retained earnings of €263 million plus a withdrawal from other retained earnings of €2,500 million. We will propose to the Shareholders' Meeting that a dividend of €3,288 million be paid in total to UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €4.10 per share after around €0.65 for the 2018 financial year. The consolidated profit of €520 million reported in the previous year was distributed to UniCredit in accordance with a resolution adopted by the Shareholders' Meeting on 3 June 2019.

Segment results by business segment

The Other business segment was reported separately from consolidation items for the first time in 2019. The previous-year figures have been restated accordingly. The structure of the income statement used for internal management purposes is shown; any deviations to the presentation in the operating performance are described in the Note "Income statement, broken down by business segment". In the 2019 financial year, all the business segments generated a profit before tax or consolidated profit:

(€ millions)

OPERATING INCOME	1/1–31/12/2019	1/1–31/12/2018
Commercial Banking	2,257	2,308
Corporate & Investment Banking	1,927	1,985
Group Corporate Centre	134	161
Other	69	76
Consolidation	(19)	(21)
Total	**4,368**	**4,509**

(€ millions)

PROFIT/(LOSS) BEFORE TAX	1/1–31/12/2019	1/1–31/12/2018
Commercial Banking	523	120
Corporate & Investment Banking	582	242
Group Corporate Centre	344	621
Other	43	93
Consolidation	(1)	(36)
Total	**1,491**	**1,040**

(€ millions)

CONSOLIDATED PROFIT/(LOSS)	1/1–31/12/2019	1/1–31/12/2018
Commercial Banking	204	56
Corporate & Investment Banking	338	(182)
Group Corporate Centre	237	579
Other	31	66
Consolidation	—	(36)
Total	**810**	**483**

Financial Review (Continued)

For the reconciliation to the figures in the income statement, please refer to the reconciliation of the segmented income statement shown in the Note "Income statement, broken down by business segment" in the notes to the 2019 consolidated financial statements. The income statements for each business segment and comments on the economic performance of the individual business segments can also be found there. The tasks of each business segment are described in detail in the Note "Components of segment reporting by business segment" in the notes to the 2019 consolidated financial statements.

General comments on the business situation in 2019 and comparison with last year's expectations

Like the entire European financial sector, HVB Group again operated in a market environment still characterised by fiscal challenges in the 2019 reporting year. Due to its customer-focused business model coupled with the positive effects from the Transform 2019 multi-year plan, HVB Group nevertheless managed to generate a satisfactory result in its operating business. As projected, operating income is moderately below the previous-year result contrary to the forecast from the previous year, which had assumed a slight increase. Various developments in the individual items led to this result. While net interest, net trading income and net other expenses/income showed weaker development and net fees and commissions was unchanged from the previous year, there was an increase in gains on financial assets and liabilities at fair value.

On account of the unscheduled write-down on the BARD Offshore 1 wind farm, administrative expenses increased in the reporting year. If this non-recurring factor is eliminated, there was a slight decline in operating costs in line with our expectations and the trend over recent years.

The item "Credit impairment losses IFRS 9" comes to €115 million and has therefore risen, as we projected. In absolute terms, this continues to reflect the positive economic development in Germany in recent years.

Profit before tax rose a significant €625 million to €1,361 million in the reporting year and was thus substantially higher as forecast. While the result adjusted for non-recurring effects in the current year and in the previous year is roughly at the same level, the charges from non-recurring effects have fallen sharply year on year. Although net provisions of €919 million had to be set aside in the previous year, particularly on account of legal risks in connection with violations of US financial sanctions, net provisions of €313 million were released in the reporting year after the proceedings on violations of US financial sanctions were concluded in April 2019 by reaching a settlement. However, the result in the reporting year will be weighed down by losses from the sale of the BARD Offshore 1 wind farm and restructuring costs.

With regard to the achievement of the forecast earnings targets, it should be noted that although the forecast included the elimination, which also occurred, of the charges from the addition of provisions, it did not take account of the effects of the reversal of provisions, the unscheduled write-down on the BARD Offshore 1 wind farm or restructuring costs. Nor did the forecast include the effects from the retrospective introduction of the valuation of investment properties through profit or loss, which resulted in a significant rise in net other expenses/income in both the reporting year and the previous year.

As forecast, the profit after tax, which was affected by the decline of €158 million in impairment on goodwill, the increase of €298 million in income tax and the non-recurring effects named above, rose a sharp €327 million to €810 million year on year.

The cost-income ratio, at 65.4%, is higher than the level in 2018 (60.8%) and therefore did not improve contrary to expectations. This was affected in particular by the rise in administrative expenses on account of the non-scheduled write-down on the BARD Offshore 1 wind farm.

The CET1 capital ratio in accordance with approved consolidated financial statements amounted to 17.5% in the reporting year (previous year: 19.9%). The year-on-year decline of 240 basis points is due to the planned special payout, which is already taken into account in the calculation of the ratio, and the increase in total risk-weighted assets.

Financial situation

Total assets

The total assets of HVB Group increased by €16.3 billion, or 5.7%, to €303.6 billion at 31 December 2019 compared with year-end 2018.

On the assets side, cash and cash balances rose by €6.2 billion to €26.2 billion, which is exclusively due to the increase in balances with central banks. Financial assets held for trading were up by €0.9 billion to €69.9 billion, mainly on account of higher positive fair values (up €4.6 billion), whereas there were declines of €1.2 billion in fixed-income securities, €1.9 billion in equity instruments and €0.6 billion in other financial assets held for trading. The portfolio of financial assets at FVTPL also fell by €1.2 billion from €16.7 billion at year-end 2018 to €15.5 billion. By contrast, financial assets at FVTOCI rose to €14.7 billion compared with the closing level of €7.4 billion at 31 December 2018. These holdings were increased by €7 billion in line with the liquidity management strategy. Of this figure, €3 billion relate to USD bonds purchased in the course of adjusting USD liquidity management and €4 billion to bonds in euros as after the end of the ECB's bond-buying programme in December 2018, the shortage in supply created by this programme eased again. Loans and receivables with banks were down by €1.8 billion to €31.8 billion, which is mainly attributable to the decline in reverse repo volumes (down €2.0 billion) and other loans to banks (down €1.1 billion), whereas cash collateral increased (up €1.4 billion). Loans and receivables with customers rose by €5.9 billion to €139.6 billion. This rise is primarily due to larger volumes of mortgage loans (up €2.3 billion), securities (up €2.0 billion) and other loans and receivables (up €1.4 billion). Only reverse repos fell slightly to €3.7 billion (down €0.2 billion). The item "Non-current assets or disposal groups held for sale" declined by €0.7 billion to €0.4 billion, whereby reclassifications in this item were netted with disposals. Property, plant and equipment was up by a mere 0.7% to €2.5 billion compared with the closing balance sheet reflecting two opposing effects. First, the disposal of the BARD Offshore 1 wind farm and second, the prospective change in the value of real estate in accordance with IAS 16 at 31 December 2019, the effects of which almost cancel each other out.

On the liabilities side, deposits from banks were up by €7.4 billion to €70.3 billion. There were essentially increases of €5.3 billion to €21.8 billion in repos, €1.9 billion to €6.7 billion in term deposits and €0.7 billion to €17.6 billion in deposits from central banks compared with the 2018 closing balance sheet. By contrast, cash collateral and pledged credit balances were down by €1.2 billion to €8.1 billion. Deposits from customers rose by €4.4 billion to €125.4 billion. This increase is primarily due to the rise of €3.1 billion to €79.4 billion in current accounts, €1.9 billion to €5.8 billion in cash collateral and €2.7 billion to €20.7 billion in term deposits. On the other hand, repos fell by €3.4 billion to €2.8 billion. Debt securities in issue were up by €3.9 billion to €28.3 billion compared with year-end 2018. By contrast, financial liabilities held for trading fell by €1.4 billion to €46.7 billion compared with year-end 2018.

Financial Review (Continued)

Shareholders' equity shown in the balance sheet increased by €0.6 billion to €18.9 billion at the balance sheet date of 31 December 2019. The 2018 consolidated profit (up €520 million) is no longer included in shareholders' equity as it was paid as a dividend to UniCredit S.p.A., Milan, Italy, as resolved by the Shareholders' Meeting in the second quarter of 2019. Other comprehensive income of €0.4 billion and the 2019 consolidated profit of €0.8 billion made a positive contribution to the increase in shareholders' equity shown in the balance sheet. Net other comprehensive income of €0.4 billion was impacted on the one hand by revaluation gains for owner-occupied real estate totalling €1.3 billion before tax and on the other by actuarial losses on defined benefit plans (pension commitments) amounting to €0.6 billion before tax.

Further and more detailed information on the individual items of the balance sheet is contained in the "Notes to the Balance Sheet" and in "Other Information" in the notes to the 2019 consolidated financial statements.

Contingent liabilities and other commitments not recognised in the balance sheet amounted to €77.5 billion at 31 December 2019 compared with €75.6 billion at the end of the previous year. This figure includes contingent liabilities in the form of financial guarantees of €25.7 billion (31 December 2018: €26.2 billion) and other commitments of €51.8 billion (31 December 2018: €49.4 billion) almost exclusively related to irrevocable credit commitments. These contingent liabilities are offset by contingent assets of the same amount.

Risk-weighted assets, key capital ratios, liquidity and leverage ratio of HVB Group

The total risk-weighted assets of HVB Group (including market risk and operational risk) determined in accordance with the Capital Requirements Regulation (Kapitaladäquanzverordnung – CRR II) amounted to €85.5 billion at 31 December 2019 and were thus €2.9 billion higher than at year-end 2018. This is mainly due to the risk-weighted assets for credit risk (including counterparty default risk), which rose by €2.0 billion to €66.1 billion. The risk-weighted assets for market risk increased by €0.9 billion to €10.2 billion, while the risk-weighted asset equivalents for operational risk remained constant at €9.2 billion.

At 31 December 2019, Common Equity Tier 1 capital compliant with the CRR II excluding hybrid capital (CET1 capital) and Tier 1 capital of HVB Group amounted to €15.0 billion at 31 December 2019 and thus fell compared with year-end 2018 (31 December 2018: €16.5 billion in accordance with approved consolidated financial statements). The CET1 capital ratio (ratio of Common Equity Tier 1 capital to the total amount of credit risk-weighted assets and risk-weighted asset equivalents for market risk and operational risk) and the Tier 1 capital ratio under the CRR II (including market risk and operational risk) amounted to 17.5% at 31 December 2019 (31 December 2018: 19.9% in both cases). The decline is attributable to the decrease in Common Equity Tier 1 capital and an increase in risk-weighted assets. Own funds came to €15.5 billion at 31 December 2019 (31 December 2018: €17.0 billion in accordance with approved consolidated financial statements). The own funds ratio was 18.1% at 31 December 2019 (31 December 2018: 20.6%).

The leverage ratio is determined by setting the Tier 1 capital measure against the total exposure measure. The total exposure measure is the sum total of the exposure values of all assets and off-balance sheet items. In accordance with the Commission Delegated Regulation (EU) 2015/62, the leverage ratio of HVB Group in accordance with approved consolidated financial statements amounted to 4.3% at 31 December 2019 (31 December 2018: 4.9%).

Ratings

The credit rating of UniCredit Bank AG is assessed by Moody's Investors Service Inc. ("Moody's"), Standard & Poor's Credit Market Services Europe Limited ("S&P") and Fitch Ratings Limited ("Fitch").

The ratings of countries and banks are subject to constant monitoring by rating agencies. In the course of harmonising the liability cascade of bank liabilities within the EU, the provisions of Section 46f German Banking Act (Kreditwesengesetz – KWG) were amended by the German legislator on 21 July 2018 and thus the insolvency ranking of bank liabilities of German banks was revised, in particular with regard to senior unsecured bonds.

Moody's responded to this legislative amendment by adjusting the rating of certain senior debt instruments of German banks on 3 August 2018. Moody's introduced junior senior bank debt as a class of instruments for senior non-preferred (SNP) debt instruments (contractual subordination). In addition, the senior unsecured debt instruments with legal subordination issued up to 20 July 2018, which had previously been reported under the issuer credit rating, were assigned to the new instrument class, as these debt instruments are equal in rank to SNPs. There was no premium on junior senior bank bonds resulting from possible government support as, in the opinion of Moody's, there is little likelihood of this class of instruments receiving government support. The junior senior unsecured instruments of UniCredit Bank AG were assigned a rating of Baa3. The portfolio of complex structured senior bonds outstanding at 20 July 2018, which to date had been grouped under the "senior senior debt" category, was assigned to the new "senior unsecured bank debt" class of instruments. The senior unsecured rating of UniCredit Bank AG was affirmed at A2. The rating category of senior unsecured bank debt instruments was defined as a point of reference for the issuer credit rating. As a result, the issuer credit rating of UniCredit Bank AG increased from Baa2 to A2. The deposit rating of UniCredit Bank AG was affirmed at A2/stable/P-1, while the counterparty risk rating (CRR) remained unchanged at A1/P-1 and the stand-alone rating at baa2.

Fitch responded to the amendment of Section 46f KWG by introducing an issue rating for senior preferred instruments, which under certain circumstances allows a higher rating than the issuer default rating. The main criterion for this is, in Fitch's view, a sufficient risk buffer through subordinated instruments (senior non-preferred debt and subordinated debt). However, Fitch presently sees a certain degree of uncertainty about the specific effects of UniCredit's resolution strategy on UniCredit Bank AG so that the issue rating of the senior preferred instruments of UniCredit Bank AG was set at currently BBB+/F2, the same level as the issuer default rating (IDR). The deposit rating of UniCredit Bank AG stands at BBB+/F2, the derivative counterparty rating (DCR) at BBB+. The outlook for the IDR remains negative as Fitch believes the fungibility of capital and liquidity could increase within banking groups under the direct supervision of the ECB. The ratings and outlook of UniCredit Bank AG were affirmed by Fitch on 19 November 2019 in the course of a regular rating review.

As part of the specification of the liability cascade, S&P already introduced the senior subordinated debt instrument rating in March 2017. The senior subordinated debt rating of UniCredit Bank AG is BBB. The resolution counterparty rating (RCR) was introduced in June 2018. S&P set its first rating for the RCR of UniCredit Bank AG at A-/A-2 and thus a notch higher than the long-term issuer credit rating. On 12 December 2019, S&P affirmed the ratings of UniCredit Bank AG. The issuer rating and the rating for senior unsecured instruments of UniCredit Bank AG remains at BBB+/A-2 with a negative rating outlook. The negative outlook for the issuer credit rating of UniCredit Bank AG indicates that the rating of UniCredit Bank AG might be lowered and reflects the uncertainties regarding the implementation of UniCredit's resolution strategy and its effects on UniCredit Bank AG, including the size and positioning of the bail-in cushion. Among other things, "negative" as a rating outlook indicates that the rating of UniCredit Bank AG might be lowered if increased economic or sector-specific risks in Germany significantly impair the quality of the assets and if the strong capitalisation of UniCredit Bank AG is thus unable to be maintained.

Investments

In the 2019 financial year, investments were made mainly in the IT infrastructure, which primarily serve the purpose of digitalisation and the adjustment to stricter internal and external requirements. These investments were made and accounted for by UniCredit Services S.C.p.A. Among other things, UniCredit Services S.C.p.A. is the UniCredit subsidiary responsible for IT to which HVB has outsourced its IT activities. No significant investments were made in HVB Group apart from the investments required in the ordinary course of business.

Financial Review (Continued)

Report on subsequent events (events after the reporting period)

At the beginning of December 2019, HVB Group sold the "Am Tucherpark" site owned by HVB consisting of a complex of office buildings and a hotel to Commerz Real. The property was transferred on 15 January 2020 (closing). A substantial profit will be generated from this sale in the 2020 financial year.

Forecast report/Outlook

Management's Discussion and Analysis and the rest of the Annual Report include statements, expectations and forecasts concerning the future. These statements, expectations and forecasts are based on plans and estimates supported by the information available to us at the present time. We assume no obligation to update these statements in the light of new information or future events. Known or unknown risks and uncertainties may entail forward-looking statements, and the actual results and developments may thus differ significantly from those expected at present. Such discrepancies may result particularly from changes to the general economic situation and the competitive situation, developments on international capital markets, the possible default of borrowers or contracting parties in commercial transactions, the implementation of restructuring measures, amendments to national and international legislation relating in particular to supervisory and tax regulations, the reliability of our risk-management procedures and methods as well as other risks, some of which are described in detail in the Risk Report.

General economic outlook

At present, it is difficult to assess the extent to which the coronavirus will have a negative impact on global economic development. In addition to the large number of those infected in China, the coronavirus has spread further to other Asian countries, Europe and the USA. The WHO now classifies the spread of the novel coronavirus as a pandemic. Besides Asia, Euope, Italy in particular, is also directly affected by a decline in aggregate demand and an interruption of supply chains.

Growth in the global economy is likely to weaken further in 2020 (status as at mid-February 2020; cf. publication of UniCredit Research 2019). After an estimated growth of 2.9% in global output in 2019, we expect a moderate decrease to 2.7% in 2020. In addition to a slowdown in economic momentum in the USA, growth is also likely to contract in the eurozone due to weakening domestic demand. Another negative factor for the global economy is likely to be a renewed decline in China's growth, triggered by trade tensions with the USA and the ongoing transformation of the Chinese economy toward a more consumer-oriented economic model. However, China's monetary and fiscal measures to boost the economy, initiated in 2019, should help to stabilise growth this year.

In our baseline scenario we assume that the trade tensions between the USA and China will continue, albeit without triggering a further escalation. Although the USA and China have reached a "Phase 1" agreement, we consider such an agreement to be only provisional and incomplete, as it does not address the major issues underlying this dispute. Furthermore, we do not expect the USA to impose tariffs on European cars, which is likely to have a positive impact on the EU in particular. However, the threat of possible tariffs is likely to continue.

Following Boris Johnson's win in the Brexit election, the UK ended its EU membership on 31 January 2020 and entered a transition phase lasting until the end of 2020 in which the long-term relationship between the United Kingdom and the EU will be renegotiated. However, due to the short transition period only a limited trade agreement between the EU and the United Kingdom is likely to be concluded so that considerable uncertainties remain, especially with regard to an exit without any agreement. We currently anticipate that there is little risk that the budget negotiations between Italy and the EU Commission in autumn 2020 could weigh on the markets. We also consider it unlikely that Italy will hold early elections in 2020 or 2021. The time window for calling such elections will close at the end of the first half of 2021, as the Italian constitution does not allow parliament to be dissolved in the six months before the current president's mandate expires.

The predicted slowdown in the US economy will contribute noticeably to weaker global growth in 2020. We expect real GDP growth in the USA to be 1.1% in 2020, and therefore 1.2 percentage points lower year on year, on account of late-cycle effects (such as lower profit margins and rising debt risk for US companies) and expiring fiscal measures. In our opinion, other factors will also adversely affect US growth this year. First, the labour market is likely to lose momentum as job vacancies have been declining since the beginning of last year, indicating a more pronounced slowdown in recruitment. As a result, we expect monthly salary increases to remain subdued this year. Combined with the diminishing effect of tax cuts, this is projected to lead to a perceptible decrease in the income gains available. Second, we anticipate that the ongoing trade tensions and the associated uncertainties will continue to weigh on US companies' confidence and cause them to postpone or cancel their investment decisions.

The US Federal Reserve has indicated that after a third rate cut in October 2019, when interest rates were lowered to a target range of 1.50–1.75%, there will probably be no further rate cuts unless there is a "significant" change in the outlook. However, in the context of our baseline scenario, we expect the Federal Reserve to resume its interest rate cuts of 25 basis points per quarter in 2020 and lower the target range to 0.50–0.75% by the year-end 2020. This reflects our forecast that GDP growth will be significantly lower than the Federal Reserve currently expects.

In 2020, we project lower growth of 0.8% in the eurozone and thus anticipate a noticeable decline compared to the previous year (up 1.2%). In this context, particularly the weaker global trade and decline in growth in the USA in the second half of 2020 will impact economic activity in the eurozone. By contrast, domestic demand will presumably also be an important mainstay this year, although its resilience is likely to weaken. Private consumer spending has already been weakening for several quarters, which has led to an increase in the savings ratio. The latter would seem to indicate that households have already started to adjust to a more uncertain environment and the prospects of slower job creation. Further "precautionary saving" this year is therefore possible and will probably have a negative impact on private consumption. Although investment in the eurozone has been stable so far despite a deterioration in companies' profitability, our baseline scenario (i.e. no recovery in foreign demand and continued weak corporate profits) suggests that investment growth is likely to slow down. The construction sector, however, is likely to be more resilient, although, according to our forecast, no large-scale infrastructure projects are in the pipeline in any of the major eurozone countries.

Financial Review (Continued)

Following the ECB's resumption of its bond purchase programme in November last year, it is likely to keep its monetary policy very expansionary this year as well. We expect the current target interest rates to be maintained, even though the ECB will automatically make further purchases in line with its "chained guidance" monetary policies, which link the end of bond purchases with the timing of the first rate hike, provided the timing of interest rate normalisation is delayed. However, given that part of the ECB's Governing Council has strongly rejected the monetary policy measures adopted in September last year, the bar for further easing in the first half of 2020 is likely to be very high. In the second half of 2020, however, we anticipate that the risk of further monetary easing will increase, triggered by the slowdown in growth in the USA. Against this background it is conceivable that the ECB could cut interest rates (possibly with some adjustment of the tiering parameters), especially if financing conditions were to tighten as a result of a euro appreciation. We expect consumer price inflation in the eurozone to fall to 1.0% for the full year 2020, compared with 1.2% in 2019.

At country level, we forecast a GDP growth rate in Germany of only 0.7% (calendar adjusted: up 0.3%) this year compared with the previous year (2019: up 0.6%). At 1.0%, growth in France is projected to be slightly lower in 2020 than in 2019 (up 1.3%). For Italy, we expect economic activity to remain at a low level this year, following growth of 0.2% in 2019. In Spain, the economic recovery is likely to slow further, from 1.9% in 2019 to an estimated 1.4% in 2020. The UK's economic growth is expected to decline from 1.3% in 2019 to 0.8% this year.

The key driver of German economic growth in 2020 is likely to be domestic consumption. Although we anticipate that the still robust labour market will continue to cool down, companies will shy away from layoffs in order to counteract the shortage of skilled workers and recurring costs of hiring staff if growth picks up in the medium term. Wage growth will therefore contract slightly this year to around 2.0%–2.5% (2019: up 3.0%). This should help to dampen the negative effects of a weaker labour market on private consumption. The construction industry is expected to once again be a pillar of growth. German exports are likely to remain weak this year, even if we assume that there will be no increase in US tariffs on European cars or an escalation of trade barriers between the USA and China. Downward pressure on exports and manufacturing capacity utilisation is likely to dampen capital spending by industrial companies.

Banking sector development in 2020

In the Italian banking sector, the reduction in the stock of impaired loans – which is still relatively large by European standards – continued markedly. The portion of impaired loans fell from 16.8% at the end of 2015 to 7.2% at 30 September 2019 and in the same period the risk coverage rose from 45.5% to 52.8%. Impaired loans were also further reduced in other countries such as Spain, Ireland or Portugal, which resulted in an overall reduction of risks in the European banking sector. In the aggregate, the impaired loans portfolio fell from €1,038 billion at the end of September 2016 to €618 billion, a reduction of more than €400 billion.

Regulatory developments are the drivers of banking development. Following the harmonisation of creditor hierarchies in the EU at the end of 2018, the EU banking package was published in June 2019. It includes amendments to requirements for own funds (CRR II and CRD V) and to the recovery and resolution of failing banks (BRRD II). With the CRR II Regulation and the CRD V Directive, the banking package transposes key elements of the Basel III framework into European law, although some of the rules do not take effect until 2021. In addition, the EU banking package complements the resolution regime in the EU:

1. The banking package transposes into European law the Total Loss Absorbing Capacity (TLAC) Standard developed by the Financial Stability Board (FSB) for global systemically important banks.

2. The Minimum Requirement for Own Funds and Eligible Liabilities (MREL) for banks in the EU was revised. The new regulations are intended to increase the liabilities available in the event of resolution and therefore enhance the resolution capacity of banks. In the primary market, banks have increasingly issued TLAC- and MREL-eligible, non-preferred senior bonds and this trend is likely to continue. In addition, capital requirements will be extended by mandatory compliance with a leverage ratio starting in mid-2021.

Furthermore, the final Basel III reform package, which was adopted by the Group of Central Bank Governors and Heads of Supervision (GHOS) at the end of 2017, is currently being transposed into European law. The new regulations relate mainly to the calculation of credit and operating risk and the respective capital backing of banks. The introduction of a minimum level of own funds (referred to as an output floor) for banks represents a significant change. The output floor is to be implemented gradually over a period from 2022 to 2027 and tends to restrict the scope of banks in calculating their need for own funds with their own risk quantification methods. Depending on their implementation, the final Basel III rules should lead to increased capital requirements, especially for large banks, which should result in the institutions concerned bolstering their capital cover by 2027.

Further relevant regulatory issues are the unified requirements by the European Banking Authority regarding the definition of default (DoD), which enter into force in 2021, and stricter supervisory expectations on the part of the ECB regarding loan loss provisions for new non-performing loans and receivables.

The profit situation of European banks remains challenging. The 15 largest European banks generated a return on equity of less than seven percent in the last four quarters, which is significantly below the profitability of 15 largest US banks, at twelve percent. However, the European banking market represents a heterogeneous picture in terms of profitability; some banking markets achieve returns of more than eight percent, while other markets report returns on equity well below the cost of equity.

Development of the HVB Group

In our view the macropolitical environment in Europe remains difficult to assess, despite the easing of tensions in the trade negotiations between the USA and China and the still unclear Brexit situation, and continues to lead to a structurally high volatility in financial and capital markets. Given this overall scenario, forward-looking statements on performance are unreliable.

In this persistently challenging environment for the financial sector, we nevertheless assume that we will generate a good profit before tax in the 2020 financial year based on the satisfactory development in our operating activities in the 2019 reporting year, our business model and the assumption that the political and macroeconomic environment will remain relatively stable. This is likely to be significantly better than in the 2019 reporting year, partly due to disposals of real estate already realised at the beginning of 2020 and planned in the future. At the planned tax rate, it should also be possible to post a significantly better result in profit after tax.

Financial Review (Continued)

As previously described in the chapter "Transform 2019 and Team 23", the Transform 2019 plan was implemented. The new Team 23 plan is based on the four pillars, "Grow and Strengthen Client Franchise", "Transform and Maximise Productivity", "Disciplined Risk Management & Controls" and "Capital and Balance Sheet Management". These measures are intended to open up further growth opportunities and efficiency gains that will be reflected in slightly higher operating income in the 2020 financial year.

Operating costs will be significantly reduced compared with the reporting year due to our continued cost management and the elimination of the unscheduled depreciation on the BARD Offshore 1 wind farm. This should also result in a significant improvement in the cost-income ratio in the 2020 financial year compared with 2019.

For 2020, we expect a significant rise in net write-downs of loans and provisions for guarantees and commitments compared with the low level in 2019. In the reporting year, net write-downs of loans and provisions for guarantees and commitments benefited from the generally positive economic development in Germany and were again low by historical standards.

Overall, we assume for the 2020 financial year that the business segments will generate a good profit after tax which is significantly higher than the result in the previous year. All the business segments will thus contribute positively to HVB Group's overall performance. For the CIB business segment in particular, we forecast a significant improvement in profits due to the elimination of the negative one-off effect from the sale of the BARD Offshore 1 wind farm. We expect a substantial increase in net income in the Commercial Banking business segment, as the 2019 reporting year was negatively affected by restructuring costs in connection with the new multi-year plan. In the Group Corporate Centre and the Other business segments, no further non-recurring effects are taken into account in 2020, except for the aforementioned income from the sale of real estate.

As regards HVB Group's capital base, we anticipate a CET1 capital ratio in a range of between 15% and 17% for the 2020 financial year.

Opportunities in terms of future business policy and corporate strategy, performance and other opportunities

The opportunities described below are offset by risks that can restrict the exploitation of those opportunities and plans. The risks arising from the business policy and corporate strategy are described in the Risk Report.

HVB Group is a member of one of the largest banking groups in Europe, UniCredit. HVB Group is one of the largest private financial institutions in Germany and has competence for the international markets and investment banking business within UniCredit. HVB Group operates in a domestic market which is the largest in the whole of Europe in terms of economic power and size of population. Moreover, Germany is one of the few countries in the world that continues to enjoy a financial rating of AAA. All in all, HVB Group can thus exploit its regional orientation combined with the international network of a large European banking group.

This results in the following opportunities for each business unit:

Within the Commercial Banking business segment, the Unternehmer Bank business unit is seeking profitable growth and an expansion of market shares in its corporate banking business through its positioning as a principal or core bank and the acquisition of new customers. As a strategic business partner, the Unternehmer Bank is closely integrated in the entrepreneurial activities of its customers. The most important strategic challenges of customers include, among other things, foreign trade, internationalisation, digitalisation and corporate succession. The entrepreneur's private sphere is also a focal point of our comprehensive advisory services in the Wealth Management business unit. For this reason, the growth initiatives of the Unternehmer Bank are geared to these needs.

In the Private Clients Bank business unit, we will continue to pursue the path we have embarked upon of fundamentally modernising our retail banking business by expanding our digital offering. The main focus is on growing and expanding customer loyalty, supported by the intended positioning as a quality provider, as well as on supporting and advising customers.

In the CIB business segment, the strategic focus is on expanding and strengthening sustainable and long-term customer relationships. To this end, we offer advice with product solutions for financing and capital procurement. We see further business potential in the expansion and improved use of our international network. To increase the efficiency of our customer-bank relations and thus enhance our cross-selling potential, we are expanding our processing and access platforms. We also wish to better exploit the opportunities afforded by digitalisation.

As a universal bank, HVB Group has a high level of cross-selling potential due to the cooperation between the Private Clients Bank and the Unternehmer Bank, as well as CIB. As a result of the integrated CIB, Mittelstand customers in the Unternehmer Bank benefit from HVB's investment banking solutions. Furthermore, the Unternehmer Bank supports the internationalisation activities of its customers by assisting them in their foreign activities in UniCredit's home countries. Extensive opportunities for new business also arise by providing support in succession planning. On account of its capital base, HVB Group is, in our opinion, already well equipped for any tightening of regulatory requirements and can take advantage of the growth opportunities that arise in the market.

Over the coming years, HVB Group aims to continuously optimise internal structures and processes, especially within the framework of Team 23. At the same time, we are making use of the opportunities to cooperate within UniCredit across country and company lines.

In addition, the possible consolidation wave in the banking sector in Germany, which is widely discussed in public, creates new growth opportunities for HVB. Through selective investments, we plan to make better use of our growth potential in the individual regions, customer groups or product areas. This will be supported by process optimisations to create gains in efficiency and might involve an adjustment of structures, locations or roles.

Digitalisation has greatly altered the finance industry and customers' expectations with regard to their bank and will continue to do so going forward. Already today, HVB Group is pressing ahead with digital transformation in individual business areas and has applied various models in different areas in terms of digitalisation.

HVB Group has opportunities to recruit highly qualified employees and managers. Both the size of UniCredit and the strategic positioning of HVB Group have a beneficial impact on the recruitment of employees and managers. Supporting female managers at junior level is an explicit part of the business strategy.

We see further potential for opportunities in our long-term orientation to customers and other stakeholders.

Risk Report

HVB Group as a risk-taking entity

By their very nature, the business activities of HVB Group are subject to risk. HVB Group defines risk as the danger of suffering losses on account of internal or external factors. In the course of our business activities, risks are identified, quantified, assessed, monitored and actively managed. We therefore regard it as one of our core duties to apply these considerations in order to integrate risk-management, risk-controlling and risk-monitoring processes in all business segments and functions of our Group. These activities are the precondition for providing adequate capital backing and maintaining an adequate liquidity base.

The Risk Report deals exclusively with the risks at HVB Group. The opportunities will be presented separately in this Management's Discussion and Analysis in the section entitled "Opportunities in terms of future business policy and corporate strategy, performance and other opportunities".

HVB Group is divided into the following business segments:
– Commercial Banking
– Corporate & Investment Banking
– Group Corporate Centre
– Other

"Other" is shown as an individual business segment separate from consolidation effects for the first time in the 2019 reporting year. The previous-year figures have been adjusted accordingly. In the past, the two segments were presented together as the "Other/consolidation" business segment. The relevant presentations have been carried out in the notes to the consolidated financial statements in segment reporting.

The income statements for each business segment and comments on their economic performance are provided in the Note "Income statement, broken down by business segment" in these consolidated financial statements. The contents and objectives of the individual business segments are described in detail in the Note "Components of segment reporting by business segment" and the Note "Method of segment reporting by business segment" in the 2019 Annual Report.

All HVB Group companies that are included in the consolidated financial statements of HVB Group prepared in accordance with International Financial Reporting Standards (IFRS) are incorporated in the risk management programme of HVB Group. As part of the Internal Capital Adequacy Assessment Process (ICAAP), these Group companies are classified into the categories "large", "medium", "small plus" and "small" by applying various criteria such as market position, scope of business activities and complexity of the risk profile or portfolio structure. With the exception of the Group companies classified as "small", which are subject to a simplified approach to risk measurement, the economic capital is measured differently for the individual risk types.

Risk types

Credit risk is defined as the risk that a change in the credit rating of a contracting party (borrower, counterparty, issuer or country) induces a change in the value of the corresponding receivables. This change in value may be due to the default by the contracting party, meaning it is no longer in a position to meet its contractual obligations.

Market risk is defined as the risk of incurring losses on positions held on and off the balance sheet in the trading or investment books as a result of unfavourable changes in the market value of securities or financial derivatives. The most relevant of these prices are interest rates (used to determine and discount cash flows), share prices, credit spreads (including, but not limited to, changes in these spreads due to credit defaults or rating changes), spot exchange rates, commodity prices and derived prices such as volatilities and correlations between these parameters.

Liquidity risk is understood to be the danger that the Bank is not able to meet its payment obligations on time or in full. However, it is also defined as the risk of sufficient liquidity not being available when required or that liquidity can only be obtained at higher interest rates, or that the Bank will only be able to liquidate assets on the market at a discount.

In line with the Capital Requirements Regulation (CRR), HVB Group defines **operational risk** as the risk of losses resulting from inadequate or deficient internal processes or systems, human error or external events. This definition includes legal risk, but excludes strategic and reputational risk. Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

These risk types are described in detail in the section entitled "Risk types in detail". All other risk types of HVB Group are summarised in the section entitled "Other risks", which are presented in an abridged form.

The following risk types are summarised as other risks:
– **Real estate risk** covers potential losses resulting from changes in the fair value of the real estate portfolio of HVB Group. Besides the real estate owned by HVB, the HVB Group portfolio also includes the real estate owned by the real estate holding companies, the subsidiaries (group of companies included in consolidation according to IFRS) and special purpose vehicles (SPVs). No land or properties are included that are held as collateral in lending transactions.
– **Business risk** is defined as losses from unexpected negative changes in the business volume and/or margins that are not attributed to other risk types. It can lead to long-term losses in earnings, thereby diminishing the fair value of the company. Business risk can result above all from a serious deterioration in the market environment, changes in the competitive situation or customer behaviour, changes in the cost structure, and changes in the underlying legal conditions.
– **Pension risk** can occur both on the assets side and the liabilities side (pension commitments). This may be caused by a decline in the fair value of plan assets on the assets side due to disadvantageous changes in market prices as well as an increase in the obligations on the liabilities side, due for instance to a reduction in the discount rate. Furthermore, there are actuarial risks such as longevity risk (changes to the mortality tables) on the obligation side. In this context, pension risk is the risk that the pension provider will have to provide additional capital to service the vested pension commitments.

Risk Report (Continued)

– **Financial investment risk** covers potential losses arising from fluctuations in the measurement of HVB Group's equity interests. HVB Group's financial investment risk stems from the occurrence of losses in equity provided, in connection with a financial investment to other companies that are not included in the consolidated financial statements according to IFRS principles or are not included in market risk.
– **Strategic risk** results from management either not recognising early enough or not correctly assessing significant developments or trends in the Bank's environment. As a consequence, fundamental management decisions could, in retrospect, prove to be disadvantageous in terms of the bank's long-term goals. In addition, some decisions may be difficult to reverse or cannot be reversed at all. In the worst case, this can negatively impact the profitability and risk profile of HVB Group.
– **Reputational risk** is defined as the risk of negative effects on the income statement caused by adverse reactions by stakeholders due to a changed perception of the Bank. This altered perception may be triggered by a primary risk such as credit risk, market risk, operational risk, liquidity risk, business risk, strategic risk or independently of any triggering primary risk.

Integrated overall bank management

Risk management

HVB Group's risk management programme is built around the business strategy adopted by the Management Board of HVB, the Bank's risk appetite and the corresponding risk strategy.

The risk-taking capacity upon achievement of the set targets is assessed on the basis of the risk strategy and the business and risk plans, using the available financial resources. At the same time, limits are defined in the planning process to ensure that the risk-taking capacity is maintained.

Pursuant to the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement – MaRisk), multi-year budgeting is performed in relation to the internal capital. This involves analysing the relevant risk types over a time horizon of at least three years and taking into account a deteriorating macroeconomic environment. Two scenarios with negative consequences are examined independently of each other to permit an assessment of the effect of a deteriorating macroeconomic business environment. Whereas the first scenario assumes a conventional recession in Germany on account of the trade conflict between the USA and China and the associated cooling in the global economy, the second scenario is based on a pause in growth in the major economies of the European Monetary Union. Since the available financial resources are considered with the same scenarios, it is possible to make a statement about how the risk-taking capacity will evolve overall over three years, taking into account the macroeconomic scenarios.

Implementation of the risk strategy is a task for the Bank as a whole, with key support from the Chief Risk Officer (CRO) organisation. The CRO organisation is responsible for risk management and risk policy guidelines set by the Management Board, reporting on a regular basis to the Management Board and the Risk Committee of the Supervisory Board on the Group's risk situation.

New releases and updates to instructions, policies and the risk strategy are communicated through the Bank's internal information system.

Functional separation

In addition to Bank-wide risk management, integrated overall bank management is accompanied by comprehensive risk controlling and risk monitoring in accordance with the MaRisk rules, which is functionally and organisationally independent.

Risk controlling

Risk controlling is defined as the operational implementation of the risk strategy. The Senior Risk Management CIB & Large Commercial Bank – Credits unit and the Credit RR & NRR Germany (KRI) unit are responsible for the operational management of credit risk for the Commercial Banking and Corporate & Investment Banking (CIB) business segments. The senior risk managers and the credit specialists take lending decisions in the defined "risk-relevant business". They thus make it possible for the business segments to take on risk positions in a deliberate and controlled manner within the framework of the risk strategy and to evaluate whether it is profitable to do so from the overall perspective of the customer relationship and on the basis of risk-return considerations. In the "non-risk-relevant business", the business segments are authorised to take their own lending decisions under conditions set by the CRO organisation. The Market Risk unit is responsible for controlling market risk and the Finance unit within the Chief Financial Officer (CFO) organisation for controlling liquidity risk. The senior management is responsible for controlling operational risk and reputational risk with the support of the relevant operational risk managers.

Controlling the business risk consists mainly of the planning of earnings and costs by the individual business segments, which the CFO organisation proactively coordinates. The relevant business segments are responsible for controlling the financial investments. The real estate risk arising from the property portfolio within the Group is controlled centrally by the Chief Operating Office (COO) unit. Within HVB Group, this is performed by the Real Estate unit, HVB Immobilien AG and the UniCredit Services S.C.p.A. (renamed from UniCredit Business Integrated Solutions S.C.p.A., UBIS, in May 2018), which was engaged by HVB Immobilien AG by way of a service level agreement. HVB Group has undertaken to provide a range of different pension plans, which are largely financed by various investment vehicles, some of which are external. Under the capital investment process, there are separate rules covering the specific risk controlling of the different pension plans in each case. Some of these are subject to supervision by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht – BaFin), specifically by the Insurance and Pension Funds Supervision unit, and therefore need to comply with external rules and regulations. Controlling of strategic risk is the shared responsibility of HVB's Management Board.

Risk monitoring

The central risk monitoring function within the CRO organisation is responsible for identifying, measuring and evaluating the risks at HVB Group. It is subdivided in accordance with risk types. The risk monitoring functions for the following risk types: market risk and liquidity risk (for the liquidity risk, however, exclusively the risk monitoring functions of stress tests, calculation and monitoring of early warning indicators, calculation of the short-term concentration risk, evaluation of the funding plan) are bundled in the Market Risk unit, while operational risk and reputational risk is bundled in the Operational & Reputational Risks unit. In addition, the Market Risk unit also monitors the market risk component of pension risk at regular intervals using a separately developed model (aggregated view of the plan assets and liabilities). As part of the asset management of the plan assets, the options for risk positioning are limited by both external and internal regulations. Ongoing monitoring of the respective rules is performed in accordance with the specific policies of the various pension plans. With regard to the monitoring of liquidity risk, some tasks are performed by the Market Risk unit while further risk monitoring functions for this risk type are the responsibility of the Finance unit within the CFO organisation (constant monitoring of the liquidity risk situation and compliance with limits). The Strategic Credit & Integrated Risks unit monitors credit risk, business risk, financial investment risk and real estate risk as well as the aggregate

Risk Report (Continued)

economic capital and the internal capital requirement. The monitoring of strategic risk is the shared responsibility of HVB's Management Board. The following are quantifiable risk types: credit risk, market risk, operational risk, business risk, financial investment risk, real estate risk and pension risk. The available financial resources are defined, quantified and compared with the risk capital for the analysis of the risk-taking capacity.

Liquidity risk is also a quantifiable risk but does not flow into the calculation of the risk-taking capacity.

A qualitative approach is used to monitor strategic risk and reputational risk.

Divisions and committees

Chief Risk Officer

The controlling and cross-business segment management of risk at HVB Group fall within the competence of the Chief Risk Officer (CRO). This is where all the key functions involved in the identification, analysis, assessment and reporting of risk are performed together with the ongoing tracking, handling, monitoring and controlling of risk. These activities are supported and complemented by various CFO units, notably with regard to liquidity risk.

The CRO organisation is divided into units that deal with lending business in the back office. The main functions of these units include:
- operational functions in the credit-decision and credit-monitoring processes for the risk-relevant lending business, complete with monitoring of the issuer and counterparty limits
- data management for the restructuring and workout portfolio
- restructuring activities with a view to minimising losses for the Bank

At the same time, there are units that cover operational and strategic aspects of risk monitoring. Their main functions include:
- the development, enhancement, parameterisation and calibration of the rating models used to determine the probability of our customers defaulting
- validation of Pillar I and II systems for risk measurement that contain the following components: models, associated processes, IT systems and data
- the development of concepts used to identify and control credit risk and concentrations, including country risk
- responsibility for the measurement methods and the refinement of the measurement methods and systems, and for the management and measurement of market risk and liquidity risk
- responsibility for the measurement methods and the refinement of the measurement methods and systems, and for the management and measurement of operational risk as well as responsibility for reputational risk and its management
- the determination of the internal capital and the economic capital base
- ensuring ICAAP compliance, ensuring compliance with the MaRisk rules as part of the responsibility for credit risk and economic capital, performance of stress tests
- ensuring compliance with regulatory rules regarding internal and external reports
- risk reporting

Chief Financial Officer

The Finance and Regional Planning & Controlling units from the Chief Financial Officer (CFO) organisation play a major role in risk monitoring. The Finance unit notably covers the management of short- and long-term liquidity at HVB Group (Asset Liability Management) acting in concert with the front office units and asset/liability management. The Finance unit is also responsible for the management of capital and capital allocation as well as the risk-return methodology.

Regional Planning & Controlling has been tasked with central business management and cost controlling. This unit is also responsible for the creation and validation of the segment report in accordance with IFRS; it similarly has responsibility for the processes involved in preparing the income budgets and for the income projections. Furthermore, the segment-related controlling departments for all the segments apart from CIB come under this unit. Controlling of the CIB business segment is the responsibility of CIB Planning and Control. Among other things, this department is responsible for the reconciliation of net trading income, which it carries out jointly with Accounting.

Asset Liability Management

The Finance unit controls Asset Liability Management by managing short-term and long-term liquidity within HVB Group. Its main objectives are to ensure that HVB Group has adequate liquidity at all times and to optimise funding costs. Asset Liability Management monitors trends and happenings on the money and capital markets and manages liquidity and funding requirements. As part of liquidity risk management, the Finance unit performs ongoing monitoring of the liquidity risk situation, in addition to the activities on the part of CRO, and manages funding activities together with the front office units. Within the framework of a liquidity cost allocation mechanism for all significant business activities, the internal transfer prices for the lending and deposit-taking activities are continually reviewed for appropriateness and regularly adjusted to reflect the market situation, for instance. The measures implemented in connection with these functions serve to support HVB Group's return targets.

Internal Audit

A number of important tasks regarding the implementation of an efficient risk management system have been entrusted to the Internal Audit department as described in the section entitled "Monitoring the effectiveness of the ICS".

Risk Committee

The Management Board has entrusted the following tasks to the Risk Committee (RC), subject to its management competence and its ultimate decision-making authority at any time:

– development and implementation of suitable policies and methods, especially for credit risk and credit portfolio management together with other risk topics
– discussion of and decision on strategic risk policy issues
  A submission is always made to the Management Board when required for legal reasons (such as to comply with the MaRisk rules).

The RC generally meets once a month. Each meeting of the RC has a different main topic – either risk management or risk governance. RC meetings focusing on risk management concentrate on the analysis of the business performance and risk development, and the ensuing measures. Method and process issues are also discussed at RC meetings which focus on risk governance alongside the risk strategy and the internal rules and instructions.

Risk Report (Continued)

Asset Liability Committee
The Asset Liability Committee (ALCO) makes decisions at its monthly meetings on the asset/liability management of HVB Group. The committee pursues the following key goals:
– establishment of uniform asset/liability management methods for HVB Group
– optimum utilisation of liquidity and capital resources
– coordination between the requirements of the business segments for financial resources and the business strategy

Stress Test Council
The Management Board, as the body responsible for bank management, delegated the topic of stress tests to the RC and the Stress Test Council (STC) as a specialist committee. The tasks of the STC include:
– coordination of all stress-testing activities within HVB Group, including the refinement of the stress-testing methodology
– definition and coordination of cross-risk-type stress scenarios, including the validation of the underlying parameters
– analysis and presentation of stress-testing results and their use to prepare recommendations for management

Reputational Risk Council
The task of the Reputational Risk Council (RRC) is to manage HVB Group's reputational risks. It is the decision-making body for all business transactions and other activities that give rise to a reputational risk to HVB. Such activities include those relating to:
– projects and outsourcing activities
– the development of new products and the exploitation of new markets
– special purpose vehicles

Implementation of overall bank management

Strategy
The business strategy and the risk strategy define the key pillars of business and risk policy for HVB Group. The subsidiaries, outsourcing and information and communications technology (ICT) are incorporated in both the risk strategy and the business strategy. The HVB Group business strategy describes the strategic starting point and organisational structure, the key pillars of the business strategy at overall bank level and the sub-strategies of the individual business segments.

The HVB Group risk strategy is derived consistently from the business strategy, supplementing it with the relevant aspects of risk management. In this context, HVB Group's risk strategy encompasses the risk types of credit risk and market risk together with their controlling using the economic capital and risk-type-specific limits, as well as operational risk, financial investment risk, real estate risk and business risk, which are controlled using only the economic capital. In addition, the strategic objectives for reputational risk, strategic risk, liquidity risk, pension risk and outsourcing are presented in terms of quality. The risk strategy is supplemented by the Industry Credit Risk Strategy, which specifies the risk appetite within the various industries.

The strategies approved by the Management Board of HVB are reviewed on both an ad hoc and an annual basis and modified when necessary.

Overall bank management

The metrics defined for the overall bank management of HVB Group are reviewed in the annual budgeting process; they are used to assess the success of the business strategy and the risk strategy. Earnings targets, risk targets, liquidity targets and capital targets are defined in the budgeting process together with the targeted risk-taking capacity at overall Bank level. The limits for the internal capital are defined and monitored in order to guarantee the risk-taking capacity. For the purposes of business segment management, the economic capital limits are distributed for each risk type (credit risk and market risk) to ensure that the planned economic risks remain within the parameters defined by the Management Board of HVB.

Key performance indicators (KPIs) generally applicable across all business segments have been defined for the management of HVB Group. These KPIs serve to entrench the aspects of profitability and growth, as well as constraints and sustainability.

The value-oriented management of HVB Group focuses on the measurement of the business activities in accordance with return and risk considerations, with a risk-return target set for each of the business units of HVB Group. The expected economic returns are calculated using the allocated capital principle that is applied group-wide by UniCredit. Within the scope of the principle of dual control, both regulatory capital, in the sense of used core capital (Common Equity Tier 1), and internal capital are allocated to the business segments. Both resources are expected to yield an appropriate return, the amount of which is derived from the returns expected by the capital market.

In line with the parameters defined in the business and risk strategies, the defined targets are broken down to business segment level and then translated into operational metrics for sales management. The defined targets are monitored using a standardised report to the Management Board of HVB. The Management Board of HVB initiates counter-measures in response to deviations from the targets defined in the budgeting process.

Regulatory capital adequacy

Used core capital (Common Equity Tier 1)

For the purposes of planning and monitoring risk-weighted assets, the business segments are required to have core capital backing of equivalent risk-weighted assets arising from credit, market and operational risks equal to an average of 12.5%. The expected return on investment is derived from the average used core capital (Common Equity Tier 1).

Management of regulatory capital adequacy requirements

Essentially, the following three processes have been defined from the normative capital perspective to safeguard an appropriate capital base over the long term:

Yearly planning of the regulatory capital taking account of regulatory requirements, while applying the three capital ratios listed below, which are managed within HVB Group's risk appetite framework using internal target, trigger and limit levels:

– Common Equity Tier 1 capital ratio: ratio of Common Equity Tier 1 capital to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions
– Tier 1 capital ratio: ratio of Tier 1 capital to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions
– total capital ratio: ratio of equity funds to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions

Quarterly performance of stress tests of the regulatory capital ratios under various scenarios (details on the stress tests can be found in the section entitled "Stress tests".

Risk Report (Continued)

Monthly performance of a rolling eight-quarter projection to provide an ongoing forecast of the capital ratios of HVB Group.

More details on the development of these capital ratios are presented in the section entitled "Risk-weighted assets, key capital ratios, liquidity and leverage ratio of HVB Group" in the Financial Review of this Management's Discussion and Analysis of HVB Group.

HVB and UniCredit S.p.A. agreed with the relevant regulators that HVB and HVB Group would not fall below an total capital ratio of 13%. This agreement will remain in force until further notice. The total capital ratio of HVB Group was 18.1% at the end of December 2019 (31 December 2018: 20.6%).

Economic capital adequacy

HVB Group determines its internal capital. The internal capital is the sum of the aggregated economic capital for all quantified risk types (with the exception of liquidity risk), a premium for pension risk and financial investment risk and the economic capital for small legal entities. The economic capital measures the potential for unexpected loss over a time horizon of one year with a confidence level of 99.90%. When the aggregated economic capital is determined, risk-mitigating diversification effects are taken into account between the individual risk types. HVB Group deploys UniCredit's group-wide model for risk aggregation that uses parameters that are uniform throughout the Group for determining interdependencies between the risk types. In terms of methodology, the model is based on a copula approach where the parameters are estimated using the statistical Bayesian method. The economic capital for small legal entities of HVB Group is calculated with no differentiation by risk type.

An all-round overview of the risk situation of HVB Group is obtained by assessing the risk-taking capacity on a quarterly basis, as shown in the table "Internal capital after portfolio effects".

Internal capital after portfolio effects (confidence level 99.90%)

	2019		2018	
Broken down by risk type	**€ millions**	**in %**	**€ millions**	**in %**
Credit risk	3,248	46.1	3,144	37.6
Market risk	1,617	23.0	2,004	23.9
Operational risk	412	5.9	1,263	15.1
Real estate risk	322	4.6	475	5.7
Business risk	354	5.0	234	2.8
Aggregated economic capital	**5,952**	**84.6**	**7,120**	**85.1**
Pension risk	615	8.7	874	10.4
Financial investment risk	222	3.2	185	2.2
Model risk cushion	158	2.2	161	1.9
Economic capital of small legal entities	91	1.3	28	0.3
Internal capital of HVB Group	**7,038**	**100.0**	**8,368**	**100.0**
Available financial resources of HVB Group	**16,061**		**17,170**	
Risk-taking capacity of HVB Group, in %	**228.2**		**205.2**	

Contains rounding differences.

Internal capital fell by €1,330 million in comparison to 31 December 2018. Applying the current methods/models retroactively to the reference date of 31 December 2018 would yield internal capital of €6,994 million (including the model risk cushion).

More details on the individual changes within the types of risk can be found in the respective sections on the corresponding types of risk.

Internal capital (without pension risk and without the model risk cushion) broken down by business segment (confidence level 99.90%)

	2019		2018	
Broken down by business segment	**€ millions**	**in %**	**€ millions**	**in %**
Commercial Banking	1,478	23.6	1,828	24.9
Corporate & Investment Banking	4,302	68.7	4,627	63.1
Group Corporate Centre	166	2.6	514	7.0
Other	319	5.1	363	5.0
Consolidation	—	—	—	—
Internal capital (without pension risk and without the model risk cushion) of HVB Group	**6,265**	**100.0**	**7,332**	**100.0**

Risk appetite
The risk appetite is defined as part of the annual strategy and planning process for HVB Group, whereby selected metrics are monitored only for HVB. The risk appetite metrics comprise specifications that are subdivided into the categories of "Pillar I", "commercial" and "specific risks". Targets, triggers and limits are defined for these metrics that allow excessive risk to be identified and counter-measures to be initiated at an early stage. The matter is escalated to the appropriate committees and the Management Board of HVB, should the defined limits be exceeded or not reached.

Consistent going concern approach
Since 2019, HVB Group has managed its risk-taking capacity from an economic perspective as part of an approach to the ongoing protection against risks and the continuation of business activities from a capital perspective (continuity of operations). At the same time, targets, triggers and limits are defined for regulatory capital backing as well as for risk-taking capacity.

Recovery plan
The preparation of recovery plans (RPs) is intended to facilitate the restructuring of systemically important financial institutions. UniCredit S.p.A. and HVB have been identified as systemically important at a global level and at a national level, respectively. Supervision of HVB passed to the ECB when the Single Supervisory Mechanism (SSM) came into effect in November 2014. According to a decision of the Joint Supervisory Team (JST), HVB, as part of UniCredit, has not been required to prepare an HVB Group recovery plan since 2015. For this reason, HVB works in close collaboration with UniCredit S.p.A. each year to prepare a joint "UniCredit Group Recovery Plan". This Recovery Plan was officially submitted to the ECB on 30 September 2019 and has been in effect since then.

Risk Report (Continued)

Risk-taking capacity

As part of an analysis of the risk-taking capacity, HVB Group measures its internal capital against the available financial resources. Furthermore, the risk-taking capacity is analysed across a defined multi-year period as part of the planning process.

HVB Group uses an internal definition for the available financial resources which, like risk measurement, has been based on a going concern approach since 2019. Under this approach, available financial resources are sufficient to protect against risks so as to ensure business operations are maintained. The risk-taking capacity is defined by comparing unexpected losses at the confidence level (internal capital) with the ability to absorb losses using the available financial resources. When determining the available financial resources, regulatory core capital is taken as the starting point. To maintain consistency with internal risk quantification, certain capital deductions (particularly expected losses and securitisation positions) within the definition of equity are brought into line with the internal economic perspective and some future profits are taken into account. The available financial resources at HVB Group totalled €16,061 million as at 31 December 2019 (31 December 2018: €17,170 million).

With internal capital (including the model risk cushion) of €7,038 million, the risk-taking capacity for HVB Group is 228.2% (31 December 2018: 205.2%). This figure is higher than the target of 170% HVB Group set itself in the 2019 risk appetite framework. The rise of 23.0 percentage points in comparison with 31 December 2018 for HVB Group is attributable to the reduction of €1,330 million or 15.9% in the internal capital in 2019. The available financial resources have fallen by €1,109 million or 6.5%. The decline in available financial resources is largely due to a reduction in the core capital on account of the development in reserves.

Limit concept

The risk limit system is a key component of the ICAAP at HVB Group. Its purpose is to guarantee the Bank's risk-taking capacity at each reporting date by means of an integrated controlling process. A wide-ranging, consistent limit system that includes the specification of limits for internal capital and economic capital, risk-type-specific limits and limits for risk concentrations has been implemented to ensure this. It covers all the risks that need to be backed with capital. Consequently, unexpected losses for credit, market, operational, business and real estate risk are currently recorded. In addition, pension risk, financial investment risk, any model risks and the economic capital for small legal entities are included in the internal capital by means of a cushion.

This system of limits reflects the business and risk strategies, taking into account the risk appetite and the available financial resources, at the level of HVB Group, and ensures compliance with the risk-taking capacity. The risk limits are approved by the Management Board of HVB each year during the strategy process.

The internal capital limits are allocated at the level of HVB Group broken down by risk type and for the internal capital as a whole. Based on the aggregate limit set for internal capital, the risk-taking capacity of HVB Group is guaranteed at each reporting date.

In order to identify at an early stage any potential overshooting, HVB Group has specified triggers in the form of early warning indicators as well as the defined limits. The utilisation of, and hence compliance with, the limits is presented in the Bank's reports on a monthly basis.

Stress tests
The MaRisk rules call for stress tests to be carried out regularly using various scenarios.

Various macroeconomic downturn scenarios and a historical scenario were calculated for the cross-risk-type stress tests in 2019:
– Contagion scenario – focusing on the political tensions within the EU
– Recession scenario – recession in Germany due to a massive decline in global demand
– Historical scenario – based on the 2009 financial crisis
– Financial intermediary scenario – a second, stricter variant of the historical scenario additionally reflects the default by the financial intermediary with the highest stressed counterparty risk exposures
– Protectionism scenario – protectionism, China slowdown and Turkey shock
  This scenario considers the introduction of a policy of protectionism in the USA that throttles growth in China in conjunction with a growth shock in Turkey
– Interest rate shock scenario – rise in interest rates in the eurozone (calculated until March 2019)
– US hard landing and hard Brexit – recession in the USA and the UK leaves the EU without a departure agreement (from June 2019 onwards)

Taking account of macroeconomic developments in 2019, the aforementioned downturn scenarios and the underlying baseline scenario were reviewed and the corresponding macroeconomic parameters and market parameters were adjusted.

The stress tests across risk types are presented and analysed within the structure of the Stress Test Council on a quarterly basis and any measures required are presented to the Risk Committee and the Management Board of HVB. Both the risk-taking capacity and the minimum requirements for regulatory capital ratios of HVB Group were met and complied with, even after the occurrence of the stress test scenarios listed. The risk-taking capacity within the scope of the stress test was established with a confidence level of 99.90%.

Furthermore, inverse and ad hoc stress tests are carried out.

Inverse stress tests involve analysing what events could endanger the continued existence of the Bank as a going concern. The continued existence as a going concern is considered at risk when the original business model proves to be no longer feasible or viable. The hypothetical events analysed included fraud by a trader, rating downgrades, a bank run and default by customers and industries.

Ad hoc stress tests are carried out in response to internal and external events that might have a considerable impact on HVB Group.

Concentrations of risk and earnings
Concentrations are accumulations of risk positions that react in a similar way to specific developments or events. Concentrations may have an impact within a risk type or equally across risk types. They indicate increased potential losses resulting from an imbalance of risk positions held with customers and in products or specific industries and countries.

Concentrations are analysed, monitored, managed and reported at least once a year with regard to the relevant risk drivers for credit, market, liquidity and operational risk. In particular, appropriate instruments and processes ensure the prompt identification of concentrations. Monitoring, the suitability of which is reviewed each year, is used as the steering approach for the risk types of financial investment risk, real estate risk and pension risk.

Risk Report (Continued)

The risk management processes for concentrations have been set up with a view to interlinking risk drivers across the risk types, such that concentration risk is integrated into the assessment and controlling functions.

The concentration of earnings at individual customers, business segments, products, industries or regions represents a business-related strategy risk for the Bank. Risks arising from concentrations of earnings are monitored each year, as their avoidance is an important indicator of sustainable diversification and hence the viability of the business model in crisis situations.

Risk inventory
The scheduled comprehensive yearly risk inventory at HVB Group was started in February 2019. The existing and potential new risks were analysed and critically evaluated by means of structured interviews with numerous decision-makers within HVB Group and by means of questionnaires, among other things. The outcome of the 2019 risk inventory was presented to the Risk Committee and HVB's Management Board in September 2019 and included in the calculation and planning of the risk-taking capacity following approval. The risk inventory serves to review the overall risk profile of HVB Group. Various topics are identified, some of which are included in the stress test and in the validation of the measurement methods used for the material risk types and other ICAAP components.

Internal reporting system
The internal reporting system supports risk monitoring at portfolio level in particular. The portfolio sections used in this connection were defined for the purpose of risk controlling and are not congruent with the portfolio sections that are defined for accounting purposes in the context of the classification of financial instruments. Within the framework of the internal reporting system, information is provided on the overall risk to HVB's Management Board, the Risk Committee of the Supervisory Board and the Risk Committee on a monthly basis, to the full Supervisory Board at least on a quarterly basis and also on an ad hoc basis. In addition, further monthly risk reports are created focusing on specific business segments, countries or industries.

Risk types in detail

1 Credit risk

Credit risk consists of the following categories:
– credit default risk (including counterparty risk and issuer risk)
– country risk

Categories
Credit default risk
Credit default risk is considered to occur with regard to a specific contracting party when one or both of the following criteria are satisfied:
– The Bank assumes the contracting party is probably not in a position to meet its entire contractual obligation towards HVB Group as whole, without having to take recourse to measures like the sale of collateral (where present).
– The contracting party is more than 90 days in arrears in terms of a material receivable of HVB Group.

The credit default risk also encompasses counterparty risk and issuer risk.

Counterparty risk
Counterparty risk arises from the possible loss of value due to the default of the counterparty in trading activities (such as derivatives involving interest rates, foreign exchange, equities/indices, or other futures or derivative contracts). It is divided into the following components:
– settlement risk
– pre-settlement risk
– money market risk (cash risk)

Issuer risk

Issuer risk is defined as credit default risk in the securities holding resulting from the downgraded credit rating or default of an issuer that can lead to a loss of value through to total loss. Issuer risk arises from the purchase of securities, securities issuance activities, credit derivatives and the placement of securities.

Country risk

Country risk is the risk of losses caused by events attributable to actions by the government of a given country. This includes the repayment of capital in a specific country being prevented by government intervention, which gives rise to various risks (such as transfer risk, expropriation risk, legal risk, tax risk, security risk). It also includes the risk of repayment of capital being prevented by a deterioration in the economic and/or political environment (such as through recession, a currency and/or banking crisis, natural disasters, war, civil war, social unrest). Country risk encompasses:
– sovereign risk (state as counterparty)
– transfer and conversion risk

Strategy

A risk strategy has been approved for HVB Group that operationalises the strategic controlling of credit risk. This is done by setting targets and limits for different metrics as needed. Controlling using economic capital, together with volume and risk metrics, is particularly important in this regard. The planning of the targets and limits is embedded in HVB Group's annual plan, similarly taking into account ceilings arising from the requirements regarding the capital base. Firstly, the limits are intended to leave scope for implementation of the business planning and, secondly, to set upper limits, specifically with regard to economic capital.

Systematic controlling and setting of limits for credit risk are essential for sustaining HVB Group's strategic orientation. The risk strategy is intended to make it possible for both the sales controlling and risk management functions to back transactions with concrete, measurable criteria in order to optimise the risk profile of the credit portfolio. To achieve this, the expected and unexpected losses of a given borrower are determined. These form the basis for drawing up limits and in some cases target portfolios for the different risk types, exposures and risk metrics.

The Industry Credit Risk Strategy includes an assessment of the opportunities and risks for every industry, from which controlling signals and quantitative ceilings for new business are derived.

Limit system

The credit risk strategy defines limits for risk metrics and risk types for individual portfolios. These are allocated at the following levels:
– HVB Group
– HVB and subsidiaries, or groups of subsidiaries of HVB Group
– business segments of HVB Group and HVB
– products and special portfolios (such as Leverage and Project Finance and shadow banking entities)

The following criteria are analysed with regard to the performing portfolio: exposure, expected loss and risk density. An overshooting of the limits is generally not permitted.

In order to avoid concentrations of risk in credit default risk, the following concentration limits and, where appropriate, target portfolios are used for controlling purposes:
– single-name concentrations
– industry concentrations
– concentration limits for countries and regions

Risk Report (Continued)

The utilisation of the individual limits is classified using a traffic light system:
– green: limit utilisation is below a defined trigger
– yellow: limit utilisation is below the limit but above the defined trigger
– red: limit utilisation is above the limit

If a limit or a trigger is exceeded, an escalation process is initiated to eliminate the overshooting or prevent an overshooting of the limit in the event that a trigger is exceeded. The corresponding responsibilities are defined in the escalation process to ensure the permanent controlling effect of the limits.

Credit risk mitigation

In new lending, HVB pursues the strategy of applying loan collateral that would present an economic benefit to the Bank in the event of default.

For the reduction of credit risk, only such collateral is used as meets the requirements of the Advanced Internal Ratings Based (A-IRB) approach in accordance with Basel III.

Methods have been implemented to value collateral that meet the requirements of Basel III. Empirically determined ratios for realisation proceeds and costs are employed in the valuation together with realisation periods. The land charges are calculated using a statistical model to update the current and forecast fair values at the time of realisation. The fair values are adjusted on an annual basis to reflect the market developments actually observed, and the forecast is reviewed and, where necessary, adjusted. Special simulation methods for valuing collateral have been devised for collateral types with a low default history. In the case of securities, HVB resorts to its own haircut calculations based on historical data. In addition, collateral is taken into account using a substitution approach if permissible under the CRR.

The most significant collateral types in terms of value in the lending business are land charges, guarantees and pledges of financial collateral, which together account for approximately 90% of all valued collateral.

In trading activities, over-the-counter (OTC) derivatives, security financing transactions (SFTs) and exchange-traded derivatives (ETDs) are hedged on the basis of the respective contractual provisions with the counterparties. In the case of OTCs, these are the International Swaps and Derivatives Association (ISDA), the German Master Agreement for Derivatives (Deutscher Rahmenvertrag für Finanztermingeschäfte – DRV) and the Credit Support Annex (CSA, appended to an ISDA master agreement) or BRV (appended to a DRV master agreement). In the case of SFTs, these are the Global Master Repurchase Agreement (GMRA) or the Global Master Securities Lending Agreement (GMSLA). For credit risk reduction, only collateral recognised as eligible under the CRR is permitted for regulatory purposes. Internally, the collateral policy defines conditions for accepting collateral in trading activities. The back office has a consultation and veto right in this regard. Collaterals from the trading business are measured on the basis of current market prices. The counterparty risk exposure is forecast using a refined internal model for predicting the amount of collateral needed and the value of the collateral provided (simulation method).

Measurement
We use the following risk measurement methods and metrics to assess our credit risk.

Probability of default (PD)
The internal customer-segment-specific rating and scoring methods of HVB Group that are available for all significant credit portfolios form the basis for the measurement of credit default risk. The reliable determination of our customers' PDs is critical for credit decisions, pricing and core capital backing under Basel III (A-IRB model) as well as for the internal credit risk model.

The PDs determined on the basis of the rating and scoring methods lead to allocation to a rating class on a ten-point scale. The rating classes 1 to 7 are set aside for performing loans and the rating classes 8 to 10 for non-performing loans, with the rating classes 8–, 9 and 10 representing default classes.

In contrast to ratings at customer level for which the customer represents the risk for the Bank, in the case of a transaction rating the risk relates to the transaction. In this instance, the customer is not considered the risk-bearing entity; the individual transaction is rated with its clearly specified risk instead. Structured loans and securitisations are typical examples of transaction ratings.

Loss given default (LGD)
The LGD indicates what proportion of the underlying portfolio of receivables would almost certainly be lost in the event of a default. The expected proceeds from the collateral used to reduce credit default risk have a major influence on the amount of the LGD. At the same time, the amount of the LGD is determined by borrower-related criteria. The reliable determination of our customers' LGD is critical for credit decisions, pricing, core capital backing under Basel III (A-IRB model) and our internal credit risk model.

Exposure at default (EAD)
The EAD is the expected amount of the receivable at the time of default. It covers current arrears together with the probable future utilisation by the borrower. These probable future utilisations are determined on the basis of historical data and validated on an annual basis. Off-balance-sheet exposures such as unused, externally committed credit lines are also employed as the reference point for the EAD parameters. The EAD parameters are also incorporated in the credit decision, pricing, core capital backing under Basel III (A-IRB model) and the internal credit risk model.

The credit-risk-oriented calculation of exposures and limits is also carried out for issuer risk. This involves calculating a fair-value-oriented exposure for the individual positions in the trading book, which shows and limits the maximum potential fair value loss without taking account of residual values. A credit-risk-oriented, nominal-value-based exposure is used to limit the banking book and asset-backed security (ABS) positions. Netting effects are taken into account when the limits are set.

In terms of counterparty risk, a simulation method is used to determine future exposure figures for the pre-settlement risk within the scope of an internal model. The default conditional metric used in the internal model to determine the future exposures makes it possible among other things to incorporate the correlation effects between market risk and credit risk, and notably the specific wrong-way risk. The simulation is carried out for up to 50 future dates on the basis of 3,000 market data scenarios for each calculation date.

Risk Report (Continued)

Expected loss (EL) (standard risk costs)
The expected loss shows the credit default losses to be expected from the credit portfolio over the next 12 months, taking into account the current ratings and collateral on hand. Among other things, it is used for risk identification, as both an absolute and a relative value, in pricing, for profitability calculations and for limitation purposes.

Risk density
The risk density is another risk metric alongside the EAD and expected loss that is used to manage the individual HVB Group sub-portfolios. HVB Group calculates the risk density as the ratio of expected loss to performing exposure in basis points (bps). It indicates the development of risk in a given portfolio.

Unexpected loss (economic capital, EC)
The economic capital measures the amount of capital required to cover the unexpected loss beyond the expected loss, which, with a probability of 99.90%, will not be exceeded over the next 12 months. This risk metric makes the risk content of the various sub-portfolios comparable, taking into account the concentration risks in the portfolio. It is also used in pricing and the Bank's risk-adjusted profitability calculations.

Internal credit risk model
HVB Group has been using the credit portfolio model used throughout the UniCredit to measure the economic capital of credit risk. The group model follows the structural Merton approach under which correlations between the borrowers are mapped using a multi-factor model, taking into account fluctuations in value arising from rating changes (migration risk) for certain sub-portfolios as well as the pure credit default risk.

The credit portfolio model covers all banking book positions and counterparty risks arising from derivative positions that are relevant pursuant to the definition of credit risk. Issuer risk from the trading book continues to be recorded using the incremental risk charge (IRC) model, which forms part of the market risk in the presentation of the ICAAP.

Country risk is integrated using appropriate PD add-ons. Risk-reducing factors are included by applying reductions to the LGDs and PDs.

Risk-based and market-oriented pricing
Pricing methods and tools are used to manage risk and profitability in the lending business that take into account all cost components – in particular the expected standard risk costs and the cost of capital – and that are each adjusted to reflect the current parameters and bank management. Lending decisions are made under risk/return considerations that are determined in the obligatory pre-calculation prior to a transaction being concluded.

Monitoring and controlling
Risk monitoring takes place at the level of individual exposures. In addition, various instruments are used at portfolio level.

Individual exposures are monitored in both lending and trading operations with the aid of classical monitoring systems, such as rating analysis and early warning systems. Individual exposure limits are also defined in line with the probability of default to limit the risks entered into. Monitoring and reporting of any limit overshootings takes place on a monthly basis.

Special features of counterparty risk and issuer risk
We employ limit systems as a key element of the management and controlling of counterparty risk as well as issuer risk to prevent an increase in our risk position that does not comply with the strategy. Each new trade is entered and applied to the corresponding limit without delay (the same day). The pre-settlement risk is established on the basis of an internal model method (IMM) and is recognised by the banking supervisory authorities for calculating capital requirements. To reduce counterparty risk relating to financial institutions, HVB Group uses derivative exchanges in its function as a central counterparty.

Quantification and specification
The economic capital for credit risk at HVB Group, without taking account of diversification effects between the risk types and without the model risk cushion, amounts to €3,406 million, which is €82 million lower than the total reported value as at 31 December 2018 (€3,488 million).

Credit default risk
The following tables and charts for credit default risk show the aggregate exposure values (total of non-performing and performing exposure) of HVB Group including issuer risk from the trading book. Issuer risk arising from the trading book is also included in the regulatory market risk analysis by way of the incremental risk charge. The comments in this regard can be found in the section covering market risk.

The aggregate exposure to credit default risk is referred to as credit default risk exposure, or simply exposure, in the following. Account balances on the entry date are included in the calculation of exposure.

The remaining exposures assigned to the former Real Estate Restructuring business segment are excluded from the analysis because the portfolio does not include any further new business and is earmarked for elimination. The portfolio has been reduced consistently in recent years and now stands at €29 million (31 December 2018: €44 million).

Risk Report (Continued)

Development of metrics by business segment

Broken down by business segment	EXPECTED LOSS[1] € millions 2019	2018	RISK DENSITY[2] in bps 2019	2018	ECONOMIC CAPITAL[3] € millions 2019	2018
Commercial Banking	169	161	16	16	1,032	994
Corporate & Investment Banking	130	185	9	14	2,373	2,489
Group Corporate Centre	0	0	11	6	0	3
Other	0	0	12	31	1	2
Consolidation	—	—	—	—	—	—
HVB Group	**299**	**346**	**12**	**15**	**3,406**	**3,488**

1 Expected loss of the performing exposure without issuer risk in the trading book.
2 Risk density as a ratio of expected loss to performing exposure without issuer risk in the trading book in basis points (bps); 100bps = 1%.
3 Without taking account of diversification effects.

In 2019, the expected loss of HVB Group decreased by €47 million and risk density by 3bps.

The main contributor to this development was the CIB business segment, where the expected loss fell by €55 million and risk density by 5bps. This is largely due to the complete redemption of a large transaction held in the portfolio for many years that had significantly influenced the portfolio parameters.

The rise of €8 million in the expected loss in the Commercial Banking segment is partly due to business expansion in the private customers segment.

The economic capital declined from 2018 to 2019 across all business segments. It only increases in the Commercial Banking business segment.

Breakdown of credit default risk exposure by business segment and risk category

(€ millions)

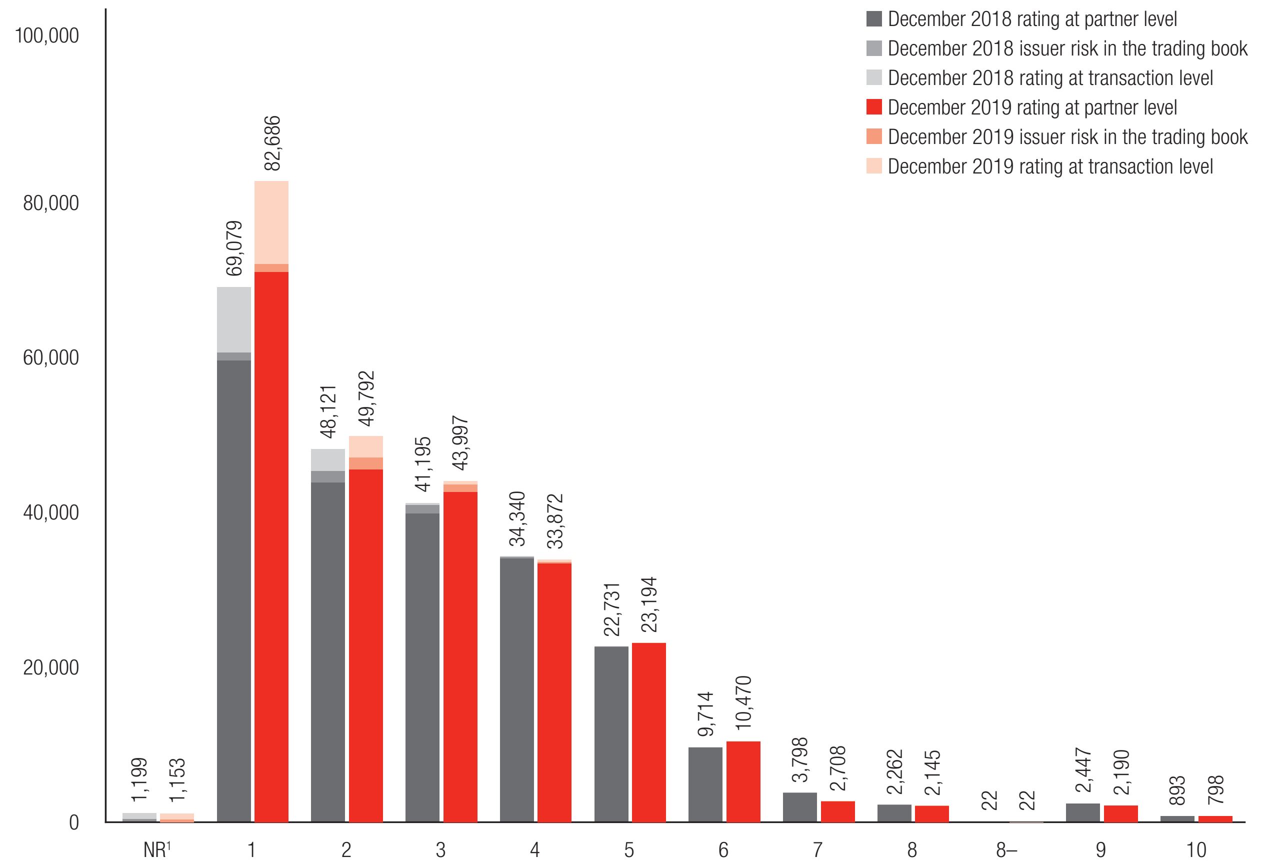
Broken down by business segment	CREDIT DEFAULT RISK EXPOSURE 2019	2018	OF WHICH COUNTERPARTY RISK 2019	2018	OF WHICH ISSUER RISK IN BANKING BOOK 2019	2018	OF WHICH ISSUER RISK IN TRADING BOOK 2019	2018
Commercial Banking	104,115	100,563	3,332	2,823	—	—	—	—
Corporate & Investment Banking	148,802	134,941	19,276	18,346	42,520	36,947	4,097	4,270
Group Corporate Centre	12	192	5	186	6	6	—	—
Other	97	105	—	—	—	—	—	—
Consolidation	—	—	—	—	—	—	—	—
HVB Group	**253,026**	**235,801**	**22,613**	**21,355**	**42,526**	**36,953**	**4,097**	**4,270**

HVB Group's credit default risk exposure increased by €17,225 million in 2019.

Exposure rose by €13,861 million particularly in the CIB business segment, notably as a result of the liquidity reserves built up at Deutsche Bundesbank, foreign state institutions and in the public sector.

Exposure in the Commercial Banking business segment increased by €3,552 million, which was driven primarily by the exposure built up in the private customers industry group.

Breakdown of credit default risk exposure by rating class (€ millions)



1 Not rated.

The rating structure of HVB Group changed in the course of 2019, primarily as a result of the development of exposure in the financial institutions (including foreign sovereigns) and public sector (including German sovereign) industry groups.

In rating class 1, exposure increased a significant €13,607 million, the main reason for this being the build-up of HVB Group's liquidity investments with Deutsche Bundesbank, foreign state institutions and in the public sector.

Risk Report (Continued)

Development of metrics by industry group

	CREDIT DEFAULT RISK EXPOSURE € millions		OF WHICH ISSUER RISK IN TRADING BOOK € millions		EXPECTED LOSS[1] € millions		RISK DENSITY[2] in bps	
Broken down by industry group	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Financial institutions								
(including foreign sovereigns)	67,324	58,894	3,257	2,970	36	29	6	5
Real estate	27,416	27,777	64	66	26	26	10	9
Public sector (including German sovereign)	22,740	20,078	49	307	2	2	1	1
Special products	15,361	12,532	0	17	13	8	8	6
Energy	12,070	13,938	96	142	14	59	12	43
Chemicals, pharma, healthcare	11,838	10,430	141	162	24	19	21	18
Food, beverages, agriculture	11,181	11,155	30	48	16	16	15	15
Automotive	8,683	8,812	100	125	12	9	14	11
Construction, building materials	6,671	5,606	17	32	9	9	13	16
Consumer goods, textile industry	6,585	6,657	22	22	20	16	31	25
Metals	6,564	5,702	47	83	11	13	17	24
Machinery	6,533	5,854	19	8	12	14	19	25
Services	5,983	5,771	51	39	16	16	29	29
Telecommunication, IT	5,224	5,448	105	148	9	11	19	22
Transport, travel	5,121	4,744	41	54	12	11	27	25
Electronics	3,116	2,954	26	20	4	3	12	11
Shipping	2,561	3,047	0	1	16	41	77	177
Tourism	2,453	2,428	5	10	3	7	15	29
Media, paper	2,426	2,449	23	11	4	6	19	25
Private customers	23,143	21,005	—	—	40	31	17	15
Others	34	520	4	5	0	0	21	3
HVB Group	**253,026**	**235,801**	**4,097**	**4,270**	**299**	**346**	**12**	**15**

1 Expected loss of the performing exposure without issuer risk in the trading book.
2 Risk density as a ratio of expected loss to performing exposure without issuer risk in the trading book in basis points (bps); 100bps = 1%.

How the top five industry groups developed within HVB Group is described below.

Financial institutions (including foreign sovereigns)
The exposure in the financial institutions (including foreign sovereigns) industry group rose by €8,430 million in 2019. This development is largely attributable to the liquidity reserves built up at Deutsche Bundesbank and foreign state institutions and with issuers.

Part of the exposure in the financial institutions (including foreign sovereigns) industry group resulted from credit risk exposure to UniCredit S.p.A. and other entities affiliated to UniCredit (upstream and downstream exposure) on account of the strategic positioning of HVB Group as the group-wide centre of competence for the markets and investment banking business of UniCredit and other business activities (such as export finance and guarantees).

Real estate
In the real estate industry, exposure as at 31 December 2019 decreased year on year by more than €361 million (down 1.3%), whereby the expected loss was kept at the previous year's level of €26 million.

The financing business remains focused on Germany.

HVB Group continues to place its focus on disciplined risk management in compliance with financing policies. Market and portfolio developments are monitored on an ongoing basis in order to be in a position to identify and counter negative developments at an early stage.

Public sector (including German sovereign)
The public sector (including German sovereign) industry group contains private enterprises with public-sector owners as well as state entities. As the German states and the development banks enjoying the formers' full liability represent important counterparties for internal liquidity management, the vast majority of the exposure is due to HVB Group's own liquidity reserves.

In the public sector (including German sovereign) industry group, exposure increased by €2,662 million in 2019. This increase is essentially attributable to liquidity reserves, in respect of which use was made of suitable investment opportunities. With an expected loss of €2 million and a risk density of 1bp, the portfolio quality is stable.

Energy
As at 31 December 2019, exposure in the energy industry fell by €1,868 million. In addition, the portfolio quality significantly improved in 2019, with an expected loss of €14 million and a risk density of 12bps.

This is largely due to the complete redemption of a large transaction held in the portfolio for many years that had significantly influenced the portfolio parameters.

Furthermore, new business, such as project loans in the area of renewable energy, was in line with the 2019 risk strategy and financing standards, which also helped to improve portfolio quality.

Special products
Special products transactions include ABS/CDO bond investments, customer-related securitisations, securitisations of UniCredit's own assets, structured credit products such as structured fund financing, structured leasing transactions and other structured financial transactions (not including project and acquisition financing).

The exposure was increased in the special products industry group by €2,829 million in 2019, mainly as a result of growth in customer-related securitisations in line with the 2019 risk strategy, for which a strategy of growth within clearly defined parameters involving conservative credit standards (for instance in relation to asset classes, rating quality) was defined for sub-segments of the special products portfolio. The expected losses and the risk density stand at €13 million or 8bps.

Exposure development of countries/regions
The following tables provide a comprehensive view of the concentration risk at country level. The exposure figures are shown with regard to the risk country of the customer.

Risk Report (Continued)

Development of credit default risk exposure of eurozone countries

(€ millions)

Broken down by eurozone countries	CREDIT DEFAULT RISK EXPOSURE		OF WHICH ISSUER RISK IN TRADING BOOK	
	2019	2018	2019	2018
Germany	150,953	137,700	848	891
Italy	10,340	8,729	789	784
France	9,040	8,076	437	448
Ireland	7,686	6,290	27	43
Spain	7,306	7,542	200	131
Luxembourg	4,884	5,023	60	74
Netherlands	4,481	4,434	91	183
Austria	1,995	1,928	341	378
Belgium	1,745	1,340	37	34
Finland	346	339	20	40
Greece	181	201	—	—
Cyprus	77	53	1	—
Portugal	38	102	4	52
Slovenia	23	23	6	4
Malta	21	42	—	—
Lithuania	11	9	10	9
Estonia	6	2	1	2
Slovakia	3	3	—	1
Latvia	1	6	1	4
Supranational organisations and multilateral banks	3,100	2,481	283	99
HVB Group	**202,237**	**184,323**	**3,156**	**3,177**

Italy

The size of the portfolio results from HVB Group's role as group-wide centre of competence for the markets and Investment banking business of UniCredit. The exposure to Italy also includes the exposure with UniCredit S.p.A.

Development of credit default risk exposure by country/region outside the eurozone (€ millions)

Broken down by country/region outside the eurozone	CREDIT DEFAULT RISK EXPOSURE 2019	CREDIT DEFAULT RISK EXPOSURE 2018	OF WHICH ISSUER RISK IN TRADING BOOK 2019	OF WHICH ISSUER RISK IN TRADING BOOK 2018
USA	11,840	9,934	320	136
UK	10,522	11,316	125	243
Switzerland	6,705	6,681	205	259
Japan	6,424	6,246	3	3
Asia/Oceania (without Japan, China, Hong Kong)	3,822	4,036	3	23
Western Europe (without Switzerland, UK)	2,243	2,248	80	124
China (including Hong Kong)	1,622	1,944	0	0
Near/Middle East	1,536	1,761	—	—
Turkey	1,396	1,925	5	12
CIS/Central Asia (without Turkey)	1,319	1,193	31	28
Africa	1,266	1,148	1	5
Eastern Europe (without euro countries)	809	1,278	146	226
North America (including offshore jurisdictions, without USA)	737	1,133	4	11
Central/South America	548	635	18	23
Without country classification	—	—	—	—
HVB Group	**50,789**	**51,478**	**941**	**1,093**

In 2019, the total exposure to countries/regions outside the eurozone fell by €689 million.

Financial derivatives

Alongside the goal of generating returns, derivatives are employed to manage market risks resulting from trading activities (in particular, risks arising from interest-rate fluctuations and currency fluctuations), and also serve to provide cover for on- and off-balance-sheet items within asset/liability management. Besides market risk, derivatives bear counterparty risk or, in the case of credit derivatives, which additionally serve to manage credit risk, also issuer risk.

The positive fair values are relevant for purposes of credit default risk as replacement values for the OTC derivatives, which represent the potential costs that HVB Group would incur to replace all of the original contracts with equivalent transactions in case of simultaneous default by all counterparties.

On the basis of these replacement values and not taking into account any risk-reducing effects, the maximum counterparty risk for HVB Group as at 31 December 2019 totalled €76.0 billion (31 December 2018: €60.7 billion). The year-on-year rise of €15.3 billion is primarily attributable to the increase in exposure in interest rate swaps.

In accordance with the regulatory provisions under CRR as well as taking account of the internal model method (IMM) that has been approved by the regulatory authorities for use by HVB to determine counterparty risks, HVB Group's derivative business results in risk-weighted assets arising from counterparty risk of €4.1 billion as at 31 December 2019 (31 December 2018: €4.1 billion).

The following tables provide detailed information especially on the nominal amount and fair values of all derivative transactions and credit derivative transactions of HVB Group.

Risk Report (Continued)

Derivative transactions

(€ millions)

	NOMINAL AMOUNT					FAIR VALUE			
	RESIDUAL MATURITY			TOTAL		POSITIVE		NEGATIVE	
	UP TO 1 YEAR	MORE THAN 1 YEAR UP TO 5 YEARS	MORE THAN 5 YEARS	2019	2018	2019	2018	2019	2018
Interest rate derivatives	**1,177,280**	**1,097,907**	**1,016,812**	**3,291,999**	**2,513,721**	**63,825**	**46,707**	**59,248**	**42,543**
OTC products									
Forward rate agreements	248,732	—	—	248,732	243,160	29	5	34	4
Interest rate swaps	826,087	982,386	903,736	2,712,209	2,000,607	58,170	42,589	54,009	38,238
Interest rate options									
– purchased	14,685	46,250	52,851	113,786	96,057	5,178	3,533	404	471
– written	12,823	59,862	60,225	132,910	98,672	406	576	4,778	3,829
Other interest rate derivatives	36,575	4	—	36,579	11,405	41	4	23	1
Exchange-traded products									
Interest rate futures	38,117	9,405	—	47,522	57,018	—	—	—	—
Interest rate options	261	—	—	261	6,802	1	—	—	—
Foreign exchange derivatives	**228,531**	**38,186**	**3,444**	**270,161**	**266,824**	**2,694**	**3,234**	**2,742**	**3,624**
OTC products									
Foreign exchange forwards	177,217	21,048	3,253	201,518	204,035	2,165	2,677	2,195	3,008
Foreign exchange options									
– purchased	25,363	9,045	128	34,536	30,814	221	356	269	205
– written	25,815	8,093	63	33,971	31,755	262	175	278	411
Other foreign									
exchange derivatives	86	—	—	86	220	46	26	—	—
Exchange-traded products									
Foreign exchange futures	50	—	—	50	—	—	—	—	—
Foreign exchange options	—	—	—	—	—	—	—	—	—
Cross-currency swaps	**44,066**	**105,117**	**51,168**	**200,351**	**200,263**	**4,262**	**5,666**	**4,080**	**5,519**
Equity/index derivatives	**62,503**	**57,541**	**10,669**	**130,713**	**79,912**	**4,423**	**3,271**	**3,746**	**3,119**
OTC products									
Equity/index swaps	5,501	3,844	298	9,643	11,264	280	526	285	452
Equity/index options									
– purchased	3,737	2,780	1,170	7,687	5,240	191	268	49	48
– written	13,434	9,464	6,641	29,539	20,767	140	384	828	562
Other equity/index derivatives	14,369	705	1	15,075	855	1,519	55	—	2
Exchange-traded products									
Equity/index futures	10,403	8,205	52	18,660	6,781	—	—	—	—
Equity/index options	14,630	31,514	2,457	48,601	33,779	2,293	2,038	2,584	2,055
Equity swaps	429	1,029	50	1,508	1,226	—	—	—	—
Credit derivatives[1]	**7,281**	**4,366**	**827**	**12,474**	**28,584**	**101**	**223**	**235**	**341**
Other transactions	**7,524**	**6,831**	**854**	**15,209**	**12,338**	**736**	**1,568**	**853**	**807**
HVB Group	**1,527,185**	**1,309,948**	**1,083,774**	**3,920,907**	**3,101,642**	**76,041**	**60,669**	**70,904**	**55,953**

1 For details of credit derivatives, please see the tables "Credit derivatives" and "Credit derivatives by reference asset" below.

Derivative transactions with a residual maturity of up to three months accounted for a nominal total amount of €800,202 million as at 31 December 2019 (of which credit derivatives on a prorata basis: €1,580 million).

Derivative transactions by counterparty type

(€ millions)

	FAIR VALUE			
	POSITIVE		NEGATIVE	
	2019	2018	2019	2018
Central governments and central banks	9,232	7,188	1,276	1,242
Banks	38,962	30,729	40,755	32,556
Financial institutions	24,690	19,232	26,424	20,164
Other companies and private individuals	3,157	3,520	2,449	1,991
HVB Group	**76,041**	**60,669**	**70,904**	**55,953**

Credit derivatives

(€ millions)

	NOMINAL AMOUNT					FAIR VALUE			
	RESIDUAL MATURITY			TOTAL		POSITIVE		NEGATIVE	
	UP TO 1 YEAR	MORE THAN 1 YEAR UP TO 5 YEARS	MORE THAN 5 YEARS	2019	2018	2019	2018	2019	2018
Banking book	**—**	**82**	**3**	**85**	**94**	**—**	**2**	**10**	**9**
Protection buyer									
Credit default swaps	—	82	—	82	91	—	2	10	9
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	—	3	3	3	—	—	—	—
Protection seller									
Credit default swaps	—	—	—	—	—	—	—	—	—
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	—	—	—	—	—	—	—	—
Trading book	**7,281**	**4,284**	**824**	**12,389**	**28,490**	**101**	**221**	**225**	**332**
Protection buyer									
Credit default swaps	3,303	1,837	368	5,507	13,985	12	73	78	138
Total return swaps	419	503	49	972	580	18	7	128	115
Credit-linked notes	—	142	3	145	171	3	5	1	2
Protection seller									
Credit default swaps	3,559	1,732	401	5,692	13,727	68	136	15	76
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	70	3	73	27	—	—	3	1
HVB Group	**7,281**	**4,366**	**827**	**12,474**	**28,584**	**101**	**223**	**235**	**341**

Credit derivatives by reference asset

(€ millions)

	NOMINAL AMOUNT				
	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT-LINKED NOTES	TOTAL 2019	TOTAL 2018
Public sector bonds	2,482	—	6	2,488	14,097
Corporate bonds	8,601	138	95	8,834	12,995
Equities	—	—	—	—	—
Other assets	198	834	120	1,152	1,492
HVB Group	**11,281**	**972**	**221**	**12,474**	**28,584**

Risk Report (Continued)

Single-name credit derivatives make up 54.5% of the total; multi-name credit derivatives, relating notably to baskets or indices, account for a share of 45.5%.

Stress tests
By carrying out stress tests in the credit portfolio, the credit risk managers obtain information on a quarterly basis about the possible consequences of a deterioration in the underlying economic conditions in addition to the monthly analysis of the real portfolio development. The focus here is on the risk metrics of risk-weighted assets, expected loss and economic capital, and the changes in the portfolio quality. Concentration stress tests, ad hoc stress tests and inverse stress tests are carried out alongside the stress tests based on macroeconomic scenarios (results of which are included in the cross-risk-type stress analysis, among other analyses).

2 Market risk

Categories
We define interest rate risk as the risk of values changing on account of fluctuations in interest rates.

Foreign currency risk arises from fluctuations in exchange rates.

Stock and commodity risk is defined as the risk arising from changing rates on the stock and/or commodity markets.

We define the credit spread as the premium on the interest rate compared with a risk-free investment. Fluctuations in the credit spread give rise to credit spread risk.

The risk that results from changes in volatilities is subsumed in option risk.

Strategy
Market risk essentially arises in the CIB business segment. As was already the case in previous years, the focus in 2019 was again on customer transactions.

One part of the market risk is entailed in trading books while the other part – mainly invested in interest-bearing-securities – lies in strategic investments or in liquidity reserve portfolios. All positions exposed to market risk are subject to corresponding limits.

Limit system
All transactions exposed to market risk in the trading and banking books of HVB are aggregated every day to form value-at-risk (VaR) metrics and set against the risk limits for internal control purposes. The Management Board of HVB approves and, if necessary, adjusts the risk limits every year. Limits are defined for trading books by using VaR limits, whereas limits are set for the combination of trading and banking books by total VaR limits. Both groups of limits are equally binding and compliance is equally enforceable.

At the beginning of 2019 when the risk strategy was adopted, the overall VaR limit of €90 million and the trading book limit of €47 million were confirmed without change.

Monitoring of the regulatory metrics stressed value-at-risk and incremental risk charge to be used additionally for the internal market risk model is ensured by setting limits for the risk values that are reported on a weekly basis.

Alongside management using the VaR approach, the risk positions of key units are restricted by an additional bundle of granular limits. These limits relate to sensitivities, stress test results and nominal volumes in various risk classes.

Measurement
The VaR shows the maximum expected loss caused by market price fluctuations that with a certain probability (confidence level) will not be exceeded over a given period. We use a confidence level of 99.00% and a holding period of one day for internal risk reports, management and risk limits.

We use a historical simulation to calculate the VaR. This simple method makes it possible to calculate the VaR without having to make any fundamental assumptions regarding the statistical distribution of the movements in the portfolio value. It encompasses the generation of the hypothetical distribution of earnings (gains and losses) from a portfolio of financial instruments directly using the historical market price fluctuations in a defined observation period. In October 2019, this period was reduced from the last 500 days to the last 250 days.

HVB Group has defined several further market risk metrics under the current CRR rules for risk management as well as the VaR:
- The stressed VaR is calculated in the same way as the VaR, although the 12-month observation period has been selected covering the most significant negative market changes for HVB's trading portfolio. The amount calculated for the regulatory report relates to a holding period of ten days and a confidence level of 99.00%.
- The incremental risk charge (IRC) for credit-risk-sensitive positions is the internal approach used to determine the specific risks (specific price risk for net interest positions). This includes credit default risk and migration risk, meaning that both the change in ratings (migration) and the potential default on a credit product are taken into account. The calculated amount for both regulatory and internal reporting relates to a holding period of one year and a confidence level of 99.90%.
- In addition, further risks not taken account of in the internal market risk model are covered by the regulatory standard approach. This essentially relates to the specific risk entailed in securitisations and risk positions in the form of units in undertakings for collective investment (UCI) and as of December 2019, risks arising from shares and indices caused by implicit fluctuations in the repo rate.
- Based on the CRR regulations, we calculate risks with regard to the credit valuation adjustment (CVA). The CVA risk shows the risk of losses in value based on changes in the expected counterparty risk for all relevant OTC derivatives under CRR. We use our own internal model to calculate the vast majority of the CVA. For the regulatory report, the internal model calculates both the CVA VaR and the stressed CVA VaR on the basis of a 10-day holding period and a confidence level of 99.00%.

Monitoring and controlling
The market risk positions in the trading and banking books are monitored using a hierarchical limit system that restricts the potential loss from market risk. This involves restricting the VaR totals from trading positions by setting trading book limits. At the same time, all positions, irrespective of the regulatory or IFRS classification, are limited by what are known as total VaR limits.

The VaR figures are reported daily along with the limit utilisation and the earnings figures (P/L figures) to the Management Board member responsible and the persons responsible in the CIB business segment. Whenever trading book and/or total VaR limits are exceeded, an escalation process is triggered immediately and the reduction of the positions in question monitored.

Risk Report (Continued)

The Market Risk Management department has direct access to the front-office systems used in trading operations. The monitoring of trading activities comprises prompt allocation to credit risk limits and detailed validation and coordination of the P/L on the following day. In this context, both the daily changes in the market price risk profile and the P/L generated from new business are calculated.

In addition to the daily reports, the management is informed on a weekly and monthly basis about the results of the risk analysis, including the results of back-testing and stress tests as well as sensitivity ratios.

Since 2019, HVB Group has been calculating economic capital on the basis of the assumption that operations will continue (continuity of operations). To calculate and allocate the economic capital requirements for market risk, the hypothetical distribution used to determine the VaR is based on an observation period of 500 trading days, excluding credit spread movements for positions carried at cost. The results from the credit valuation adjustment (CVA) and funding valuation adjustment (FVA) risk are added to this hypothetical distribution, whereby the FVA is derived from the expected future funding costs of derivative transactions. Unlike in internal risk controlling, any hedge effect of the model book for equity is not included in the economic capital. Furthermore, market risks are also included that arise from the Incremental Default Risk Charge (IDRC), which in contrast to the regulatory IRC approach only takes account of issuer default, the market risk standard approach, add-ons for ABS risks and for gap option risks. All risks, with the exception of the add-ons, are scaled accordingly to obtain a holding period of one year and a confidence level of 99.90%.

The regulatory capital requirement for market risk encompasses the VaR and stressed VaR for, in each case, a 10-day holding period together with the IRC and the market risk standard approach. The CVA risk is also taken into account. When calculating the capital requirement, the individual risk metrics are aggregated by regulatory averages, maximum calculation and scaling.

Quantification and specification

The economic capital for market risk at HVB Group, without taking account of diversification effects between the risk types, amounts to €1,742 million. The change compared with the figure as at 31 December 2018 (€2,357 million) is due to the change in the calculation method to the going concern approach. If the current approach is applied retroactively to the to the reference date for market risk, the result is economic capital of €1,453 million as at 31 December 2018.

The following table shows the aggregated market risk for the trading and banking book positions at HVB Group over the course of the year. Most of the market risk arises from positions of the CIB business segment of HVB Group.

Market risk of HVB Group (VaR, 99.00% confidence level, one-day holding period)

(€ millions)

	MARKET RISK OF TRADING BOOK ACTIVITIES			MARKET RISK OF TRADING AND BANKING BOOK ACTIVITIES[3]		
	AVERAGE	PERIOD END		AVERAGE	PERIOD END	
	2019	31/12/2019	31/12/2018	2019	31/12/2019	31/12/2018
Credit spread risk	3	2	3	18	12	13
Interest rate positions	5	7	4	8	9	5
Foreign exchange positions	2	3	1	3	2	4
Equity/index positions[1]	3	2	3	3	2	3
HVB Group[2]	**6**	**7**	**6**	**18**	**13**	**16**

1 Including commodity risk.
2 Because of the diversification effects between the risk categories, the total risk is less than the sum of the individual risks.
3 Because of the diversification effect between the trading book and the banking book, the difference in the figures shown does not correspond to the banking book risks.

The regulatory capital requirements for the past twelve months are described below, broken down by the relevant risk metrics.

Regulatory capital requirements of HVB Group

(€ millions)

	31/12/2019	30/9/2019	30/6/2019	31/3/2019	31/12/2018
Value at risk	81	76	62	58	80
Stressed value at risk	293	266	219	196	288
Incremental risk charge	264	253	248	249	222
Market risk Standard Approach	68	23	24	25	25
CVA value at risk	10	12	12	11	10
Stressed CVA value at risk	68	89	89	82	86
CVA Standard Approach	29	28	25	27	26

Risk Report (Continued)

Regulatory back-testing of the internal model at HVB for 2019
The forecasting quality of the VaR measurement method is reviewed by means of daily back-testing that compares the computed regulatory VaR figures with the changes in the hypothetical portfolio value. Six reportable back-testing outlier occurred in 2019. The hypothetical loss was larger than the forecast VaR figure on these days. These six outliers were all caused by severe market movements, particularly by strong fluctuations on the interest market.

Alongside back-testing using the hypothetical change in value, HVB also uses a back-testing method based on the change in the actual portfolio value to validate the model. In 2019, there were five instances of a limit being exceeded, which were due to strong market fluctuations.

Besides back-testing, further methods are used on a quarterly basis to check the quality of the model. These involve analysing the suitability of both the modelling and the risk factors used and adjusting them as required. Risks that cannot be adequately modelled are monitored and limits set for them if they are material.

Market liquidity risk
Market liquidity risk relates to the risk that the Bank will suffer losses due to the disposal of assets that can only be liquidated on the market at a discount. In an extreme case, HVB Group may not be able to sell such an asset, as the market does not offer enough liquidity or the Bank holds a position that is too large to set against the market turnover. The CRO organisation is responsible for managing market liquidity risk and conducts advanced market liquidity analyses.

Stress tests
In addition to calculating the VaR and the other risk metrics, we conduct stress tests on a monthly basis to determine the potential losses in our market risk positions resulting from extreme market movements and extraordinary events. The scenarios we examine range from large movements in interest rates, currency and equity markets through to disruptions in the underlying volatilities. Further scenarios are also considered for HVB Group, such as a widening of credit spreads. We also analyse macroeconomic stress test scenarios based on real market upheavals in the past (historical stress tests) or current threats (hypothetical stress tests).

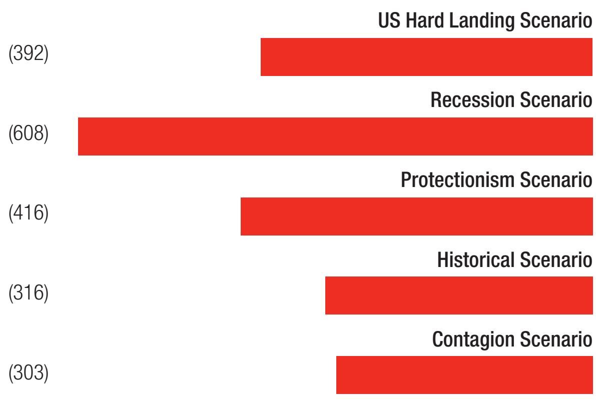
The Historical scenario is calculated to evaluate the effects of a potential financial crisis. This scenario reflects the trend in the financial crisis in 2009. To take account of the low market liquidity, the time horizon for this scenario was extended and covers a period of three months.

Further hypothetical scenarios are based on the potential market movements in the event of a worsening of the debt crisis in Europe (Contagion scenario) or a negative demand shock in Germany (Recession scenario). The Protectionism scenario sees a slowing in Chinese growth following a policy of protectionism in the USA and simulates a growth shock in Turkey. The US hard landing scenario is used to analyse the impact of an abrupt end to the longest expansion phase of the American economy in history and a disorderly withdrawal of the UK from the EU.

In contrast to previous years, the presentation of stress test results selected here no longer includes the results used to determine capital adequacy, but those used for internal management purposes. The main consequence of this is that only stress test losses of financial instruments measured at fair value are taken into account, whereas financial instruments carried at cost in the past contributed to the results. The previous-year results presented in this report were also calculated using the new approach and therefore differ from the results in the previous year's report.

At 31 December 2019, the most significant stress test result of this package of stress test scenarios involves a potential loss of €0.6 billion in the Recession scenario (31 December 2018: loss of €0.8 billion). This scenario is also used in the cross-risk-type stress tests, where it is analysed for risk-taking capacity.

HVB Group stress tests at 31 December 2019 (€ millions)



As described under the sub-header "Stress tests" in the section entitled "Implementation of overall bank management", inverse stress tests were again carried out in 2019. Risks resulting from market risk in the banking portfolio were also included in this analysis.

Interest rate risk in the banking book

The interest rate risk in the banking book is the risk relating to the Bank's capital and income caused by changes in interest rates. The strategy of the interest rate risk in the banking book aims to reduce negative effects on net interest income caused by fluctuations in interest rates over several years and to generate sustainable earnings. The modelling of contractually short-term deposits and non-interest bearing assets and non-interest bearing liabilities helps to stabilise the flow of income. Interest rate risk management also takes account of customer behaviour with regard to early repayments of loans. Parameters are based on historical data as well as trend analyses.

Risk Report (Continued)

HVB Group measures and monitors this risk with regard to the change in the economic value as well as the income of the Bank. In this context, it is ensured that the methodologies and models as well as limits or thresholds for the sensitivity of net interest and the present value are consistent. Interest rate risk exposure from commercial banking transactions is managed and hedged by the Treasury department, which monitors market risk on a daily basis. Present value-based measurement shows the effects of fluctuations in the interest rate on the economic value of assets and liabilities as a relevant risk measure. In line with regulatory reporting requirements, the absolute change in present value and the coefficients from the change in present value and regulatory own funds are calculated on a monthly basis in the event of a 200bps increase or a 200bps decrease in interest rates. According to Circular 6/2019 (BA) of the Federal Financial Supervisory Authority on interest rate risks in the banking book, the calculations of the +/–200 basis points interest rate shocks have been adjusted and the collection of early warning indicators was also included. These evaluations are carried out with (management view) and without (regulatory view) taking account of the hedge effect from the model book for own funds.

Information on interest rate risks in the banking book

	REGULATORY PERSPECTIVE		MANAGEMENT PERSPECTIVE	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Change in present value +200 basis points in millions	(1,713)	(1,736)	(68)	(59)
Interest rate coefficient in %	(11.0)	(10.2)	(0.4)	(0.3)

HVB Group is well below the specified 20% mark, above which the banking supervisory authorities consider a bank to have increased interest rate risk, and below the 15% mark, which is seen as an early warning indicator. These figures include HVB’s positions as well as the positions of the material group companies, customer margins are not included.

In addition to the present value approach, a simulation of net interest in the banking book is performed for HVB Group on a monthly basis. The focus of this analysis is the impact of changes in interest rates on net interest income compared with the benchmark scenario over a defined time horizon. The scenarios are limited internally with parallel shifts in the yield curve by plus 100bps or minus 30bps for transactions in euros and other foreign currencies in combination with a minus 100bps interest rate shock for positions in US dollars and British pounds. Assumptions regarding the elasticity of demand and savings deposits are also taken into account. Depending on the contractual agreement with the customer, a floor of 0% could be employed for commercial banking products. In such a case, the interest rate shock of minus 30/minus 100bps would not be fully applied. Model assumptions are also incorporated into the analysis. This relates notably to products with unknown and/or undefined maturities and included options. The results are below the internal limit of 9%.

Effects of changes in the interest rate on net interest

	31/12/2019		31/12/2018	
	€ millions	in %	€ millions	in %
+100 basis points	145	5.7	190	7.9
–30 basis points / –100 basis points	(50)	(2.0)	(119)	(4.9)

The resulting sensitivity analysis was carried out on the basis of the planned net interest for the 2019 financial year. The change in results compared with the previous year can be explained by the changed positions held by the Bank and the persistently low interest rates.

Furthermore, additional stress test scenarios are performed to estimate the basis risk (resulting from the imperfect correlation in reference interest rates for different instruments and products) and the effects of nonparallel shocks.

3 Liquidity risk

Liquidity risk consists of the following categories:
– short-term liquidity risk
– operational liquidity risk (as part of the short-term liquidity risk)
– funding risk
– market liquidity risk

Categories

Short-term liquidity risk
Short-term liquidity risk relates to the risk of a discrepancy in the amount and/or maturity of incoming and outgoing payments in the short run (one year or less).

Intraday/operational liquidity risk, which is part of the short-term liquidity risk
Operational liquidity risk arises when a financial institution cannot meet its intraday payment obligations (payment obligations within one trading day) from its current incoming and outgoing payments, hence becoming technically insolvent. This can be considered a special type of short-term liquidity risk. An intraday cushion is set up as part of the short-term liquidity cushion with a view to balancing the intraday liquidity requirement and covering unforeseen payment obligations.

Funding risk
The funding risk (structural liquidity risk) is defined as the risk of not being able to raise the necessary refinancing funds at an appropriate ratio between medium to long-term assets and liabilities (over one year), at acceptable prices and in a stable and sustainable manner without adversely affecting the Bank’s day-to-day operations or financial position. It could potentially have an impact on the funding costs (own credit and market funding spread) and thus on the future earnings of the company.

Risk Report (Continued)

Market liquidity risk
Information on the market liquidity risk is provided in the section entitled "Market risk".

Strategy
Liquidity management at HVB Group is divided into short-term liquidity management (one year or less) and long-term liquidity management (more than one year). Risk drivers that may be the cause of potential liquidity outflows have been identified for the various segments.

Furthermore, various dimensions of liquidity risk management have been defined to which appropriate instruments and controlling mechanisms have been assigned depending on the type of risk involved.

The risk appetite is defined with regard to liquidity risk on the basis of the business activities and taking into account risk sources and risk drivers. This forms the foundation for the management and limit mechanisms, such as liquidity reports, projections and plans, and the definition of liquidity cushions to be maintained for unexpected outflows of liquidity during the day. Furthermore, a limit system has been set up and triggers defined. The result is the specification of a minimum survival period that matches the risk appetite.

Limit system
For the management of short-term liquidity risk, we have put in place a cash-flow-oriented limit system that presents the relevant balances within HVB Group per working day and limits the positions appropriately.

The difference between the calculated potential liquidity requirement and the existing liquidity reserves is limited.

A limit was set for operational liquidity risk as part of short-term liquidity risk by implementing a minimum balance to be observed during the day, by means of which additional liquidity is maintained to cover unforeseeable outflows (intraday liquidity cushion).

Funding risk or structural liquidity risk is restricted by defining a limit for the ratio of liabilities to assets.

The effects arising from the change in funding spreads are to a very large extent taken into account by limiting funding risk. In addition, the internal transfer prices for the lending and deposit-taking activities are continually reviewed for appropriateness and regularly adjusted to reflect the market situation.

Reduction
Among other ways of reducing liquidity risk, we specify processes, implement an early warning system complete with early warning indicators and a limit system, and manage the highly liquid assets made available as collateral.

Measurement

Short-term liquidity risk

To measure short-term liquidity risk, cash flow profiles are produced on a daily basis. The resulting balances are compared with the available liquidity reserves, which consist primarily of the available highly liquid securities eligible at all times as collateral for central bank borrowings. The cumulative balance of the above-named components is backed with limits for all maturity buckets of up to three months for the relevant units of HVB Group.

The aggregate amount for the three-month maturity bucket is published in the Risk Report for short-term liquidity risk as the relevant figure for managing the Bank's liquidity risk.

Furthermore, stress-test scenarios based on the liquidity profiles of the HVB Group units are simulated at regular intervals and the impact on liquidity is calculated. The corresponding stress-test scenarios take account of both company-specific influences (e.g. potential HVB Group-specific incidents) and external factors (e.g. disruptions in global financial markets), as well as a combination of company-specific and external factors (e.g. the scenario demanded under the MaRisk rules). A time horizon of up to two months is defined for the individual stress-test scenarios, during which the available liquidity reserves are expected to exceed the simulated outflows of liquidity. This ensures that counter-measures can be initiated promptly, if required. In addition, the defined early warning indicators and relevant concentration risks are determined and monitored at regular intervals.

Calculating the liquidity coverage ratio (LCR) is intended to ensure that an institution is able to meet its short-term payment obligations under the assumption of an acute stress scenario over a period of 30 calendar days.

Funding risk

To measure funding risk, the long-term funding needs based on the expected business development are reported and updated in a coordinated process. The long-term funding need, which is used to set the funding targets and is presented to the Asset Liability Committee (ALCO), takes into account the assets and liabilities falling due in the planning period. To present the funding structure, maturity mismatches between the long-term assets and liabilities are shown in defined maturity buckets. The key assumptions underlying the risk measurement methods are reviewed on a regular basis to assess their appropriateness. The net stable funding ratio (NSFR) is used as the key internal indicator for measuring funding risk according to Basel III requirements. An internal indicator "adjusted NSFR" is calculated for the time horizon greater than three years, in which connection the net surplus of current liabilities to assets is assumed to be stable.

Monitoring and controlling

Short-term liquidity risk

The task of monitoring the short-term liquidity situation at HVB Group has been entrusted to the Finance unit in the CFO organisation. This essentially involves analysing and controlling the short-term liquidity profiles within the scope of the limits defined and monitored by the CRO organisation on a daily basis. The monitoring and controlling of operational intraday liquidity risk are essentially performed on the basis of various minimum balances that must be observed during the day and at the beginning of the day. These are set against the current volumes in the relevant accounts on a regular basis and monitored. Responsibility for monitoring and controlling developments on the respective local markets rests with the local Treasury units, which report to the Finance unit as and when necessary.

Risk Report (Continued)

For short-term liquidity risk, moreover, weekly stress analyses based on various scenarios allow us to make projections on the impact of sudden disruptions on the liquidity position, enabling us to take the necessary management measures as early as possible. Units in the CRO organisation are responsible for monitoring and analysing the stress-test scenarios, the early warning indicators and concentration risk, while the CFO organisation has been tasked with monitoring and analysing the holding of freely disposable securities eligible as collateral for central bank borrowings that can be used at short notice to cover unexpected liquidity outflows. Additional market liquidity analyses are carried out by the CRO organisation during the stress tests.

Funding risk

The task of monitoring the structural liquidity situation at HVB Group has similarly been entrusted to the Finance unit in the CFO organisation. This essentially involves analysing and controlling the long-term mismatches in the maturities of assets and liabilities within the scope of the defined limits and also specified funding targets. Compliance with the long-term funding ratios is monitored on a monthly basis. The funding risk of HVB Group is broken down by product, market and investor group. The front-office units implement the volume and product parameters derived from the funding targets cost-efficiently upon consultation with the Finance unit. This activity is similarly supported by a liquidity cost allocation mechanism – known as Funds Transfer Pricing (FTP) – for all significant business activities, the principles of which are defined in the FTP policy.

The ALCO and the management are regularly informed about the current liquidity and funding situation. A contingency plan is in place to allow the impact of potential liquidity crises to be managed. This plan describes and regulates the distribution of responsibilities, internal reporting requirements, decision-making powers and potential measures.

The rules and regulations governing liquidity management are defined in a liquidity policy adopted by the Management Board of HVB. The key points contained in the policy relate to the ability to satisfy financial obligations at all times in line with the defined risk appetite. Its objectives include the following: optimising the projected cash flows, restricting the cumulative short-term and operational liquidity differences, performing stress tests at regular intervals and restricting the long-term maturity mismatches between the liabilities side and the assets side.

The liquidity policy and contingency plan together with supplementary remarks are updated at regular intervals by the CRO organisation with support from the CFO organisation. The liquidity policy is implemented by the operational business units and coordinated and monitored for the relevant units of HVB Group by the Market Risk unit in the CRO organisation.

Quantification and specification

Short-term liquidity risk

Within the framework of our limit system, we showed an overall positive balance of short-term liquidity risk of €43.8 billion at HVB Group for the three-month maturity bucket at the end of December 2019 (31 December 2018: €36.0 billion). The holding of available securities eligible as collateral for central bank borrowings that can be employed on the next banking day to compensate for unexpected outflows of liquidity amounted to €21.9 billion at the end of 2019 (31 December 2018: €17.7 billion).

The liquidity coverage ratio (LCR) of a minimum of 100% to ensure that an institution is able to meet its short-term payment obligations was exceeded at HVB as at 31 December 2019 with a figure of more than 100%.

Funding risk
The funding risk of HVB Group was again low in 2019 thanks to our broad funding base in terms of products, markets and investor groups. This ensured that we were able to obtain adequate funding at all times for our lending operations in terms of volume and maturity within the framework of our limit system. By the end of December 2019, HVB Group had obtained longer-term funding with a volume of €10.5 billion (31 December 2018: €9.3 billion) in which connection no further Targeted Longer-Term Refinancing Operation of the ECB (TLTRO-III programme) was concluded. There is a regulatory minimum ratio to be complied with from 2021 for the NSFR. HVB adhered to a ratio of over 100% in 2019 based on Basel III requirements. The internal indicator "adjusted NSFR greater than three years" was over 100% in 2019. On account of their ratings, our Pfandbriefe still remain an important funding instrument.

(in %)

BREAKDOWN OF SOURCES OF FUNDING OF HVB GROUP	
Deposits from customers	46.7
Deposits from banks	11.8
Debt securities (including Pfandbriefe)	10.8
Repos[1]	9.6
Equity	7.2
Central banks	6.7
Financial liabilities held for trading[2]	1.9
Other	3.1
Financial assets at fair value through profit or loss	2.3

1 Repos from the items "Financial liabilities held for trading", "Deposits from customers" and "Deposits from banks".
2 Without the item "Negative fair values arising from derivative financial instruments".

Stress tests
Stress analyses are carried out at regular intervals, enabling us to make projections on the impact of sudden disruptions to our liquidity position on the basis of various scenarios so that we can initiate appropriate management measures as early as possible.

We include Bank-specific, market-wide and combined scenarios when conducting our stress tests. The calculations at the end of the year 2019 showed that the available liquidity reserves were sufficient to cover the funding requirements over the minimum period demanded.

4 Operational risk

Strategy
The risk strategy pursues the goal of reducing operational risk to a reasonable level from a profitability perspective and taking the defined risk appetite into account. This is primarily intended to reduce or avoid significant losses by taking appropriate measures and also helps to generate a sustainable improvement in earnings.

To make the risk strategy more specific, Bank-wide and business segment-specific action areas are defined on the basis of influencing factors relevant to operational risk.

Risk Report (Continued)

Limit system
Operational risk is part of the internal capital, with a limit set for HVB Group accordingly.

Reduction
HVB Group has a group-wide operational risk organisational structure. The individual business segments of HVB and each subsidiary of HVB Group are responsible for identifying, analysing and managing operational risk.

Loss events that have occurred and significant risks are reported to the Management Board and the Risk Committee at regular intervals. On a local level, operational risk managers report losses and relevant risks to their senior management on a quarterly or half-yearly basis.

Information technology (IT)
UniCredit Services S.C.p.A. provides most of HVB's IT services. HVB's Information and Communication Technology (ICT) management processes require continual adjustments to be made to the internal control system (ICS) for IT to allow for all significant IT risks within the ICT management processes, among other things, to be monitored and managed appropriately. This also includes the processes in the field of the IT infrastructure which are in turn outsourced by UniCredit Services S.C.p.A. to Value Transformation Services (V-TS, a joint venture of IBM and UniCredit Services S.C.p.A.) for which separate controls were defined in HVB's ICS. In addition, the control system will be adjusted as necessary in line with the potential improvements identified at regular intervals and findings from audits.

Business continuity management, IT service continuity management and crisis management
The business continuity, IT service continuity and crisis management function demonstrated its effectiveness and appropriateness by successfully mastering critical situations. In addition, the emergency precautions are adapted constantly to accommodate new threats.

Legal risk and compliance risk
Legal risk as a subcategory of operational risk is defined as the possibility of losses, damage or costs caused by lack of knowledge of the current legal situation or by a delay in reacting to changes in the law, insufficient and/or inadequate application of the law or unforeseeable changes to case law and/or the interpretation of the law by the authorities.

The Legal, Corporate Affairs & Documentation department is responsible for managing legal risk and provides advice on legal matters to all units of HVB. Excluded from this are tax law, labour law (only legal disputes), data protection and the legal areas covered by compliance, which are overseen by the respective functional departments.

Compliance risk is defined as an existing or future risk to income or capital as a consequence of infringements of or non-compliance with laws, regulations, statutory provisions, agreements, mandatory practices or ethical standards. This may result in fines, compensation for damage and/or contracts being rendered null and void in addition to damaging a bank's reputation.

The management of compliance risk is normally a task of the Bank's Management Board. Pursuant to Section 25a of the German Banking Act (Kreditwesengesetz – KWG), it is required to ensure that a proper business organisation is in place, encompassing in particular effective risk management, including an ICS. Part of the ICS is the compliance function (second line of defence), which helps the Management Board to manage compliance risk. In terms of the three lines of defence, however, the business units have the task (first line of defence) of knowing and mitigating their own compliance risks.

The Minimum Requirements for Compliance (MaComp) and MaRisk both require a compliance function to be put into place. Both also contain rules on how such a compliance function should be structured. At HVB, both functions are combined in the Compliance unit in order to ensure a uniform approach. Money-laundering and fraud prevention as well as preventive measures against infringements of financial sanctions and embargos are also assigned to the Compliance unit. Comprehensive risk assessment is ensured by this approach. On account of its high degree of specialisation, tax compliance is managed and refined within the CFO organisation exclusively by the Tax Affairs unit.

Legal risks
HVB and other companies belonging to HVB Group are involved in various legal proceedings. The following is a summary of cases against HVB and other companies belonging to HVB Group, which individually or collectively in the respective subject areas have a value in dispute exceeding €50 million or are of substantial significance for HVB for other reasons.

In many cases, there is substantial uncertainty regarding the outcome of the proceedings and the amount of possible damages. These cases include criminal or administrative proceedings by the relevant authority and claims in which the petitioner has not specifically quantified the amounts in dispute. In all proceedings where it is possible to reliably estimate the amount of possible losses, and the loss is considered likely, provisions have been set up based on the circumstances and consistent with IFRS accounting principles applied by HVB Group.

VIP 4 Medienfonds Fund
Various investors in Film & Entertainment VIP Medienfonds 4 GmbH & Co. KG to whom the Bank issued loans to finance their participation, brought legal proceedings against HVB. In the context of the conclusion of the loan agreements the plaintiffs claim that inadequate disclosure was provided by the Bank about the fund structure and the related tax consequences. A settlement was reached with the vast majority of the plaintiffs. An outstanding final decision with respect to the question of HVB's liability for the prospectus in the proceeding pursuant to the Capital Markets Test Case Act (Kapitalanleger-Musterverfahrensgesetz) which is pending at Munich Higher Regional Court, will affect only a few pending cases.

Derivative transactions
The number of complaints and lawsuits filed against HVB by customers in connection with inadequate advice in the context of the conclusion of derivative transactions is declining. Among other things, the arguments raised are that the Bank allegedly did not sufficiently inform the customer with respect to potential risks related to such transactions and especially did not inform the customer about a potential initial negative market value of the derivative. Experience gained so far shows that the characteristics of the relevant product and the individual circumstances of each case are decisive for assessing the risks. In particular, the statute of limitations, the client's economic experience and risk tolerance, and the actual investment advice given play a crucial role.

Risk Report (Continued)

Proceedings related to claims for withholding tax credits
On 31 July 2014 the Supervisory Board of HVB concluded its internal investigations into the so-called “cum-ex” transactions (the short selling of equities around dividend dates and claims for withholding tax credits on German share dividends) at HVB. The findings of the Supervisory Board’s investigation indicated that the Bank sustained losses due to certain past acts/omissions of individuals. The Supervisory Board has brought proceedings for compensation against three individual former members of the Management Board, not seeing reasons to take any action against the current members. These proceedings are ongoing.

In addition, criminal investigations have been conducted against current or former employees of HVB by the Prosecutors in Frankfurt/Main, Cologne and Munich with the aim of verifying alleged tax evasion offences on their part. HVB cooperated – and continues to cooperate – with the aforesaid Prosecutors who investigated offences that include alleged tax evasion in connection with cum-ex transactions both for HVB’s own book as well as for a former customer of HVB. Proceedings in Cologne against HVB and its former employees were closed in November 2015 with, inter alia, the payment of a fine of €9.8 million by HVB. The investigations by the Frankfurt/Main Prosecutor against HVB under section 30 of the Administrative Offences Act (the Ordnungswidrigkeitengesetz) were closed in February 2016 by the payment of a fine of €5 million. The investigation by the Munich Prosecutor against HVB was closed in April 2017 with legally binding effect following the payment of a forfeiture of €5 million.

In December 2018, in connection with an ongoing investigation against former Bank employees by the Cologne Prosecutor, HVB was informed of the initiation of an investigation in connection with an administrative offence regarding “cum-ex” transactions involving Exchange Traded Funds (“ETF”). In April 2019 these investigations were extended to so called ex/ex-transactions, in which an involvement of the Bank in the sourcing of cum/ex transactions of other market participants on the ex-day is suspected. The facts are being examined internally. HVB cooperates with the authorities.

The Munich tax authorities are currently performing a regular field audit of HVB for the years 2013 to 2016 which includes, among other things, a review of other transactions in equities around the dividend record date. During these years HVB performed, among other things, securities-lending transactions with different domestic counterparties which include, but are not limited to, different types of security transactions around the dividend date. It remains to be clarified whether, and under what circumstances, tax credits can be obtained or taxes refunded with regard to different types of transactions carried out close to the dividend record days, and what the further consequences for the Bank will be in the event of different tax treatment. It cannot be ruled out that HVB might be exposed to tax claims in this respect by relevant tax offices or third-party claims under civil law. HVB is in constant communication with relevant regulatory authorities and the competent tax authorities regarding these matters. HVB has made provisions.

Lawsuit for consequential damages

A customer had filed an action against HVB for consequential damages of €236 million for the following reasons: In 2010, HVB was ordered by Frankfurt Higher Regional Court to pay damages in the amount of €4.8 million to the plaintiff due to the faulty handling of a bill of exchange and in addition to compensate further damages suffered by the plaintiff as a result of this deficiency. In 2011, the plaintiff filed an action against HVB with Frankfurt Regional Court for alleged consequential damages in the amount of €33.7 million and extended this action several times to a total of €236 million in the meantime. By ruling dated 31 August 2017, Frankfurt Regional Court dismissed the claim and followed HVB's opinion on the claim being unfounded and the allegations raised by the plaintiff being unreasonable. The appeal of the plaintiff against the court ruling filed with the Frankfurt Higher Regional Court was dismissed on 19 March 2019. Frankfurt Higher Regional Court fully acknowledged the justification given by the Regional Court and did not permit an appeal. The plaintiff filed a complaint against not admitting the case to the third instance to the Federal Court of Justice, which was dismissed in December 2019.

Claim in relation to collateral enforcement

In late 2019, a holding company of a German industrial group brought a claim against HVB, in its capacity as security agent for a group of noteholders and lenders, aiming at obtaining the annulment and/or damages in relation to an allegedly fraudulent collateral enforcement. The alleged claim is still under evaluation.

Financial sanctions matters

In March 2011, HVB received a subpoena from the District Attorney for New York County (DANY) relating to historical transactions involving certain Iranian entities designated by the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) and their affiliates. In the subsequent years, DANY, the U.S. Department of Justice (DOJ), OFAC, the New York State Department of Financial Services (DFS), and the Board of Governors of the Federal Reserve System and the New York Federal Reserve Bank (Fed) (collectively: U.S. and New York authorities) initiated their own investigations respecting historical compliance by HVB with applicable U.S. sanctions laws and regulations.

HVB has cooperated extensively with the U.S. and New York authorities, including conducting its own voluntary investigation of its U.S. dollar payments practices and its historical compliance with applicable U.S. financial sanctions, in the course of which certain historical non-transparent practices were identified. Even before the conclusion of these investigations, HVB initiated substantial and substantive remediation activities relating to policies and procedures, which are ongoing.

Risk Report (Continued)

On 15 April 2019, HVB reached a resolution with the U.S. and New York authorities regarding these investigations. No further enforcement actions are expected relating to the subject of the resolved investigation.

As part of the settlements with the U.S. and New York authorities (DANY, OFAC, DOJ, DFS and Fed), HVB made certain commitments to implement remedial compliance controls and conduct risk assessments relating to the business lines, to provide periodic reports and certifications concerning the implementation and effectiveness of the compliance program to the U.S. and New York authorities, and to engage an independent external party to conduct an annual review of the effectiveness of the compliance program whose findings will be shared with the U.S. and New York authorities. Most of these reporting requirements will expire after three to five years, but may be extended at the discretion of the U.S. and New York authorities.

Lehman Brothers Special Financing Claim

The Lehman Brothers Special Financing Claim (LBSF) relates to HVB's holding of: (A) 2005-1 €19,000,000 Class A2-A9 notes issued by Ruby Finance Plc (Ruby), and (B) 2004-1 Upper Thames €25,000,000 Credit-Linked Synthetic Portfolio Notes due in 2043 and issued by Quartz Finance PLC (Quartz).

Both Ruby and Quartz entered into contracts for derivatives with Lehman Brothers Special Financing, Inc. LBSF included these credit derivative transactions in omnibus avoidance proceedings commenced before the U.S. Bankruptcy Court on 1 October 2010 (LBSF v Bank of America, N.A. et. al. Adv. Pro. No. 10-03547; the "Adversary Proceeding"). On 18 July 2012, LBSF amended its First Amended Claim in the Adversary Proceeding, in order to, among other things, add the London Branch of HVB as a "Noteholder Defendant", in an attempt to claw-back distributions for the benefit of LBSF (as derivative counterparty) already made by both Ruby and Quartz to HVB (as noteholder).

The U.S. Bankruptcy Court held a hearing on 4 May 2016 on an omnibus motion to dismiss filed by the Noteholder Defendants, and the decision of Bankruptcy Judge Chapman on the omnibus motion was issued on 28 June 2016. In her decision, Judge Chapman dismissed the case against HVB and the other Noteholder Defendants.

LBSF unsuccessfully appealed against such decision to the U.S. District Court for the Southern District of New York.

On 13 April 2018, LBSF filed notice of appeal to the Second Circuit Court of Appeals. The parties exchanged pleadings. The appeal hearing was held on 26 June 2019 and we await the judgement.

Euro-denominated government bonds issued by EU countries
On 31 January 2019, UniCredit S.p.A. and HVB received a Statement of Objections from the European Commission referring to the investigation by the European Commission of a suspected violation of antitrust rules in relation to European government bonds. The subject matter of the investigation extends to certain periods from 2007 to 2012, and includes alleged activities by HVB in a part of this period. The Statement of Objections does not prejudge the outcome of the proceeding; should the Commission conclude that there is sufficient evidence of an infringement, a decision prohibiting the conduct and imposing a fine could be adopted, with any fine subject to a statutory maximum of 10% of company's annual worldwide turnover.

HVB had access to the entirety of the European Commission's file on the investigation from 15 February 2019 onwards. As a result of the assessment of the files, the Bank regards it no longer remote but possible, even though not likely, that a cash outflow might be required to fulfil a potential fine arising from the outcome of the investigation. On the basis of the current information, it is not possible to reliably estimate the amount of any potential fine at the present date.

UniCredit S.p.A. and HVB have responded to the raised objections on 29 April 2019 and participated in a hearing before the European Commission on 22–24 October 2019. Proceedings are ongoing. There is no legal deadline for the Commission to complete antitrust inquiries.

On 11 June 2019, HVB and UniCredit Capital Markets LLC were named, among other financial institutions, as defendants in a putative class action already pending in the United States District Court for the Southern District of New York. The third amended class action complaint, filed December 3, 2019, alleges a conspiracy among dealers of Euro-denominated bonds issued by European central banks to fix and manipulate the prices of those bonds, among other things by widening the bid-ask spreads they quoted to customers. The putative class consists of those who purchased or sold Euro-denominated bonds issued by European central banks in the US between 2007 and 2012. The third amended class action complaint does not include a quantification of damages claimed. The proceedings are in their inception. Motions to dismiss – a procedural device contemplated by the United States Federal Rules of Civil Procedure which provides defendants with an opportunity to challenge the legal sufficiency of a complaint and present arguments that the complaint should be dismissed – will likely be fully briefed before the end of the second quarter of 2020 and will likely include the argument that the complaint fails to state a claim.

Risk Report (Continued)

Measurement
The operational risk of HVB Group is calculated for HVB and its material subsidiaries – HVB Immobilien AG and UniCredit Leasing GmbH (together with subsidiaries) – using an internal model in accordance with the Advanced Measurement Approach (AMA model). The standard approach is applied for all other subsidiaries in the respective area of application.

The AMA model is based mainly on internal and external loss data. The process involves computing loss distributions for each model risk category. A model risk category is determined by combining the Basel loss event category and the product category of the loss event. Scenario data are used to complete the data for rare yet extreme events. The method used to aggregate the individual data sources is based on the Bayesian model and is applied to the loss distribution parameters for each model risk category.

The VaR is determined using a Monte Carlo simulation, taking account of correlations between the model risk categories as well as risk-reducing measures such as insurance policies. Finally, the VaR is modified to reflect internal control and business environment factors.

The model was developed by UniCredit S.p.A. HVB checks the plausibility of the calculation results on an annual basis and validates the model to ensure that it is appropriate.

The AMA model for calculating the capital for operational risk was changed at the end of the second quarter of 2019. The changes essentially included adjusting the method for selecting the appropriate distribution of loss volumes for each model risk category. In addition to other changes, including an adjustment for control and business environment factors, the model was adjusted for the purpose of implementing the requirements set out in Chapter 3, Sections 2 and 3 of Commission Delegated Regulation (EU) 2018/959 of 14 March 2018 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards of the specification of the assessment methodology under which competent authorities permit institutions to use Advanced Measurement Approaches for operational risk.

Furthermore, with effect from the end of the second quarter, the approach used to calculate HVB Group's economic capital for operational risk was harmonised with the approach used by UniCredit. In line with UniCredit's approach, economic capital is calculated based on the Advanced Measurement Approach (AMA) at the level of the UniCredit corporate group as a whole and then distributed as a first step to the subgroups (known as hubs), including HVB Group, and as a second step, to the AMA subsidiaries, using a risk-sensitive allocation mechanism. Previously, the economic capital was calculated using the internal AMA model at HVB Group level with subsequent allocation to HVB and its AMA subsidiaries.

Stress tests
The impact of macroeconomic scenarios on operational risk is analysed within the scope of the cross-risk-type stress tests.

5 Other risks

In the section entitled "Other risks", HVB Group groups together the following types of quantifiable risk as other risks: real estate risk, business risk, pension risk and financial investment risk as well as the strategic risk and reputational risk types, which are described exclusively in qualitative terms. The risk arising from outsourcing activities is not treated as a separate risk type at HVB Group, but is considered a cross-risk type and is consequently listed under other risks.

Real estate risk

A fundamental distinction is made in real estate risk between (strategic) real estate required for operations and (non-strategic) real estate that is not used for operations. In 2019, large parts of the non-strategic portfolio were sold. In addition, the sale of the Tucherpark site constitutes a disposal from the strategic portfolio and will be realised in 2020. Investing in an alternative location for the Tucherpark site is planned in the short to medium term. The longer term orientation for strategic real estate corresponds with the Bank's strategy of preferring Bank-owned properties over rented properties for own use and making such properties available for the banking operations of HVB Group at market terms on a cost-optimised basis.

Facility concepts are drawn up for both the Bank-owned portfolio and the rented properties, under which the requirements of the business segments and also economic viability are the key factors for decisions, taking into account the assumptions listed.

The main risks for the Bank-owned portfolio stem mainly from the development of the market value. The risk drivers are the future usage by the Bank, property rents/Bank rents, market rents, rental contract periods, occupancy rate and required investment. The medium-term goal for the non-strategic real estate portfolio, on the other hand, is to realise the best possible value upon disposal of the overall portfolio; in this regard, the impact on both the income statement and the Bank's other management instruments is crucial for the individual decisions. This tallies with the overarching strategy for dealing with real estate risk.

Real estate risk is managed overall on the basis of an internal capital limit for HVB Group. In addition, economic capital limits adjusted for diversification effects were allocated to the business segments and the relevant subsidiaries for 2019 in the context of overall bank management. Based on these limits, early warning indicators have also been defined in the form of targets and triggers in order to identify in advance any overshooting.

The Bank uses an empirical Bayesian model with a confidence level of 99.90%. This model applies an expected shortfall approach which also takes account of the possible risk of extreme values (tail risk) (i.e. losses in excess of the VaR).

The economic capital for the real estate risk is measured by the Credit Risk Modelling & Systems (CRS) unit and calculated by the Chief Data Office (CDO). The Strategic Credit & Integrated Risks (SCI) unit is responsible for reporting to the business segments, the CRO, the Management Board and the Risk Committee of the Supervisory Board. In line with the risk strategy, quarterly risk reporting also includes a comparison of the actual values with the limits.

Risk Report (Continued)

The economic capital for the real estate risk at HVB Group, without taking account of diversification effects between the risk types and without the model risk cushion, amounts to €426 million at 31 December 2019, which represents a decrease of €209 million (31 December 2018: €636 million). The fully diversified economic capital for the real estate risk at HVB Group stands at €322 million (31 December 2018: €475 million). The change in economic capital is mainly attributable to the use of the group-wide real estate risk model, which uses a Bayesian estimate rather than the variance/covariance approach, and a different capital allocation process incorporating the potential risk of extreme values (tail risk). Other factors affecting the estimates of economic capital include changes in the composition of the real estate portfolio (on account of the introduction of IFRS 16) and in the market value development of property assets.

Applying the group-wide real estate risk model introduced in the first half of 2019 retroactively to the reference date, the comparative value for economic capital as at 31 December 2018 would be €406 million, excluding diversification effects between the risk types and excluding the model risk cushion. The elimination of the effect of the change in model results in an increase of €20 million in economic capital.

The risk figures relate to a portfolio valued at €3,894 million.

Breakdown of the real estate portfolio by type

	PORTFOLIO VALUE € millions		SHARE in %	
	2019	2018	2019	2018
Strategic real estate	2,207	2,216	56.7	57.1
Non-strategic real estate	1,687	1,665	43.3	42.9
HVB Group	**3,894**	**3,881**	**100.0**	**100.0**

The impact of macroeconomic scenarios on real estate risk is analysed within the scope of the cross-risk-type stress tests.

Business risk

The strategy for business risk is based on the direction of business over the medium term and is reflected in planning. As part of its general cost and income management, each business unit is responsible for the operational management of business risk.

Business risk is managed overall on the basis of an internal capital limit for HVB Group. Based on this limit, HVB Group has additionally defined early warning indicators in the form of targets and triggers in order to identify in advance any overshooting.

HVB Group uses a group-wide model to measure the economic capital used by business risks that is based on a time series model of the quarterly income. The economic capital requirement corresponds to the unexpected loss and is quantified using value-at-risk (VaR) metrics over a period of one year and a confidence level of 99.90%.

The economic capital for the business risk is measured by the Credit Risk Modelling & Systems (CRS) unit and calculated by the Chief Data Office (CDO). The Strategic Credit & Integrated Risks (SCI) unit is responsible for reporting to the business segments, the CRO, the Management Board and the Risk Committee of the Supervisory Board. In line with the risk strategy, quarterly risk reporting also includes a comparison of the actual values with the limits.

The economic capital for HVB Group's business risk, without taking account of diversification effects between the risk types and without the model risk cushion, amounted to €526 million at 31 December 2019 (31 December 2018: €380 million). The fully diversified economic capital for HVB Group's business risk totals €354 million as at 31 December 2019 (31 December 2018: €234 million).

The impact of macroeconomic scenarios on business risk is analysed within the scope of the cross-risk-type stress tests.

Pension risk

In risk management the risks are calculated and monitored at regular intervals using a model devised specifically for pension risk. A risk figure is determined periodically using calculations based on changes in key risk parameters for both the various capital investments and the cash flows on the obligations side. A figure of €615 million was determined as at 31 December 2019 for the total pension risk of HVB Group (31 December 2018: €874 million). The decline compared with year-end 2018 is primarily due to the further reduction in interest rates and, as a consequence, a further potential interest rate shock of a lower magnitude than assumed. The risk figure is incorporated in the calculation of the risk-taking capacity in the form of an additive component to the internal capital. In addition, the impact on pension risk is analysed at regular intervals as part of the cross-risk-type stress tests.

Risk Report (Continued)

Low interest rates continue to be seen as the main negative factor for both the amount of the pension obligations disclosed and the amount of the income that can be generated from the plan assets with acceptable risk. In the current low interest rate environment, it is quite possible that the discount rate will fall to the historically low levels reached in the course of 2019 and the pension obligations will thus increase.

Financial investment risk

The financial investment portfolio mainly consists of holdings in unlisted companies, equity derivatives and other fund shares (real estate funds and other closed-end funds). All the investments to be included in the financial investment risk are either considered strategic and allocated to a business segment or competence line, or deemed non-strategic and connected with the fundamental goal of reduction.

The financial investment risk is controlled at a higher level on the basis of a limit for internal capital for HVB Group. In addition, the business segments and the relevant subsidiaries have been allocated limits for economic capital for the year 2019 that were adjusted for diversification effects in the sense of overall bank management. On the basis of these limits, HVB has additionally defined early warning indicators in the form of target values and triggers in order to indicate in advance any overshooting.

The risk from holdings in unlisted companies is covered by applying a cautious approach of 100% capital backing of the investment value that has been in place. In addition, risks from hedge funds, private equity funds (including issuer risks from the trading book) and FX risks from the investment portfolio are no longer included in financial investment risk but are included in the calculation of the market risk.

The economic capital for the financial investment risk is measured by the Credit Risk Modelling & Systems (CRS) unit and calculated by the Chief Data Office (CDO). The Strategic Credit & Integrated Risks (SCI) is responsible for reporting to the business segments, the CRO, the Management Board and the Risk Committee of the Supervisory Board. In line with the risk strategy, quarterly risk reporting also includes a comparison of the actual values with the limits.

The economic capital for financial investment risk at HVB Group, without taking into account any diversification effects between the risk types and without the model risk cushion, rose by €37 million and stands at €222 million as at 31 December 2019 (31 December 2018: €185 million). HVB Group's fully diversified economic capital amounts to €222 million as at 31 December 2019 (31 December 2018: €185 million).

Breakdown of the financial investment portfolio

	PORTFOLIO VALUE € millions		SHARE in %	
	2019	2018	2019	2018
Private equity investments	10	19	4.5	10.3
Other holdings[1]	212	166	95.5	89.7
HVB Group	**222**	**185**	**100.0**	**100.0**

1 Listed and unlisted investments.

For the purpose of the cross-risk-type stress tests, a 100% capital charge is assumed for the stressed economic capital irrespective of the macroeconomic scenarios.

Strategic risk

As a universal bank, HVB Group focuses on the one hand on the regional development of the German market, on the other hand, it is the centre of competence for the investment banking of the whole of UniCredit. Therefore, HVB Group's profitability and risk profile of are influenced in particular by the economic development in Germany and the development of international financial and capital markets. In this context, strategic risk results from management either not recognising early enough or not correctly assessing significant developments or trends in the Bank's environment. As a consequence fundamental management decisions could, in retrospect, prove to be disadvantageous in terms of the Bank's long-term goals. In addition, some decisions may be difficult to reverse or cannot be reversed at all. In the worst case, this can negatively impact the profitability and risk profile of HVB Group.

The following areas are currently classified as relevant for the occurrence of strategic risk:
– Economic environment – If, among other things, the stabilising measures in the eurozone do not take effect or economic growth slows in Europe, this could have negative effects on the operating result of HVB Group.
– Strategic orientation of the business model of HVB Group – The persistently low level of interest rates could, for example, lead to imbalances in the earnings contributions of the business segments.
– Bank-specific risks – The intensification of competition in the financial sector could, for example, lead to further shifts in market shares.
– Regulatory and legal framework – Should HVB or one of its subsidiaries not fully comply with the regulatory requirements of the supervisory authorities, this could lead to sanctions by the competent supervisory authority.
– Rating of UniCredit Bank AG – A rating change downwards (downgrade) could make refinancing costs more expensive or have a negative impact on business opportunities as a counterparty in the interbank market or with rating-sensitive customers.

The strategic risk is not quantified as part of internal capital but is assessed qualitatively instead. This assessment is based on a traffic light system: low risk (green), increased risk (yellow) and high risk (red). Furthermore, continual monitoring is performed of the national and international environment in which HVB Group operates (for example, political, economic, regulatory or specific banking market conditions) and a constant review of the Bank's own strategic positioning.

Strategic risk is monitored on an ongoing basis by the Management Board and its staff offices and, if necessary, analysed in depth on an ad hoc basis. Any changes in the strategic parameters are discussed at Management Board meetings, whereby alternative courses of action are derived and implemented accordingly. A dialogue with external experts (such as management consultants and independent auditors) regarding strategic issues and options at Management Board level and below ensures the involvement of external experts' know-how.

Risk Report (Continued)

Reputational risk
HVB and its most important subsidiaries apply a holistic approach to reputational risk management. This means that all significant new activities and transactions at the Bank are regularly analysed with regard to reputational risk (“change-the-bank” approach) and individual units at the Bank are examined at regular intervals regarding latent reputational risk at the same time (“run-the-bank” approach).

Commercial transactions and new activities such as new product processes, outsourcing, projects and particular investments (such as special purpose vehicles) are included in the “change-the-bank” approach, as well as any other new activity as is appropriate. The employees responsible in each case are required to analyse the transactions/activities to identify any reputational risk, taking into account the existing guidelines. Once a reputational risk has been identified, the appropriate specialist departments are called in who will assess the reputational risk identified in terms of quality. The Reputational Risk Council (RRC) will obtain a decision on the basis of the risk analysis and the qualitative assessment.

Under the “run-the-bank” approach, the individual units of the Bank are examined at regular intervals with regard to existing and/or latent reputational risk. The process starts with what are known as risk self-assessments by important function owners (risk managers) together with the local operational risk managers. A list of questions is used to carry out the risk self-assessments. Senior management is subsequently interviewed about reputational risk. The senior managers have the opportunity to review the reputational risk identified in their unit during the interview and add further material reputational risks. Where it is possible and makes sense to do so, additional countermeasures are defined for the individual reputational risks.

The Bank has decided not to directly quantify reputational risk under the “run-the-bank” process on account of the fundamental difficulty of accurately assessing the possible effects of reactions from stakeholders. Instead, the risk is classified in accordance with a three-tier system (traffic light logic) as part of the “run-the-bank” approach. This involves determining the aggregate risk across two dimensions: impact on the income statement and probability of occurrence. Any reputational risk identified is documented in the Bank’s own IT system (as necessary during the year).

The individual business segments and central units are responsible for reputational risk management. Overall responsibility for monitoring rests with the Operational & Reputational Risks unit (CRO organisation). The Operational & Reputational Risks unit consolidates the results of the senior management interviews and prepares a yearly RepRisk Report covering the largest reputational risks at HVB.

Risks arising from outsourcing activities

Outsourcing involves the transfer of activities and processes to intragroup and external service providers. Parts of the operational risk can also be mitigated by transferring the liability, while contractual risks arising from the outsourcing arrangement remain within HVB or a subsidiary of HVB Group. An outsourcing arrangement is deemed to exist when a different company is contracted to carry out activities and processes in connection with the performance of banking business, financial services or other typical banking services that would otherwise be performed by the outsourcing company itself. This includes outsourcing arrangements within UniCredit as well as the subcontracting of outsourced activities and functions to subcontractors.

Outsourcing risk is considered a cross-risk-type risk at HVB Group and is not treated as a separate risk type. Outsourcing activities affect the following risk types in particular: operational risk, reputational risk, strategic risk, business risk, credit risk, market risk and liquidity risk. Those risks that are identified and assessed in an in-depth risk analysis are managed as part of the respective risk type. Specific risks arising from outsourcing activities that cannot be assigned directly to a specific risk type are managed by the unit responsible for the outsourcing in question.

The respective project team and defined functional departments (including Operational Risk Management, Compliance, Legal, Corporate Affairs & Documentation, Data Protection and Business Continuity Management) use a standardised procedure to classify outsourcing arrangements as "not critical/material" and "critical/material". An in-depth risk analysis covering the other risk types as well as operational risk is performed for all outsourcing arrangements classified as critical/material (and for all outsourcing arrangements in accordance with the EBA GL 2019/02 applicable from 1 October 2019). A retained organisation (RTO) responsible for the arrangement is set up for each outsourcing arrangement that manages the risks identified. The identified risks are incorporated in HVB Group's risk management in the processes defined for the risk types concerned. The operational risk managers help the project manager and the heads of the RTOs to prepare and/or update the related risk analyses.

Three new outsourcing arrangements at HVB in the Luxembourg branch were put in place with UniCredit International Bank S.A. These relate to (i) back-office services covering data maintenance and transaction execution (master data, securities, payments), (ii) application support for various ICT applications and (iii) support for compliance activities. These outsourcing arrangements were classified as material without significant impact at the time when the arrangements were set up, now they are classified as critical/material. This did not give rise to any material change to the risk. In addition, HVB set up a critical/material outsourcing arrangement with Amundi Deutschland GmbH for the Premium Invest asset management mandate.

No new material outsourcing arrangements that have a material effect on the risk position of the individual subsidiaries or of HVB Group as a whole were put in place in HVB Group in 2019.

ICS – Internal Control System

Internal control system with regard to the financial reporting process

Definitions and objectives

Section 315 (4) of the German Commercial Code (Handelsgesetzbuch – HGB) requires capital-market-oriented companies as defined in Section 264d HGB to describe the main features of the internal control system (ICS) and risk management system with regard to the financial reporting process.

The risk management system is formulated in broad terms and relates above all to strategic management, the identification, quantification, assessment, monitoring and active management of risk. The ensuing coordination of risk-management, risk-controlling and risk-monitoring processes in our corporate group is presented in the Risk Report in the present Management's Discussion and Analysis. The respective risk types are described in detail in the sections entitled "Risk types" and "Risk types in detail".

Risks with regard to the financial reporting process might, for example, involve human processing errors, system weaknesses or fraudulent conduct resulting in significant financial misrepresentations or delays in financial reporting, and these might not reflect the actual situation or not give an appropriate view of the assets, liabilities and financial position. These risks might possibly entail legal penalties and, in addition, the erosion of investors' confidence and damage to the Bank's reputation. The purpose of the internal control system in relation to the financial reporting process is to implement controls that ensure with an adequate degree of certainty that the annual and consolidated financial statements together with the Management Report and Management's Discussion and Analysis are prepared in compliance with regulations despite the identified risks.

The ICS encompasses the policies, processes and measures needed to ensure the financial reporting process and compliance with the applicable legal provisions. It is intended to ensure that internal and external financial reports are correct and reliable and that the assets, provisions, liabilities, and deferrals and accruals are classified, recognised and measured and changes in equity are correctly shown.

The method used for the design of the ICS and thus the introduction and risk assessment of processes is based on the international "Internal Control – Integrated Framework" standard issued by the Treadway Commission's Committee of Sponsoring Organizations (COSO) and creates a solid methodological framework. The main task in this context is to define specific objectives to facilitate a control system and to monitor the effectiveness of the control system on this basis. The following objectives are pursued:

- Completeness: All transactions are recorded and all assets and liabilities, provisions and shareholders' equity are included in the financial statements.
- Measurement: The assets and liabilities, provisions and transactions are disclosed at their correct amounts in the financial reports.
- Presentation and disclosure: The financial reports are correctly classified and discussed with regard to recognition, structure and disclosures in the notes to the consolidated financial statements, comply with the legal requirements and are published on schedule.

Even the extensive structuring of the ICS can naturally only ensure that the objectives of the ICS are achieved with reasonable assurance but not with absolute certainty. The documented controls carried out within the framework of the ICS for the relevant processes or systems are therefore unable to completely eliminate mistakes or fraudulent actions. It must also be taken into account in this context that the work performed and spending on the ICS must be commensurate with the benefits achieved.

ICS organisation

The Management Board determines the extent and orientation of the ICS specifically geared to HVB Group, taking measures to refine the systems and adapt them to changing conditions. At Board meetings, it regularly discusses the key topic of the Internal Control Business Committee (ICBC), in terms of the consolidation and monitoring of all projects and measures related to the ICS.

Responsibility for the financial reporting process and, in particular, for the preparation of the annual and consolidated financial statements rests with the CFO organisation. The CFO receives significant support in this context from the CRO organisation by the CRO also assuming responsibility for the measurement of financial instruments (receivables, securities and derivatives), among other things.

The CFO organisation is also supported in the technical process of preparing the financial statements by the Human Resources department (recognition and measurement of payroll expenses), the Legal department (recognition and measurement of legal disputes and other legal risks) and external third parties. The latter essentially extends to various expert opinions of external service providers relating to such things as the measurement and accounting treatment of pension provisions.

Technical system support for the application systems used in the Accounting department and especially in connection with preparing the financial statements has been outsourced to UniCredit Services S.C.p.A. (UCS), the UniCredit subsidiary responsible for IT. UniCredit Services S.C.p.A. is monitored and managed by the Retained Organisation in the Chief Operating Office (COO).

Organisational structure and tasks of the CFO organisation

For purposes of the financial reporting processes, the Chief Financial Officer (CFO) organisation is essentially broken down into the following areas:

HVB's financial reporting is conducted by the Accounting, Shareholdings, Regulatory Reporting (CFF) unit. This unit has functional responsibility for the financial reporting systems employed by HVB. At the same time, the CFF unit is responsible for fundamental accounting questions under IFRS and the German Commercial Code and for preparation of the consolidated financial statements. Furthermore, it prepares the financial reporting in the Annual Report of HVB Group. The management and administration of shareholdings for financial reporting purposes is also positioned in this unit. In addition, it submits the regulatory reports for HVB Group to the banking supervisory authorities.

The central tax department (CFT/Tax Affairs) should monitor compliance with all tax laws on the one hand and on the other hand, it advises its customers (Management Board, business lines and competence lines) on the tax-related concerns of HVB, including its foreign branches.

Regional Planning & Controlling (CCP) is tasked with central business management and cost controlling at HVB. Furthermore, CCP prepares and validates the internal segment report in accordance with IFRS. This department also has process responsibility for the preparation of income budgets and income projections. Moreover, the business segment-related controlling departments for all the segments excluding CIB and GCC are assigned to CCP. Controlling for CIB is the responsibility of CPA. This department also carries out the reconciliation of trading income for Markets jointly with Accounting. The reconciliation of trading income for Treasury is carried out between Accounting and Finance (CDF).

The Chief Data Office (CDO) is responsible for data and information governance in coordination with the Group Data Office. In addition, significant parts of the data produced are amalgamated in CDO for the CFO in order to achieve a continual improvement in data quality. This department also has responsibility for the implementation of various IT projects relating to financial reporting.

ICS – Internal Control System (Continued)

Controls in the ICS for risk minimisation
To reduce the risk of misrepresentation in financial reporting as described above, we carry out various preventive and investigative controls which are integrated in operating processes. This includes controls to ensure compliance with instructions, functional separation and compliance with approval authority regulations. The controls comprise both automated system-based controls within the IT systems and manual controls.

As part of UniCredit, HVB Group is also obliged to comply with Law 262 ("Savings Law" – Law 262/2005, passed in Italy in 2005 and amended by Legislative Decree 303/2006, based on the Sarbanes-Oxley Act in the United States). Alongside the internal CFO controls, there are also checking and control steps in the upstream processes and organisations.

Based on the requirements under Law 262 and the legal requirements under the German Commercial Code, a number of financial reporting processes complete with the risks and controls included therein are documented in the course of implementing the ICS at HVB. The corresponding process descriptions include presentations of both the individual process steps and the organisational units involved in the processes. At the same time, risk and control are to be defined, together with their assessment, and documented.

The focus of risk and monitoring analysis is on identifying and evaluating the risks relevant to financial reporting. Identified risk potential is to be sufficiently reduced through defined control steps. Periodic random sampling is intended to document the implementation of these controls and provide adequate records. If controls are identified that do not sufficiently reduce risk, or if no controls are in place, measures are initiated to eliminate the identified deficiencies. The timely implementation of these measures is reviewed on a quarterly basis.

Furthermore a yearly analysis is carried out on the basis of what are known as "company level controls". This is a list of questions based on the international COSO standards, the answers to which are used to check the existence of comprehensive control measures in HVB Group that are suitable for reducing the risk of incorrect external presentation or incorrect actions, not only with regard to financial reporting.

In a half-yearly certification process, the management of the departments in charge of processes confirms to the CFO of HVB Group and the CFO to UniCredit, that controls to ensure correct reporting have been carried out.

The controls cover the aspects of the ICS described below:

Group posting and accounting rules defined in the UniCredit Group Accounting Manual (GAM), which is valid for the Group as a whole, serve to ensure consistent financial reporting about the Group's business activities. In addition, there are general accounting rules set out in the Bank-wide Operating Guidelines, the application of which is mandatory for all process participants.

HVB uses SAP's standard SAP Balance Analyzer and Business Warehouse software to prepare its annual financial statements. The SAP Balance Analyzer concept is based on the mainly automated uploading of individual transaction data from the upstream systems relevant to financial reporting (sub-ledger). The Accounting department collates the data relevant to the financial statements. It reconciles the positions delivered by the upstream systems and automatically checks the totals against the general ledger account balances, which serves as proof of the completeness of balance sheet items. At the same time, it also corrects errors and performs manual bookings of one-off transactions and closing entries. Adjustments and closing entries are carried out by authorised persons in accordance with the principle of dual control. Furthermore, deviation analyses are conducted at item level to minimise the risk of error and incomplete data.

The ICS for securities, derivatives and other trading-related transactions also comprises the following components:

- The allocation of transactions to the holding categories compliant with IFRS and HGB is primarily governed by the orientation of the operating units. The determination of the holding category is determined individually for each trading book and the related trading strategy. The Accounting department is incorporated as an authorising body to ensure compliance with individual requirements relating to classification based on the respective accounting standard.
- Booking standards based on the respective holding category – initiated by transactions – are defined in the accounting systems.
- The income calculated for purposes of financial reporting is checked on a monthly basis by comparing it with the result of the economic income statement that serves as the basis for the daily information provided to the Management Board members. Following this, the results are analysed and comments made on the content of the deviation analysis.
- The Risk Control department, which reports to the CRO, performs several tasks in connection with ensuring the valuation and other information relevant for the financial statements (for example: level allocation) of the financial instruments mentioned above. Firstly, transactions are checked by the Risk Control department to ensure compliance with market pricing. Secondly, the Risk Control department reviews the valuation of financial instruments in the front office systems. Depending on the market parameters and asset classes, market data are supplied by both the trading departments and external sources such as Bloomberg, Reuters and MarktIT. Valuation adjustments and valuations based on estimates are to be agreed by the CRO and CFO units.
- In accordance with the separation of functions, the back office handles the processing of HVB trades. For derivatives, this is UniCredit Services S.C.p.A., which is supervised by the COO unit. Furthermore, external service providers have been engaged to process securities transactions in Germany and for the Milan branch. It has thus been ensured that trades are processed independently of the Trading department.

A cross-departmental new product process is in place for developing and launching new products, as stipulated in the Operating Guidelines. The products relevant for a new product process are addressed in this process. It involves all the departments concerned as they have veto rights and are authorised to enforce amendments up to and including the termination of the new product process.

ICS – Internal Control System (Continued)

The consolidated financial statements prepared in accordance with IFRS are based on the standalone financial statements of HVB, the subsidiaries included in the consolidated financial statements and special purpose entities on the basis of local accounting rules. These financial statements are converted by the reporting companies to HVB Group standards in accordance with the UniCredit Accounting Principles and transformed to comply with the corporate position classifications. The financial information reported within the framework of the consolidated financial statements is included in the process of auditing the consolidated financial statements. The figures for the consolidated financial statements and the subsequent consolidated bookings are collected and reported using the TAGETIK CPM consolidation system marketed by Tagetik Software S.R.L. This is used across the entire corporate group and networked across all Group companies. After the figures have been entered in or transferred to this system by the Group companies, the system is closed for further entries in line with the phases of the consolidation process. These data may only be changed in exceptional circumstances, as agreed with the subsidiary concerned. The consolidation process includes system-based validation checks at a diverse range of levels to reduce the risk of error. In addition, plausibility checks are carried out on a regular basis.

The figures presented in the consolidated balance sheet and consolidated income statement are validated using deviation analysis at historical comparative figures and budget figures and on the basis of non-recurring effects in an ongoing process that is carried out over the entire course of the reporting year as part of the process of preparing the monthly and quarterly financial statements. In addition, the data are also verified by analysing the segment report.

With regard to the presentation and disclosure of financial reporting-related data in financial reports, controls have been implemented to ensure compliance with disclosure duties. This is carried out by means of checklists and by the data being reviewed and approved by management personnel within the CFO organisation.

UniCredit Services S.C.p.A. carries out the back-up and archiving of data from financial reporting-related application systems under the responsibility of the CFO in accordance with Section 257 HGB in conjunction with Sections 238 and 239 HGB and the German Generally Accepted Accounting Principles (GAAP) under the supervision of the Retained Organisation and the respective banking expert responsible. In the course of what are referred to as first level controls, controls between the upstream systems (e.g. EuroSIG) and the general ledger have been outsourced to UniCredit Services S.C.p.A. via additional service level agreements (SLAs). Another technical review takes place in the Accounting department as a second level control.

The required protection against unauthorised access, and compliance with the principles of functional separation when using the Bank's financial reporting application systems are to be ensured in particular by requesting and periodically monitoring individual rights in the authorisation management systems. For SAP rights, special approval is provided across the board by the functional units responsible for the application. The use of individual rights implies a time restriction of no more than one year.

Furthermore, contingency plans are in place to ensure the availability of human and technical resources to handle processes regarding financial reporting. These contingency plans are to be continuously updated and refined.

Monitoring the effectiveness of the ICS

Internal Audit

The Internal Audit department is a process-neutral instrument of the Management Board, to which it reports directly. According to its internal regulations, the Management Board bears the overall responsibility for setting up the Internal Audit department and ensuring that it functions properly. In the reporting year, operational responsibility for the audit function was assigned to the Spokesman of the Management Board (CEO).

The Internal Audit department is responsible for the risk-oriented, process-neutral auditing and assessment of all activities and processes, regardless of whether they are outsourced or not. The outsourced activities may be audited by the internal audit function of the service provider.

For this purpose, Internal Audit carries out a risk-based selection of individual operating and business processes in order to set scheduling priorities for audits. The Minimum Requirements for Risk Management (MaRisk) stipulate that all operating and business processes must be audited at least every three years. In the case of activities and processes deemed to be of lower priority in terms of risk, it is permissible to deviate from the three-year cycle. Operating and business processes subject to especially high levels of risk are audited at least once a year. If the need arises or it is instructed to do so, the Internal Audit department may also carry out tasks in subsidiaries.

The Bank's Internal Audit department must audit and assess the following areas in particular:
– functionality, effectiveness, economic efficiency and appropriateness of the internal control system
– applications, functionality, effectiveness and appropriateness of the risk management and risk control systems, reporting, information systems, and finance and accounting
– compliance with legal and regulatory standards as well as other regulations
– observation of internal operational guidelines, ordinances and regulations
– correctness of operational and business processes
– regulations and measures to protect assets

While audit reports are submitted to audited units and the responsible Management Board members, the Management Board as a whole receives quarterly reports and an annual report which include an overview of audit findings as well as significant deficiencies, major deficiencies, severe deficiencies and particularly severe deficiencies as defined in the MaRisk rules, the measures taken and their current status.

The head of the Internal Audit department informs the Audit Committee and the Risk Committee of the Supervisory Board on a quarterly basis at the meetings of these committees on the main findings of the audits carried out by Internal Audit.

Supervisory Board
It is the task of the Supervisory Board to advise the Management Board on the running of the Bank and monitor it as it conducts its business. Particularly with respect to the monitoring of the financial reporting process and the effectiveness of the ICS, the Supervisory Board receives support from the Audit Committee pursuant to Section 107 (3) of the German Stock Corporation Act (Aktiengesetz – AktG) and Section 25d (9) Nos. 1 and 2 of the German Banking Act (Kreditwesengesetz – KWG). In this context, the Audit Committee also addresses the ICS in connection with the financial reporting process. Furthermore, the Supervisory Board – and, in a preparatory role, the Audit Committee – is itself integrated into the financial reporting processes through its monitoring of the financial reporting by reviewing and approving the annual and consolidated financial statements, the Management Report and the Management's Discussion and Analysis. In addition, the Audit Committee and the Supervisory Board discuss the interim financial information with the Management Board as such information becomes available throughout the year.

Refinement of the ICS
When changes are made to the legal provisions and regulations for financial reporting, they must be assessed to determine what consequences, if any, they have for the financial reporting processes. In the case of amendments or new regulations that would have an impact on the accounting processes, a corresponding project is set up to cover measures such as IT adaptations, working procedures and posting instructions and the effects on financial reporting across all departments and business segments.

In the course of the update of the ICS, moreover, new processes are subject to half-yearly reviews in terms of organisational changes or changes in content by the persons responsible for the process. If necessary, the documentation is modified and a new risk assessment performed. In addition, the completeness of the process documentation must be checked and, if necessary, further relevant processes added and assessed, and integrated into routine ICS operations.

Financial Statements (2)

Consolidated Financial Statements

Consolidated Income Statement

Consolidated Income Statement

INCOME/EXPENSE	NOTES	2019 € millions	2018 € millions	CHANGE € millions	CHANGE in %
Interest income[1]		3,845	3,753	+ 92	+ 2.5
Negative interest on financial assets		(131)	(154)	+ 23	(14.9)
Interest expense		(1,573)	(1,387)	(186)	+ 13.4
Negative interest on financial liabilities		247	272	(25)	(9.2)
Net interest	34	2,388	2,484	(96)	(3.9)
Dividends and other income from equity investments	35	24	25	(1)	(4.0)
Net fees and commissions	36	973	973	—	—
Net trading income	37	579	693	(114)	(16.5)
Net gains/(losses) on financial assets and liabilities at fair value	38	108	(110)	+ 218	
Net gains/(losses) on derecognition of financial instruments measured at cost	39	13	52	(39)	(75.0)
Net other expenses/income	40	742	845	(103)	(12.2)
Payroll costs		(1,453)	(1,468)	+ 15	(1.0)
Other administrative expenses		(1,220)	(1,364)	+ 144	(10.6)
Amortisation, depreciation and impairment losses on intangible and tangible assets		(483)	(183)	(300)	>+ 100.0
Operating costs	41	(3,156)	(3,015)	(141)	+ 4.7
Credit impairment losses IFRS 9	42	(115)	(16)	(99)	>+ 100.0
Provisions for risks and charges	43	313	(919)	+ 1,232	
Restructuring costs	44	(363)	(14)	(349)	>+ 100.0
Net gains/(losses) on disposals of investments	45	(15)	26	(41)	
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL		**1,491**	**1,024**	**+ 467**	**+ 45.6**
Impairment on goodwill	46	(130)	(288)	+ 158	(54.9)
PROFIT BEFORE TAX		**1,361**	**736**	**+ 625**	**+ 84.9**
Income tax for the period	47	(551)	(253)	(298)	>+ 100.0
PROFIT AFTER TAX		**810**	**483**	**+ 327**	**+ 67.7**
CONSOLIDATED PROFIT/(LOSS)		**810**	**483**	**+ 327**	**+ 67.7**
attributable to the shareholder of UniCredit Bank AG		793	465	+ 328	+ 70.5
attributable to minorities		17	18	(1)	(5.6)

1 The item "Interest income" contains interest of €2,935 million calculated using the effective interest method (previous-year period: €2,960 million). The figure is based on classification according to IFRS 9.

Earnings per share

(in €)

	NOTES	2019	2018
Earnings per share (undiluted and diluted)	48	0.99	0.58

Consolidated Statement of Total Comprehensive Income

(€ millions)

	2019	2018
Consolidated profit recognised in the income statement	**810**	**483**
Income and expenses recognised in other comprehensive income		
Income and expenses not to be reclassified to the income statement in future periods		
Actuarial profit/(loss) on defined benefit plans (pension commitments)	(624)	(101)
Allocation/withdrawal from the revaluation surplus for owner-occupied property (IAS16)	1,253	—
Change in the fair value of financial liabilities at FVTPL attributable		
to changes in the default risk (own credit spread reserve)	(19)	31
Other changes	—	—
Taxes on income and expenses not to be reclassified to the income statement in future periods	(199)	22
Income and expenses to be reclassified to the income statement in future periods		
Changes from foreign currency translation	1	2
Changes from companies accounted for using the equity method	—	—
Changes in the measurement of financial instruments (hedge reserve)	6	6
Unrealised gains/(losses)	6	7
Gains/(losses) reclassified to the income statement	—	(1)
Changes in the measurement of financial instruments at FVTOCI (FVTOCI reserve)	16	(31)
Unrealised gains/(losses)	20	(28)
Gains/(losses) reclassified to the income statement	(4)	(3)
Other changes	(8)	(7)
Taxes on income and expenses to be reclassified to the income statement in future periods	(3)	11
Total income and expenses recognised in equity through other comprehensive income	**423**	**(67)**
Total comprehensive income	**1,233**	**416**
of which:		
attributable to the shareholder of UniCredit Bank AG	1,216	398
attributable to minorities	17	18

Consolidated Balance Sheet

		2019	2018	CHANGE	
ASSETS	NOTES	€ millions	€ millions	€ millions	in %
Cash and cash balances	49	26,215	19,990	+ 6,225	+ 31.1
Financial assets held for trading	50	69,853	68,957	+ 896	+ 1.3
Financial assets at FVTPL	51	15,474	16,683	(1,209)	(7.2)
Financial assets at FVTOCI	52	14,673	7,370	+ 7,303	+ 99.1
Loans and receivables with banks (at cost)	53	31,842	33,648	(1,806)	(5.4)
Loans and receivables with customers (at cost)	54	139,632	133,706	+ 5,926	+ 4.4
Hedging derivatives	56	264	276	(12)	(4.3)
Hedge adjustment of hedged items					
in the fair value hedge portfolio		40	36	+ 4	+ 11.1
Investments in associates and joint ventures					
accounted for using the equity method	57	10	23	(13)	(56.5)
Property, plant and equipment	58	2,507	2,489	+ 18	+ 0.7
Investment properties	59	353	563	(210)	(37.3)
Intangible assets	60	15	149	(134)	(89.9)
of which: goodwill		—	130	(130)	(100.0)
Tax assets		1,184	1,281	(97)	(7.6)
Current tax assets		103	132	(29)	(22.0)
Deferred tax assets		1,081	1,149	(68)	(5.9)
Non-current assets or disposal groups held for sale	61	444	1,175	(731)	(62.2)
Other assets	62	1,092	988	+ 104	+ 10.5
TOTAL ASSETS		**303,598**	**287,334**	**+ 16,264**	**+ 5.7**

LIABILITIES	NOTES	2019 € millions	2018 € millions	CHANGE € millions	in %
Deposits from banks	64	70,321	62,943	+ 7,378	+ 11.7
Deposits from customers	65	125,394	121,038	+ 4,356	+ 3.6
Debt securities in issue	66	28,256	24,360	+ 3,896	+ 16.0
Financial liabilities held for trading	67	46,665	48,105	(1,440)	(3.0)
Financial liabilities at FVTPL	68	5,936	5,152	+ 784	+ 15.2
Hedging derivatives	69	813	598	+ 215	+ 36.0
Hedge adjustment of hedged items					
in the fair value hedge portfolio	70	1,636	1,210	+ 426	+ 35.2
Tax liabilities		1,062	559	+ 503	+ 90.0
Current tax liabilities		548	275	+ 273	+ 99.3
Deferred tax liabilities		514	284	+ 230	+ 81.0
Liabilities of disposal groups held for sale		—	—	—	—
Other liabilities	71	1,857	1,649	+ 208	+ 12.6
Provisions	72	2,743	3,453	(710)	(20.6)
Shareholders' equity	73	18,915	18,267	+ 648	+ 3.5
Shareholders' equity attributable to the shareholder					
of UniCredit Bank AG		18,925	18,231	+ 694	+ 3.8
Subscribed capital		2,407	2,407	—	—
Additional paid-in capital		9,791	9,791	—	—
Other reserves		3,396	5,481	(2,085)	(38.0)
Changes in the measurement of financial instruments		43	32	+ 11	+ 34.4
Hedge reserve		28	28	—	—
FVTOCI reserve		15	4	+ 11	+> 100.0
Consolidated profit/(loss)		3,288	520	+ 2,768	+> 100.0
Minority interests		(10)	36	(46)	
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		**303,598**	**287,334**	**+ 16,264**	**+ 5.7**

The 2019 profit available for distribution disclosed in the annual financial statements of HVB, which forms the basis for the appropriation of profit, amounts to €3,288 million. This consists of the net income of €1,051 million generated in the reporting year less the transfer to other retained earnings of €263 million and a withdrawal from other retained earnings of €2,500 million. We will propose to the Shareholders' Meeting to pass a resolution that a dividend totalling €3,288 million be paid to UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €4.10 per share after around €0.65 for the 2018 financial year. The consolidated profit of €520 million reported in the previous year was distributed to UniCredit in accordance with a resolution adopted by the Shareholders' Meeting on 3 June 2019.

Statement of Changes in Consolidated Shareholders' Equity

	SUBSCRIBED CAPITAL	ADDITIONAL PAID-IN CAPITAL	OTHER RESERVES			
			TOTAL OTHER RESERVES	OF WHICH: OWN CREDIT SPREAD	OF WHICH: REVALUATION RESERVE FOR OWN PROPERTIES	OF WHICH: PENSIONS AND SIMILAR OBLIGATIONS (IAS 19)
Shareholders' equity at 1/1/2018	**2,407**	**9,791**	**5,289**	**—**	**n/a**	**(1,161)**
Changes on the first-time adoption of IFRS 9	—	—	38	(21)	n/a	—
Effect of first-time adoption upon transition to fair value						
measurement of investment properties (IAS 40)	—	—	254	—	n/a	—
Shareholders' equity restated at 1/1/2018 (after first-time adoption)	**2,407**	**9,791**	**5,581**	**(21)**	**n/a**	**(1,161)**
Consolidated profit recognised in the consolidated						
income statement	**—**	**—**	**—**	**—**	**n/a**	**—**
Total income and expenses recognised in equity under						
other comprehensive income[3]	**—**	**—**	**(46)**	**21**	**n/a**	**(69)**
Unrealised gains/(losses) due to changes in the measurement						
of financial instruments	—	—	21	21	n/a	—
Gains/(losses) reclassified to the income statement	—	—	—	—	n/a	—
Actuarial gains/(losses) on defined benefit plans	—	—	(69)	—	n/a	(69)
Changes from foreign currency translation	—	—	2	—	n/a	—
Other changes	—	—	—	—	n/a	—
Total other changes in equity	**—**	**—**	**(54)**	**—**	**n/a**	**—**
Dividend payouts	—	—	—	—	n/a	—
Transfers to/withdrawals from consolidated profit	—	—	(55)	—	n/a	—
Changes in group of consolidated companies	—	—	1	—	n/a	—
Capital decreases	—	—	—	—	n/a	—
Shareholders' equity at 31/12/2018	**2,407**	**9,791**	**5,481**	**—**	**n/a**	**(1,230)**
Shareholders' equity at 1/1/2019	**2,407**	**9,791**	**5,481**	**—**	**—**	**(1,230)**
Consolidated profit recognised in the consolidated						
income statement	**—**	**—**	**—**	**—**	**—**	**—**
Total income and expenses recognised in equity through						
other comprehensive income[3]	**—**	**—**	**412**	**(13)**	**852**	**(428)**
Unrealised gains/(losses) due to changes in the measurement						
of financial instruments	—	—	(13)	(13)	—	—
Gains/(losses) reclassified to the income statement	—	—	—	—	—	—
Actuarial gains/(losses) on defined benefit plans	—	—	(428)	—	—	(428)
Changes from foreign currency translation	—	—	1	—	—	—
Other changes	—	—	—	—	—	—
Effect of first-time adoption upon transition						
to revaluation model IAS 16	—	—	852	—	852	—
Total other changes in equity	**—**	**—**	**(2,497)**	**—**	**—**	**—**
Dividend payouts	—	—	—	—	—	—
Transfers to/withdrawals from consolidated profit	—	—	(2,495)	—	—	—
Changes in group of consolidated companies	—	—	(2)	—	—	—
Capital decreases	—	—	—	—	—	—
Shareholders' equity at 31/12/2019	**2,407**	**9,791**	**3,396**	**(13)**	**852**	**(1,658)**

1 The Shareholders' Meeting of 3 June 2019 resolved to distribute the 2018 consolidated profit in the amount of €520 million to our sole shareholder UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €0.65 per share. The Shareholders' Meeting of 11 June 2018 resolved to distribute the 2017 consolidated profit in the amount of €1,300 million as a dividend to our sole shareholder, UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €1.62 per share.
2 UniCredit Bank AG (HVB).
3 See Consolidated statement of total comprehensive income.

(€ millions)

CHANGE IN MEASUREMENT OF FINANCIAL INSTRUMENTS						
AFS RESERVE	HEDGE RESERVE	FVTOCI RESERVE	CONSOLIDATED PROFIT/(LOSS)[1]	TOTAL SHAREHOLDERS' EQUITY ATTRIBUTABLE TO THE SHAREHOLDER OF HVB[2]	MINORITY INTERESTS	TOTAL SHAREHOLDERS' EQUITY
52	**28**	**—**	**1,300**	**18,867**	**7**	**18,874**
(52)	—	25	—	11	—	11
n/a	—	—	—	254	17	271
n/a	**28**	**25**	**1,300**	**19,132**	**24**	**19,156**
n/a	**—**	**—**	**465**	**465**	**18**	**483**
n/a	**—**	**(21)**	**—**	**(67)**	**—**	**(67)**
n/a	6	(19)	—	8	—	8
n/a	(1)	(2)	—	(3)	—	(3)
n/a	—	—	—	(69)	—	(69)
n/a	—	—	—	2	—	2
n/a	(5)	—	—	(5)	—	(5)
n/a	**—**	**—**	**(1,245)**	**(1,299)**	**(6)**	**(1,305)**
n/a	—	—	(1,300)	(1,300)	—	(1,300)
n/a	—	—	55	—	—	—
n/a	—	—	—	1	(6)	(5)
n/a	—	—	—	—	—	—
n/a	**28**	**4**	**520**	**18,231**	**36**	**18,267**
n/a	**28**	**4**	**520**	**18,231**	**36**	**18,267**
n/a	**—**	**—**	**793**	**793**	**17**	**810**
n/a	**—**	**11**	**—**	**423**	**—**	**423**
n/a	5	14	—	6	—	6
n/a	—	(3)	—	(3)	—	(3)
n/a	—	—	—	(428)	—	(428)
n/a	—	—	—	1	—	1
n/a	(5)	—	—	(5)	—	(5)
n/a	—	—	—	852	—	852
n/a	**—**	**—**	**1,975**	**(522)**	**(63)**	**(585)**
n/a	—	—	(520)	(520)	—	(520)
n/a	—	—	2,495	—	—	—
n/a	—	—	—	(2)	(63)	(65)
n/a	—	—	—	—	—	—
n/a	**28**	**15**	**3,288**	**18,925**	**(10)**	**18,915**

Consolidated Cash Flow Statement

(€ millions)

	2019	2018
Consolidated profit/(loss)	**810**	**483**
Write-downs, provisions for losses on, and write-ups of, loans and receivables and		
additions to provisions for losses on guarantees and indemnities	163	49
Write-downs and depreciation less write-ups on non-current assets	(700)	15
Change in other non-cash positions	1,691	(1,537)
Gains/(losses) on non-current assets	(124)	19
Other adjustments (net interest and dividend income from the income statement, taxes on income paid)	(2,521)	(2,627)
Subtotal	**(681)**	**(3,598)**
Change in assets and liabilities from operating activities after correction for non-cash components		
Increase in assets/decrease in liabilities (–)		
Decrease in assets/increase in liabilities (+)		
Financial assets held for trading	2,046	6,563
Loans and receivables with banks (at cost)	1,987	(3,998)
Loans and receivables with customers (at cost)	(6,041)	(13,399)
Other assets from operating activities	(369)	(36)
Deposits from banks	6,941	(3,718)
Deposits from customers	4,395	(3,169)
Debt securities in issue	3,985	(298)
Other liabilities from operating activities	(2,090)	(284)
Taxes on income	(130)	(351)
Interest received	3,906	4,110
Interest paid	(1,576)	(1,529)
Dividends received	212	345
Cash flows from operating activities	**12,585**	**(19,362)**
Proceeds from the sale of investments	2,044	5,767
Proceeds from the sale of property, plant and equipment	105	82
Payments for the acquisition of investments	(7,876)	(1,366)
Payments for the acquisition of property, plant and equipment	(445)	(160)
Effects of the change in the group of companies included in consolidation	101	38
Effect of the disposal of discontinued operations	—	—
Cash flows from investing activities	**(6,071)**	**4,361**

	2019	2018
Change in additional paid-in capital	—	—
Dividend payments	(520)	(1,300)
Issue of subordinated liabilities and hybrid capital	—	—
Repayment/buy-back of subordinated liabilities and hybrid capital	(130)	(45)
Other financing activities (debt, fund for general banking risks)	361	(78)
Cash flows from financing activities	**(289)**	**(1,423)**
Cash and cash equivalents at end of previous period	**19,990**	**36,414**
Cash flows from operating activities	**12,585**	**(19,362)**
Cash flows from investing activities	**(6,071)**	**4,361**
Cash flows from financing activities	**(289)**	**(1,423)**
Effects of exchange rate changes	—	—
Less non-current assets or disposal groups held for sale	—	—
Cash and cash equivalents at end of period	**26,215**	**19,990**

Legal basis

UniCredit Bank AG (HVB) is a universal bank with its registered office and principal place of business in Arabellastrasse 12, Munich, Germany. It is filed under HRB 42148 in the B section of the Commercial Register maintained by Munich District Court. HVB is an affiliated company of UniCredit S.p.A., Milan, Italy (ultimate parent company) in whose consolidated financial statements HVB Group is included. These are published on the UniCredit corporate group's website at the following address: https://www.unicreditgroup.eu/en/investors/financial-reports.html.

As a universal bank, HVB with its subsidiaries is one of the leading providers of banking and financial services in Germany. It offers a comprehensive range of banking and financial products and services to private, corporate and public-sector customers, international companies and institutional customers. Further information on the Bank's products and services is provided in the Note "Components of segment reporting by business segment" in the notes to these consolidated financial statements.

As a capital market-oriented company, HVB prepares its financial statements in accordance with the requirements of the International Accounting Standards Board (IASB) in the version adopted by the EU. This provides a reliable and internationally comparable basis for evaluating the assets, liabilities, financial position and profit or loss of HVB Group. Our value-based management is similarly based on these accounting principles.

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) pursuant to EU Commission Regulation 1606/2002 of the European Parliament and of the Council of 19 July 2002 (IAS Regulation) together with further regulations regarding the adoption of certain IFRS within the framework of the EU endorsement in conjunction with Section 315e (1) of the German Commercial Code (Handelsgesetzbuch – HGB) as non-exempt consolidated financial statements compliant with Section 4 of the IAS Regulation. The present consolidated financial statements were prepared by HVB's Management Board on 12 March 2020 and will be submitted to the Supervisory Board on 20 March 2020 for approval. Besides the standards defined as IFRS, the IFRS also comprise the existing International Accounting Standards (IAS) together with the interpretations known as IFRICs and SICs of the IFRS Interpretations Committee (IFRS IC) and its predecessor organisation. All the standards and interpretations subject to mandatory application in the EU for the 2019 financial year have been applied. Section 315e HGB also contains national regulations to be applied alongside the IFRS by capital-market-oriented companies.

Management's Discussion and Analysis meets the requirements of Section 315 (1, 2 and 4) HGB. It also incorporates a risk report pursuant to Section 315 HGB.

Legal basis (Continued)

Compliant with Section 264b HGB, the following partnerships are exempted from the obligation to prepare a management report and publish their annual financial statements:
- A & T-Projektentwicklungs GmbH & Co. Potsdamer Platz Berlin KG, Munich
- Acis Immobilien- und Projektentwicklungs GmbH & Co. Oberbaum City KG, Grünwald
- Acis Immobilien- und Projektentwicklungs GmbH & Co. Parkkolonnaden KG, Grünwald
- Acis Immobilien- und Projektentwicklungs GmbH & Co. Stuttgart Kronprinzstraße KG, Grünwald
- Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Alpha Management KG, Munich
- Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Gamma Management KG, Munich
- Grundstücksgesellschaft Simon beschränkt haftende Kommanditgesellschaft, Munich
- HAWA Grundstücks GmbH & Co. oHG Hotelverwaltung, Munich
- HAWA Grundstücks GmbH & Co. OHG Immobilienverwaltung, Munich
- H.F.S. Leasingfonds Deutschland 1 GmbH & Co. KG (Immobilienleasing), Munich
- HVB Gesellschaft für Gebäude mbH & Co. KG, Munich
- HVZ GmbH & Co. Objekt KG, Munich
- Hypo-Bank Verwaltungszentrum GmbH & Co. KG Objekt Arabellastraße, Munich
- Omnia Grundstücks-GmbH & Co. Objekt Haidenauplatz KG, Munich
- Omnia Grundstücks-GmbH & Co. Objekt Perlach KG, Munich
- Othmarschen Park Hamburg GmbH & Co. Centerpark KG, Munich
- Othmarschen Park Hamburg GmbH & Co. Gewerbepark KG, Munich
- Portia Grundstücks-Verwaltungsgesellschaft mbH & Co. Objekt KG, Munich
- Salvatorplatz-Grundstücksgesellschaft mbH & Co. oHG Saarland, Munich
- Salvatorplatz-Grundstücksgesellschaft mbH & Co. OHG Verwaltungszentrum, Munich
- Solos Immobilien- und Projektentwicklungs GmbH & Co. Sirius Beteiligungs KG, Munich
- TERRENO Grundstücksverwaltung GmbH & Co. Entwicklungs- und Finanzierungsvermittlungs KG, Munich
- TRICASA Grundbesitz Gesellschaft mbH & Co. 1. Vermietungs KG, Munich
- Vermietungsgesellschaft mbH & Co. Objekt MOC KG, Munich

Compliant with Section 264 (3) HGB, the following corporations are exempted from the obligation to prepare a management report and publish their annual financial statements:
- Argentaurus Immobilien-Vermietungs- und Verwaltungs GmbH, Munich
- Food & more GmbH, Munich
- HJS 12 Beteiligungsgesellschaft mbH, Munich
- HVB Immobilien AG, Munich
- HVB Projekt GmbH, Munich
- HVB Secur GmbH, Munich
- HVB Tecta GmbH, Munich
- HVB Verwa 4 GmbH, Munich
- HVB Verwa 4.4 GmbH, Munich
- Interra Gesellschaft für Immobilienverwaltung mbH, Munich
- MERKURHOF Grundstücksgesellschaft mit beschränkter Haftung, Munich
- NF Objekt FFM GmbH, Munich
- NF Objekte Berlin GmbH, Munich
- Orestos Immobilien-Verwaltungs GmbH, Munich
- Selfoss Beteiligungsgesellschaft mbH, Grünwald
- Spree Galerie Hotelbetriebsgesellschaft mbH, Munich
- UniCredit Direct Services GmbH, Munich
- Verwaltungsgesellschaft Katharinenhof m.b.H., Munich

Accounting and Valuation

1 Reporting date/period
The amounts shown in the tables and texts below relate to the reporting date of 31 December for disclosures regarding balance sheet items and totals and the period from 1 January to 31 December of the respective year for disclosures regarding the income statement.

2 Uniform Group accounting policies
The separate financial statements of the domestic and foreign subsidiaries are incorporated in the consolidated financial statements of HVB Group in accordance with uniform principles of accounting and valuation. Where options have been exercised, the details are explained under the balance sheet items concerned.

3 Consistency
In accordance with the IFRS framework together with IAS 1 and IAS 8, we apply the accounting, valuation and disclosure principles consistently from one period to the next. We discuss the changes in accounting principles as follows: the first-time adoption of new IFRS accounting rules is described in the Note "Initial adoption of the die new IFRS accounting rules. Where significant accounting and valuation errors from earlier periods are corrected, the amounts involved are adjusted retroactively. Where retroactive adjustment is not possible in exceptional circumstances, the amounts involved are adjusted against retained earnings. Where we effect changes in accounting policies, any resulting adjustments are similarly recognised retrospectively.

As part of the optimisation of its payment transaction activities, HVB has decided to adjust the recognition of expenses for the purchase of certain payment transaction services (an external service provider carries out the activities required for the settlement of payment transactions on behalf of the Bank) and of services in connection with credit card payment or credit card management: these expenses are now recognised under commission expense instead of in operating costs. In view of the adjustments made in recent years to the pricing scheme for accounts and payment services, it is more appropriate to set off the expense for the purchase of the services as commission expense from commission income for these services. The change in recognition results in the financial statements providing more reliable and relevant information on the respective banking services. Consequently, €41 million was recognised as commission expense in the 2019 reporting period, whereas €41 million was shown as operating costs for the purchase of these services in 2018. On account of the retrospective application, the previous year's figures have been adjusted so that commission expense has increased by €41 million, while operating costs have decreased by €41 million.

Unfortunately, we made an error in the change in recognition referred to in the Half-yearly Financial Report for the period up to 30 June 2019, with regard to the presentation of the differences between spot and forward rates (swap rate) of forward exchange transactions; the swap rate was already accrued in the previous year and reported in the net interest. As a result, there is no change in recognition.

The two changes in accounting policies that took effect from 31 December 2019 are described below:
– change to the revaluation model for owner-occupied land and buildings and
– change to the fair value model for investment property

Change to the revaluation model for owner-occupied land and buildings
HVB Group has decided to change the subsequent measurement of the properties used by the Bank falling within the scope of IAS 16 which are classified as property, plant and equipment from the previous cost model to the revaluation model pursuant to IAS 16.31. Under IAS 8.14(b), such a change in the accounting method is permitted if it results in more meaningful and reliable information in the consolidated financial statements.

In recent years, HVB Group has intensified its management of properties used by the Bank. Essential properties were thus adjusted, among other things, to new office concepts or refurbished to meet new technical challenges posed by digitalisation in particular. To better reflect available or used resources, HVB Group has generally decided to change the measurement to report the fair value. This change results in a more transparent presentation of the asset situation as the substance available is now shown on the basis of current values and hidden reserves are disclosed. As a result, equity is also reported more transparently in the consolidated financial statements. The actual use of resources is also shown in relation to earnings as in future the depreciation entered is based on the actual resource input, i.e. generally the fair value of the properties used. In addition, the planned main measures implemented in real estate management are reflected promptly in full in the consolidated financial statements as these result in a revaluation of the properties.

Accounting and Valuation (Continued)

Under the revaluation model, a revaluation is to be carried out at sufficiently regular intervals on the revaluation date and the carrying amount adjusted to the fair value of the asset. Scheduled depreciation continues to be recognised in the income statement on this basis over the expected useful life. If any deviations between the current carrying amount and the current fair value arise, another revaluation is to be carried out. This ensures that the carrying amount does not deviate significantly from the fair value.

In accordance with the rules of IAS 8.17 in conjunction with IAS 16.80A, the change to the revaluation model is to be undertaken prospectively and not retrospectively. As HVB Group has decided to apply the revaluation model with effect as of 31 December 2019, the carrying amounts have been adjusted to the fair value on the revaluation date of 31 December 2019. The revaluation method is applied to the following groups of property, plant and equipment: land and buildings. In the process, the carrying amounts for properties used by the Bank are broken down into separate carrying amounts for land and buildings, which are measured separately. If the fair value for an asset is higher than the previous carrying amount, the increase in value is recognised in other comprehensive income in conformity with IAS 16.39 and accumulated in equity within the revaluation surplus. If the fair value is lower than the existing carrying amount upon initial application, it is to be written down as an expense. Such a write-down is confined at the time of the first revaluation at 31 December 2019 to cases in which the allocation of carrying amounts to land and buildings results in a pro rata carrying amount which is lower than the fair value for the plot of land or building now valued separately.

For the revaluation of properties used by the Bank, valuation reports were generally prepared by independent external experts. HVB Group carried out the valuation itself only for non-essential properties. In the course of the initial revaluation, increases in value of €1,253 million were recognised in equity through other comprehensive income and depreciation of €36 million as depreciation and impairment losses on property, plant and equipment within operating costs. The carrying amounts of the owner-occupied land and buildings still reported under property, plant and equipment have increased by €1,217 million accordingly. This does not include owner-occupied properties in the process of being sold and thus recognised at 31 December 2019 as "Non-current assets or disposal groups held for sale". The valuation regulations of IFRS 5 are to be applied to these. Separate lines have been added to the development of property, plant and equipment included the notes to show the effects of the change to the revaluation method.

Change to the fair value model for investment properties

HVB Group has decided to change the subsequent measurement of the Bank's investment properties falling within the scope of IAS 40 which are classified as investment properties from the previous cost model to the fair value model pursuant to IAS 40.33. Under IAS 8.14(b), such a change in the accounting method is permitted if it results in more meaningful and reliable information in the consolidated financial statements.

In recent years HVB Group has intensified its management of these properties. The active management of the real estate portfolio includes disposals if attractive sales opportunities arise. To better reflect the available resources, HVB Group has decided to change the measurement to report the fair value. This change results in a more transparent presentation of the asset situation as the substance available is now shown on the basis of the current values and hidden reserves are disclosed. As a result, equity is also reported more appropriately in the consolidated financial statements. With regard to the profit and loss situation, the periods in which income/expenses are incurred through the measurement results also become clearer. It is thus no longer of importance that the hidden reserves are realised by a sale in order to be recognised through profit or loss. As a result, the real estate portfolio is recognised for the most part at fair value since the Bank has also changed to the revaluation model in accordance with IAS 16.31 for the properties used by the Bank.

The change to measuring investment properties at fair value through profit or loss was made retrospectively in accordance with IAS 8.19(b). The previous-year figures in the 2019 consolidated financial statements have been restated accordingly. This relates in detail to the following measures:

- First-time adoption effect from the measurement adjustment in equity under total other reserves as of 1 January 2018 (opening balance 2018) to recognise the measurement differences from the change in measurement method for the period before 1 January 2018.
- Adjustment of the 2018 consolidated income statement to the retrospectively changed measurement method; the increase in the reported consolidated profit reduces the amount withdrawn from total other reserves; such withdrawal was carried out in the 2018 consolidated financial statements as part of the appropriation of net profit.
- Adjustment of the 2019 consolidated income statement to the retrospectively changed measurement method leads to a higher consolidated profit for 2019.

Investment properties shown in the respective balance sheet item or classified as "Non-current assets or disposal groups held for sale" fall within the scope of application of the fair value measurement of investment properties in accordance with IFRS 5.5(d), the latter continues to be subject to measurement based on the fair value model pursuant to IAS 40. This item also includes the right-of-use assets received under leases, which represent investment property at HVB Group.

The fair values of investment properties were determined at the respective measurement dates by external appraisals. Only in the event of a sale close to the measurement date was the selling price used. The fair value changes are recognised in the consolidated income statement under the item "Net other expenses/income". Scheduled depreciation is no longer taken over the useful life of the property. On account of the change in measurement to fair value, it was also necessary to restate the results from the sale of investment properties.

Where the change in the measurement method resulted in the recognition of deferred taxes, these were posted accordingly (for first-time adoption effects, these were also recognised in equity under retained earnings; for adjustments in the consolidated income statement, these were recognised in tax expense). The following effects resulted from the change in accounting method:

As a first-time adoption effect as of 1 January 2018, there are changes of €395 million on account of remeasurement at fair value. This resulted in deferred taxes of €124 million, resulting in an amount of €271 million being recognised in equity under retained earnings.

Adjustments in the consolidated income statement for properties reported under the item "Investment properties": **(€ millions)**

	2019	2018
Remeasurement (adjusted to current fair value)	70	449
Suspension of write-ups/extraordinary write-downs	(8)	(108)
Total adjustments in the item "Net other expenses/income"	**62**	**341**
Item "Operating costs": suspension of depreciation/amortisation	8	23
Tax expense: recognition of deferred taxes	13	(105)
Total	**83**	**259**

Adjustments in the consolidated income statement for properties contained in the item
"Non-current assets or disposal groups held for sale": **(€ millions)**

	2019	2018
Remeasurement (adjusted to current fair value)	295	30
Adjustment of the sales result achieved	(615)	(50)
Total adjustments in the item "Net other expenses/income"	**(320)**	**(20)**
Tax expense: recognition of deferred taxes	89	6
Total	**(231)**	**(14)**

Accounting and Valuation (Continued)

As a result, earnings per share (undiluted and diluted) for 2019 changed by minus €0.21 (previous year: plus €0.29) to €0.99 (previous year: €0.58).

In addition, the following adjustments were made to the carrying amounts in the consolidated balance sheet: (€ millions)

	CARRYING AMOUNT BEFORE CHANGE IN MEASUREMENT METHOD	ADJUSTMENT	CARRYING AMOUNT AFTER CHANGE IN MEASUREMENT METHOD
Investment properties (31/12/2018)	256	307	563
Investment properties (31/12/2019)	185	168	353
Non-current assets or disposal groups held for sale:			
investment properties (31/12/2018)	667	433	1,100
Non-current assets or disposal groups held for sale:			
investment properties (31/12/2019)	21	208	229

Changes in estimates have been recognised in net income for the period affected by the change in the estimation method. Provided the change in the estimation method does not affect the income statement, the carrying amount of the concerned asset or liability, or shareholders' equity position has been adjusted.

The consolidated financial statements are prepared under the assumption of a going concern. Accounting and valuation in accordance with IFRS contains values that have been determined reliably using estimates and assumptions. The estimates and assumptions applied are based on past experience and other factors such as budgets, expectations and forecasts regarding future events which seem appropriate under the present circumstances. This mainly affects the determination of the fair value of certain financial assets and liabilities, impairments in the lending business, deferred taxes, and the accounting and valuation of provisions. The actual values may differ from the assumptions and estimates made.

The following matters in particular are affected by estimates, assumptions and discretionary decisions:

– Measurement of goodwill:
  The multi-year plan drawn up by HVB Group forms the main basis for the impairment test for goodwill. The multi-year plan contains forecasts of future trends in terms of both the Bank's respective business units and macroeconomic developments. This means that the impairment test for goodwill is also subject to estimates, assumptions and discretionary decisions.
– Determination of impairments (IFRS 9):
  Scenarios of the anticipated cash flows of debt instruments serve as a basis for determining the expected credit default. This means that, to determine the impairments, assumptions and forecasts must be made regarding the payments that may still be received from the borrower and/or proceeds from the realisation of the collateral and the probability of occurrence of the respective scenario must be estimated. This is carried out collectively for debt instruments at Stage 1 and Stage 2 and for insignificant individual cases at Stage 3 while the assumptions and estimates are made individually for significant individual cases at Stage 3.
– Determination of fair value:
  HVB Group employs internal models to determine the fair value of financial instruments for which no price is available on an active market. The application of these internal models presupposes assumptions and forecasts, among other things, the scope of which depends on the complexity of the financial instrument and the valuation parameters derived from market data.
  Determining the fair value of real estate as non-financial assets also requires discretionary decisions to a certain degree. As self-occupied land and buildings, as well as investment properties, are unique, there is generally no observable market data available for such properties. As a result, the value of this real estate is periodically assessed, usually by independent external assessors, using recognised appraisal methods, and the valuation parameters, such as rents, are estimated based on market information.
– Provisions:
  Provisions are recognised for present or future obligations to cover the payments required to settle these obligations. In this context, it is necessary to estimate the amount of these expenses or costs and also the date at which the liabilities are expected to be settled. This involves making assumptions regarding the actual amount of the costs occurring and, in the case of long-term provisions, also determining possible cost increases up until the settlement date. If the settlement date is more than one year in the future, the forecast expenses and costs are discounted over the period until the liability is settled. If provisions are set up for future audits of tax returns by the tax authorities, the anticipated additional tax payments are not discounted. Instead the interest charged by the tax authorities on the additional amounts payable are added together. The uncertainties in making estimates are greater in this case as the interpretation of tax issues is constantly evolving and is also applied retrospectively.

– Deferred tax assets and liabilities:
  Apart from a few exceptions defined in the standard, deferred tax assets and liabilities are recognised for all temporary differences between the values stated in accordance with IFRS and the values stated for tax-reporting purposes (liability method). Accounting and valuation are performed in accordance with IAS 12 on the basis of local tax regulations that are expected to apply to the period when an asset is realised or a liability is settled. The regulations and applicable local tax rates are assumed that are enacted or substantively enacted at the reporting date. Deferred tax assets are not recognised to the extent that it seems unlikely that sufficient taxable profit will be available in future periods. Furthermore, deferred tax assets are recognised for unused tax losses carried forward and unused tax credits to the extent that recoverability is demonstrated. This is done on the basis of a five-year plan for HVB Group, which is subject to segment-specific and macroeconomic assumptions and takes account of local tax regulations.
– Share-based compensation:
  Assumptions must similarly be made to determine the cost of share-based compensation programmes. The costs for the instruments to be transferred are amortised over the vesting period or the beneficiaries' claims expire if they leave UniCredit first. This makes it necessary to forecast what proportion of employees will leave UniCredit during the vesting period. At the same time, the shares granted must be measured at fair value at the grant date. The comments made above regarding the determination of fair value are applicable analogously.
– Property, plant and equipment:
  Depreciable items of property, plant and equipment are depreciated over their useful lives. Since the useful life is not independent of the usage of the actual asset in question, it must be estimated in the light of the circumstances in each case.
– Intangible assets:
  With the exception of goodwill, intangible assets are amortised over their useful life. Here, too, suitable assumptions must be made to estimate the useful life.

Apart from this, the accounting, valuation and disclosure principles applied in the 2019 financial year are the same as those applied in the consolidated financial statements for 2018, with the exception of the new IFRS rules to be applied as described in the Note "Initial adoption of new IFRS accounting rules".

4 Initial adoption of new IFRS accounting rules
The amendments to the following standards newly published or revised by the IASB were mandatorily applicable in the European Union (EU) for the first time in the 2019 financial year:

Standards
IFRS 16 – "Leases"

Interpretations
IFRIC 23 – "Uncertainty over Income Tax Treatments"

Amendments and improvements
– Annual improvements to the IFRS 2015–2017 cycle (IFRS 3, IFRS 11, IAS 12 and IAS 23)
– Amendments to IFRS 9 "Financial Instruments" – Prepayment Features with Negative Compensation
– Amendments to IAS 28 "Investments in Associates and Joint Ventures" – Long-term Interests in Associates and Joint Ventures
– Amendments to IAS 19 "Employee Benefits" – Plan Amendment, Curtailment or Settlement

The first-time application of the new IFRS 16 accounting standards had a material impact on the consolidated financial statements of HVB Group. A detailed description of the revised accounting and valuation methods with regard to the leases of HVB Group as lessee and lessor is included in the Note "Leasing Business". The nature and impact of the changes as a consequence of the first-time application of IFRS 16 are described below.

We have also implemented the other new or amended accounting principles. These did not impact or have any material effects on our consolidated financial statements.

For the effects of the first-time adoption of IFRS 9 included in the previous-year figures, please refer to the detailed explanations in the 2018 consolidated financial statements.

Accounting and Valuation (Continued)

First-time adoption of IFRS 16 "Leases"

On 13 January 2016, the IASB published the new accounting standard IFRS 16 "Leases", which supersedes the previous standard for lease accounting IAS 17 "Leases" as well as the accompanying interpretations IFRIC 4 "Determining whether an Arrangement Contains a Lease", SIC 15 "Operating Leases – Incentives" and SIC 27 "Evaluating the Substance of Transactions Involving the Legal Form of a Lease". The incorporation of IFRS 16 into European law (endorsement) took place on 31 October 2017. Adoption of the standard is mandatory in the EU for financial years beginning on or after 1 January 2019.

IFRS 16 contains new or amended recognition, measurement, presentation and disclosure requirements for lease accounting. The amendments affect accounting by the lessee in particular; the requirements relating to accounting by the lessor have remained largely unchanged. The requirements of the new standard apply to leases of our property, plant and equipment and to investment properties. IFRS 16 does not apply to leases involving licence agreements.

HVB Group adopted IFRS 16 for the first time on 1 January 2019. The first-time adoption was carried out consistently for all of the leases in conformity with the transitional provisions based on the modified retrospective method pursuant to IFRS 16.C5(b), according to which the cumulative effect of the first-time adoption of IFRS 16 at the date of initial application is to be recognised as an adjustment of the opening balance of retained earnings. The comparative information for the previous year has not been restated and is presented in accordance with the rules of the previously applicable standard IAS 17 and the related interpretations. No first-time adoption effects to be recognised in equity arose at HVB Group level.

During the transition to the new lease standard, HVB Group made use of the accounting simplification option for lessees and lessors regarding the use of the new definition of lease agreements. Consequently, agreements in place prior to 1 January 2019 should not be re-evaluated at the time of initial application to determine whether they should be reclassified in whole or in part as leases in accordance with IFRS 16. The assessments reached in accordance with the previous rules of IAS 17 / IFRIC 4 were applied to the whole portfolio of agreements (grandfathering). In the case of existing agreements that establish or contain a lease, HVB Group generally accounted for each lease component separately from the non-lease components of the agreement as a separate lease.

According to the new lease definition of IFRS 16, an agreement is or contains a lease when it grants the right to control the use of an identified asset (the underlying asset) for a specified period in exchange for a fee. While the new definition in IFRS 16 is essentially based on the concept of control, IAS 17 / IFRIC 4 primarily focus on risks and rewards. The new definition in IFRS 16 will not significantly change the number of lease agreements held by the Bank.

For the lessee, IFRS 16 eliminates the previous classification of lease agreements as either operating leases or finance leases, and instead introduces a uniform lessee accounting model (right-of-use approach). According to this approach, for all these lease agreements the lessee generally recognises an asset for the right to use the underlying leased property and a corresponding lease liability for the obligation to make the outstanding lease payments, the only exception being short-term leases and leases for low-value assets. This means that previously unrecognised operating leases now have to be accounted for in a manner largely comparable to the recognition of finance leases in accordance with IAS 17. As a result, the capitalisation of the right-of-use assets and the recognition of the corresponding lease liabilities as a liability leads to an extension of the balance sheet for operating leases previously not recognised in the balance sheet. As at 1 January 2019, our total assets increased by €373 million due to the first-time adoption of IFRS 16.

The adoption of IFRS 16 also resulted in changes to the consolidated income statement. The lease payments previously made by the lessee under operating leases in accordance with IAS 17, which were recognised as an other operating expense or, if they were rental expenses, under operating costs on a straight-line basis over the lease term have now generally been replaced by depreciation expenses. Scheduled and unscheduled depreciation, impairments and write-ups on the right-of-use assets reported under property, plant and equipment are recognised under the item "Depreciation and impairment losses on intangible and tangible assets" within operating costs. Only for right-of-use assets that meet the definition of an investment property under IAS 40 and are measured at fair value are profits and losses arising from a change in the fair value recognised directly through profit or loss in the item "Net other expenses/income". While incentive payments (for example, rent-free periods) under IFRS 16 are taken into account in the course of measuring the right-of-use assets and lease liabilities, the lease incentives granted to the lessee were previously amortised on a straight-line basis as a reduction in the rental expenses pursuant to IAS 17.

Compounding of the lease liabilities contained in the balance sheet items "Deposits from customers" as well as "Deposits from banks" is carried out as interest expense.

In its transition to the new IFRS 16 standard for lessees, HVB Group proceeds as follows, whereby optional simplification options and practical aids afforded by the standard are explained, among other things:

– Leases ending on 31 December 2019 at the latest were treated as short-term leases regardless of the original term of contract. In line with the procedure for short-term leases, the Bank did not recognise a right of use and a lease liability. The lease payments related to these leases were recognised as an expense on a straight-line basis over the lease term in accordance with the previous treatment of operating leases pursuant to IAS 17.
– Each remaining lease was discounted separately at its individual interest rate and measured. The Bank did not use the option of applying a single discount rate for a portfolio of similarly structured lease agreements.
– For lease agreements previously classified as operating leases under IAS 17, the respective outstanding lease payments were discounted by the lessee at the time of initial application at the incremental borrowing rate at 1 January 2019 separately for each lease liability to be recognised and stated at their present value. The weighted average incremental borrowing rate was 2.36% p.a. The corresponding right-of-use asset was recognised in the amount of the lease liability.
– Rather than carry out an impairment review in accordance with IAS 36, the right-of-use asset at the time of initial application was reduced in a simplified manner by the amount as at 31 December 2018 recognised as a provision for onerous leases in accordance with IAS 37.
– The Bank did not use the retroactive determination and consideration of the initial direct costs in the measurement of the right-of-use asset at the time of initial adoption.
– In specifying the term of lease agreements, the exercise of options to extend or terminate the lease was assessed according to the current state of the facts rather than retrospectively determining the likelihood that these options would be exercised when the agreement was initiated.

Upon the first-time adoption of IFRS 16, previous obligations arising under operating leases pursuant to IAS 17 were recognised as right-of-use assets or lease liabilities in the consolidated balance sheet for the first time. A significant share of the newly recognised right-of-use assets of liabilities is accounted for by the real estate rented by HVB Group.

In addition, the right-of-use assets and lease liabilities contain leases which were previously accounted for as finance leases under IAS 17. For finance leases, the assets leased by HVB Group as the lessee were shown in the consolidated balance sheet under property, plant and equipment, and the corresponding obligation under deposits from customers or deposits from banks. On 1 January 2019, the previous finance lease agreements with their carrying amounts as at 31 December 2018 were recognised as right-of-use assets and lease liabilities, and as a result were accounted for in accordance with IFRS 16.

Accounting and Valuation (Continued)

In the context of the transition to IFRS 16, lease liabilities of €546 million were recognised. Based on the off-balance sheet operating lease obligations as at 31 December 2018, the following table shows the reconciliation to the opening balance of the lease liabilities carried as liabilities as at 1 January 2019:

(€ millions)

Off-balance sheet obligations from operating leases in accordance with IAS 17 as at 31/12/2018	**289**
Application relief for short-term leases	(21)
Application relief for leases of low-value assets	—
Changes related to extend or terminate a lease	146
Others	(3)
Obligations from operating lease arrangements (gross amount undiscounted) as at 1/1/2019	**411**
Effect from the discounting with the incremental borrowing rate as at 1/1/2019	(38)
Obligation from operating lease arrangements (discounted) as at 1/1/2019	**373**
Adoption in the consolidated balance sheet as additional recognised lease liabilities	
due to first-time application of IFRS 16 as at 1/1/2019	**373**
Carrying amount of lease liabilities from finance leases in accordance with IAS 17 as at 31/12/2018	173
Carrying amount of total lease liabilities in accordance with IFRS 16 as at 1/1/2019	**546**

The figure of €251 million recognised in the previous year as the initial value of off-balance-sheet obligations under operating leases in accordance with IAS 17 as at 31 December 2018 was adjusted by €38 million to €289 million based on the operating lease portfolio additionally identified in the contract analysis.

Upon the first-time adoption of IFRS 16, assets of €373 million were recognised for the right-of-use assets to the underlying leased property. As shown in the following table, the difference between the amounts stated for the right-of-use assets and the lease liabilities at 1 January 2019 is primarily due to the impairment losses recognised in previous years on the carrying amounts of the assets from a finance lease, the offsetting of right-of-use assets from provisions set up in connection with onerous leases as well as the derecognition of right-of-use assets to the leased item in the case of subleases classified by the intermediary as finance leases:

(€ millions)

Lease liabilities as at 1/1/2019	**546**
Adoption as initial value for the recognition of right of use assets as at 1/1/2019	**546**
Difference between the carrying amount of the leased assets and the lease liabilities	
from finance leases due to impairment losses in previous years	(123)
Offsetting with provisions for onerous lease arrangements	(29)
Derecognition in case of sub-leases classified as finance leases	(21)
Others	—
Carrying amount of right of use assets as at 1/1/2019	**373**
of which: carrying amount of right-of-use assets from previous finance leases	50

For lessor accounting, the rules of IAS 17 have essentially been incorporated unchanged into the new IFRS 16, such that the dual lessor accounting model which classifies lease agreements as either operating leases or finance leases is still applicable.

In the case of subleases that are recognised as separate contracts separately to the main lease in accordance with IFRS 16, HVB Group as the intermediate lessor at the date of the initial application of the new standard was required to again assess each existing operating lease to determine whether it is to be classified as an operating or a finance lease under the rules of IFRS 16. This assessment was made on the basis of the remaining terms of contract of the main lease and sublease with reference to the right of use to the leased property under the main lease (and not on the basis of the asset underlying the right of use as was the case under IAS 17). On account of this change, HVB Group has reclassified some of its subleases at the date of the first-time adoption of IFRS 16.

In addition, IFRS 16 stipulates changes and extensions regarding the disclosure requirements of the lessor.

5 Published IFRS that are not yet the subject of mandatory adoption and that have not been the subject of early adoption
As permitted, HVB Group has decided against the early voluntary adoption of the standards and interpretations adopted or revised by the IASB, which become the subject of mandatory adoption for the 2020 financial year or thereafter. HVB Group will apply these standards and interpretations in the financial year in which the new provisions in question become mandatorily applicable for EU-based enterprises for the first time.

The EU has adopted the following into European law:
- Framework concept for financial reporting – changes in the references to the framework concept in IFRS standards. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.
- Amendments to IFRS 9 “Financial Instruments”. IAS 39 “Financial Instruments: Recognition and Measurement” and IFRS 7 “Financial Instruments: Disclosures” – Interest Rate Benchmark Reform. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.
- Amendments to IAS 1 “Presentation of Financial Statements” and IAS 8. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.

The EU has not yet adopted the following into European law:
- Amendments to IFRS 3 “Business Combinations” – Definitions of a business. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.
- Amendments to IAS 1 “Presentation of Financial Statements” Classification of Liabilities as Current or Non-current. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2022.
- IFRS 17 “Insurance Contracts”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2021.

We do not expect the remaining new or amended provisions to be applied in the future to have any significant effects on the consolidated financial statements.

Accounting and Valuation (Continued)

6 Companies included in consolidation

The group of companies included in consolidation by HVB Group encompasses 135 (previous year: 139) controlled companies, of which 36 (previous year: 37) are classified as structured entities within the meaning of IFRS 12.

	2019	2018
Total controlled companies	**290**	**307**
Consolidated companies	135	139
of which: structured entities in accordance with IFRS 12	36	37
Non-consolidated companies	**155**	**168**
Joint ventures	**2**	**3**
of which: accounted for using the equity method	—	—
Associates	**4**	**6**
of which: accounted for using the equity method	2	5

At year-end 2019, we had a total of 159 (previous year: 172) controlled and associates, and joint ventures in HVB Group that were neither fully consolidated nor fully accounted for using the equity method as they are not of material importance to the Group.

The structured entities include two borrowers (previous year: three) over which HVB gained control during the course of restructuring or resolution. The borrowers are classified as structured entities within the meaning of IFRS 12 as, on account of their financial difficulties, they are controlled by their credit relationship with HVB and no longer by voting rights. Not all of the borrowers are disclosed in the Note “List of holdings”, for data protection reasons. Two (previous year: three) of these borrowers have been consolidated; as in the previous year, there were no borrowers who have not been consolidated for materiality reasons.

The effects on the balance sheet of the contractual relationships between the Group companies and these non-consolidated companies are included in the consolidated financial statements. The aggregate amounts of net income for the year of these minor non-consolidated companies makes up 1.06% (previous year: 1.25%) of the consolidated profit of HVB Group, while such companies provide around 0.07% (previous year: 0.06%) of consolidated assets. The aggregate amounts of net income for the year of minor companies not accounted for using the equity method (joint ventures and associates) amounts to 0.03% (previous year: 0.07%) of the consolidated profit, their share in the Group capital is 0.0004% (previous year: 0.001%). Our interests in these companies are carried as “Financial assets at FVTPL” and loans extended under “Loans and receivables with customers (at cost)”.

Controlled companies

The group of companies included in consolidation has been defined taking into account materiality criteria. In addition, smaller companies that are below the materiality thresholds have also been consolidated on account of the rules defined by the banking supervisory authorities that regulate UniCredit. The fully consolidated companies prepared their annual financial statements for the period ending 31 December 2019.

In accordance with IFRS 12, 36 (previous year: 37) fully consolidated controlled entities are classified as structured entities. Please refer to the Note “Disclosures regarding structured entities” for more information on structured entities.

There were significant restrictions on the ability of HVB Group to access assets of the controlled companies as follows:
- Subsidiaries classified as credit institutions or financial services institutions for supervisory purposes are subject to the provisions of the German Banking Act, the CRR and MaRisk/ICAAP regarding their capital base. The equity capital to be maintained under these provisions limits the ability of HVB Group to adopt resolutions regarding dividend distributions.
- Fully consolidated structured entities are not generally included in the consolidated financial statements on account of HVB Group's position as a shareholder. Accordingly, HVB Group has no ability to decide on dividend distributions and is bound by the contractual arrangements (such as lending agreements or derivative contracts).

The non-controlling interests at 31 December 2019 have no significant effects on the consolidated financial statements of HVB Group either individually or in aggregate. At 31 December 2019 third parties hold non-controlling interests in 44 (previous year: 47) fully consolidated companies. The non-controlling interests are shown separately in the consolidated balance sheet and generally participate in the profits and losses of the companies; their shareholders hold voting rights in the companies, but without breaking the controlling influence of HVB Group.

The following companies were newly added to the group of companies included in consolidation at HVB Group in 2019:
- Bayerische Wohnungsgesellschaft für Handel und Industrie Gesellschaft mit beschränkter Haftung, Munich
- Elektra Purchase No. 64 DAC, Dublin
- Elektra Purchase No. 71 DAC, Dublin
- Ice Creek Pool No. 1 DAC, Dublin
- Verwaltungsgesellschaft Katharinenhof mbH, Munich
- Wealthcap Immobilien Deutschland 44 GmbH & Co. geschlossene Investment KG, Munich
- Wealthcap Immobilienankauf Komplementär GmbH, Munich
- WealthCap Objekt Berlin II GmbH & Co. KG, Munich
- Wealthcap Objekt Dresden GmbH & Co. KG, Munich
- Wealthcap Objekt-Vorrat 25 GmbH & Co. KG, Munich
- Wealthcap Objekt-Vorrat 31 GmbH & Co. KG, Munich
- WealthCap Objekt-Vorrat 32 GmbH & Co. KG, Munich
- WealthCap Wohnen 1 GmbH & Co. KG, Munich
- Wealthcap Wohnen 1a GmbH & Co. KG, Munich
- Weicker S. à r.l., Luxembourg

Wealthcap Immobilien Deutschland 44 GmbH & Co. geschlossene Investment KG and WealthCap Objekt Berlin II GmbH & Co. KG were fully consolidated over the course of the year, and then deconsolidated.

The following companies left the group of companies included in consolidation of HVB Group in 2019 due to merger, sale, or imminent or completed liquidation:
- AGROB Immobilien AG, Ismaning
- Elektra Purchase No. 32 S.A. – Compartment 2, Luxembourg
- Elektra Purchase No. 48 DAC, Dublin
- HVB Capital Partners AG, Munich
- Nautilus Tankers Limited, Valletta
- Ocean Breeze Asset GmbH & Co. KG, Bremen
- Ocean Breeze Energy GmbH & Co. KG, Bremen
- Ocean Breeze Finance S.A. – Compartment 1, Luxembourg
- Ocean Breeze GmbH, Bremen
- Perikles 20092 Vermögensverwaltung GmbH, Bremen
- SwanCap Partners GmbH, Munich
- Wealthcap Immobilien Deutschland 44 GmbH & Co. geschlossene Investment KG, Munich
- WealthCap Los Gatos 131 Albright Way, L.P., Wilmington
- WealthCap Objekt Berlin II GmbH & Co. KG, Munich
- Wealthcap Objekte Grasbrunn und Ismaning GmbH & Co. KG, Munich
- WealthCap Portland Park Square L.P., Wilmington

Accounting and Valuation (Continued)

The following companies left the group of companies included in consolidation in 2019 for materiality reasons:
– Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Beta Management KG, Munich
– Life Management Erste GmbH, Munich
– paydirekt Beteiligungsgesellschaft privater Banken mbH, Berlin
– Transterra Gesellschaft für Immobilienverwaltung mbH, Munich
– Verwaltungsgesellschaft Katharinenhof mbH, Munich
– WealthCap Objekt-Vorrat 20 GmbH & Co. KG, Munich

Verwaltungsgesellschaft Katharinenhof mbH was deconsolidated, and then fully consolidated over the course of the year.

On account of the deconsolidation of the companies listed above, HVB Group realised a deconsolidation result in accordance with IFRS 10.25 recognised in the item "Net other expenses/income" of €– million (previous year period: €6 million) and minus €12 million (previous year period: €28 million) in the item "Net gains/losses on disposals of investments" in the income statement.

Associates
No financial statements at 31 December 2019 were available for the associates listed below valued using the equity method when the consolidated financial statements were prepared. The following financial statements were used for valuation using the equity method:

– Comtrade Group B.V., Rotterdam	30 September 2019
– Adler Funding LLC, Dover	31 December 2018

There were no significant events at these companies between the date when the above financial statements were prepared and 31 December 2019 that could have an impact on the assets, liabilities, financial position, and profit or loss.

The group of consolidated companies does not include any companies for which the proportionate consolidation method is applied.

7 Principles of consolidation
An enterprise (or economically separate entity) is fully consolidated when it is controlled by HVB Group. Control is deemed to exist when the following three criteria defined in IFRS 10 are met: HVB Group must have power over the relevant activities of the company and be exposed to variable income from the enterprise. In addition, HVB Group must be able to use its power to influence the variable earnings it obtains from the enterprise.

Control is independent of the type of financial relationship between parent company and subsidiary and does not require any participation in the enterprise's capital. Control may also be derived from contractual arrangements or legal provisions.

To assess whether an enterprise is controlled by HVB Group, a detailed analysis must be carried out of the business purpose, the relevant activities of the enterprise, the parties involved and the distribution of the variable income from the enterprise. The analysis includes an assessment of whether HVB Group is acting as the principal and has delegated power over the enterprise to a third party (agent). This may be the case when the decision-maker who has power over the enterprise does not pursue own economic interests out of the enterprise or these are insignificant and the decision-maker merely exercises delegated decision-making powers for HVB Group.

An enterprise is initially consolidated as soon as HVB Group gains control over the enterprise. During initial consolidation, the assets and liabilities of the enterprise measured are included at their fair values at the effective date. The uniform Group accounting and valuation policies are then applied. Expenses and income of the respective company are included in the consolidated income statement from the effective date of initial consolidation. Participating interests in a consolidated company held by third parties are carried under minority interests, provided the criteria for disclosure as shareholders' equity are met. Otherwise, they are recognised as debt.

Consolidation is performed by offsetting the purchase price of a subsidiary company against the value of the interest held in the completely remeasured shareholders' equity at the time of acquisition, provided the transactions involved are not internal to UniCredit. This amount represents the difference between the assets and liabilities of the acquired company measured at the fair value at the time of initial consolidation. The difference between the higher acquisition cost and the remeasured balance of assets and liabilities is recognised as goodwill under intangible assets in the balance sheet on a prorated basis. Goodwill on companies accounted for using the equity method is carried under "Investments in associates and joint ventures". Compliant with IAS 36, scheduled amortisation is not taken on goodwill. The goodwill is allocated to the cash-generating units (CGU) that are expected to benefit from the synergies arising from the business combination. At HVB Group, these cash-generating units are the business segments. Where the commercial activities of a company span more than one segment, the goodwill is distributed in line with the expected contribution to results at the time of acquisition. The goodwill is tested for impairment at least once a year at cash-generating unit level. This involves comparing the carrying amount of the cash-generating unit with the recoverable amount defined as the maximum of the unit's value in use and the fair value less costs to sell.

The most recent multi-year plan approved by the Management Board normally covering a period of five years and created at segment level forms the basis for testing impairment. In this context, the earnings drivers are net trading income, net interest, net fees and commissions, operating costs and the projected net write-downs of loans and provisions for guarantees and commitments. To allow the earnings components to be planned, the multi-year plan includes an income budget as well as budgets for risk-weighted assets and loans and receivables with customers and deposits from customers. The budgets are based on forecasts by the UniCredit Economics department, with the forecasts for overall economic development (gross domestic product) and interest and inflation rates playing a crucial role. Furthermore, the multi-year plan also reflects the experience gained by management from past events and an assessment of the underlying economic conditions.

We have used the multi-year plan as the basis for determining appropriate values in use for the CGUs to which goodwill is allocated. The values in use are determined using the discounted cash flow method. The value in use represents the present value of the profit generated by the respective segment, which can be distributed or withdrawn. The figures for profit before tax from the segments' multi-year plans are included as cash flows. Furthermore, changes to the allocated capital are taken into account in the course of determining cash flows. If the addition of allocated capital is required for a business segment to cover the higher capital backing for business growth or a higher capital backing to comply with tighter regulatory capital requirements, this addition reduces the cash flows generated by the segment as a kind of profit retention must be carried out at this amount and these amounts are not available for distribution purposes. The cash flows of the previous year in the multi-year plan are assumed for the subsequent period. The segment-specific cost of capital rates used for discounting is 15.6% (previous year: 14.1%) for the Corporate & Investment Banking business segment and 12.8% (previous year: 13.2%) for the Commercial Banking business segment. No growth factor has been assumed for the perpetual annuity. The discount rates named are pre-tax interest rates.

These values in use are employed as recoverable amounts. If they exceed the carrying amount (including the goodwill) to be tested of the CGU, no impairment of goodwill is necessary. As the recoverable amount represents the higher amount of value in use and the selling price less costs to sell, it is not necessary to estimate the selling price, unless the value in use is lower than the carrying amount. In the reporting year, the value in use for the Commercial Banking business segment is lower than the carrying amount to be tested (including the goodwill allocated to this business segment), so that the goodwill assigned to it has to be written down. The Commercial Banking business segment is the only business segment to which goodwill was allocated in the reporting year, following the write down of the goodwill allocated to the CIB business segment in the previous year. In view of the fact that the value in use has already been determined on the basis of a discounted cash flow model and there is no comparable market price available for the Commercial Banking business segment, the fair value would need to be calculated on the basis of a valuation model, such as a discounted cash flow model. In the final analysis, a fair value will not be higher than the value in use which means that the recoverable amount equals the value in use. More extensive write-downs on assets of the company relevant in this case (mostly real estate used by the Bank), which are allocated to the CGU, are not necessary as pursuant to IAS 36.105 ff, such a write-down is required only if the carrying amount is higher than the fair value less costs to sell of the assets concerned. This is not the case because the assets concerned do not entail any hidden charges.

Accounting and Valuation (Continued)

IFRS 3 is not applicable to combinations of businesses under common control (IFRS 3.2 (c)). IAS 8.10 requires an appropriate accounting and valuation method to be developed accordingly for such cases. Given that HVB Group is part of UniCredit, the carrying amounts of the parent company are retained for business combinations within UniCredit. Any difference between the purchase price paid and the net carrying amount of the company acquired is recognised in equity under reserves.

Compliant with IAS 28, shares in associates are accounted for using the equity method or the capital share method and disclosed in the balance sheet accordingly. HVB is able to exercise significant influence over associates without being able to control them. Significant influence is assumed when a company holds more than 20% but less than 50% of the voting rights in an associate. This assumption of association can be refuted where a qualitative analysis demonstrates that significant influence over the financial and strategic decisions of the associate is not possible. Shares in associates are recognised at cost upon initial inclusion in the consolidated financial statements. For the purposes of subsequent measurement, the carrying amount increases or decreases in accordance with the share of HVB in the profit or loss of the associate. This share of the associate's profit or loss attributable to HVB is measured on the basis of the fair values of the associate's assets, liabilities and contingent liabilities when the shares were acquired. The accounting and valuation principles of HVB Group are applied for subsequent measurement.

Business transactions between consolidated companies are eliminated. Any profits or losses arising from intercompany transactions are also netted.

8 Financial instruments

A financial instrument is any contract that gives rise to both a financial asset of one company and a financial liability or equity instrument of another company.

The classes required by IFRS 7.6 are defined as follows:
- Cash and cash balances
- Financial assets and liabilities held for trading
- Financial assets at FVTPL
- Financial assets at FVTOCI
- Loans and receivables with banks (at cost)
- Loans and receivables with customers (at cost)
- Receivables under finance leases
- Hedging derivatives
- Other deposits from banks
- Other deposits from customers
- Other debt securities in issue
- Financial liabilities at FVTPL
- Financial guarantees and irrevocable credit commitments

With regard to the classes, the balance sheet disclosures and profit contributions of the financial instruments, among other things, must be presented separately in accordance with IFRS 9 valuation categories. In the present consolidated financial statements, we have included these in the explanatory notes to the balance sheet and the income statement. The information required by IFRS 7 regarding risks in connection with financial instruments is also provided in the Risk Report within Management's Discussion and Analysis. Compliant with IFRS 7.36 (a), the maximum credit exposure is the same as the carrying amount of the risk-bearing financial instruments or, in the case of financial guarantees and credit commitments, the nominal amount disclosed in the Note "Fair values of financial instruments compliant with IFRS 7" for the guarantee/amount of the credit commitments not yet utilised.

IFRS 9 requires all financial instruments to be recognised in the balance sheet, classified in the given valuation or portfolio categories and measured in line with this classification. In addition, debt instruments must be allocated to a business model.

Financial assets and liabilities are initially recognised from the date on which the corporate group becomes a contractual party to the financial instrument in question. HVB Group normally recognises customary market purchases and sales of financial assets (known as regular way contracts) at the settlement date. Derivatives are recognised at the trading date.

Financial assets and liabilities are derecognised when either the contractual rights or obligations to pay have expired, e.g. through repayment, or all the opportunities and risks have essentially been transferred to third parties. HVB Group did not carry out any transactions in which all the opportunities and risks were essentially either transferred or retained. If the contractual rights to an asset or liability are transferred to third parties but the opportunities and risks are essentially retained, the assets or liabilities are not derecognised.

The regulations set forth in IFRS 9 on reclassification were observed. No reclassifications were carried out.

Financial assets and liabilities at fair value through profit or loss
The "at fair value through profit or loss" category is subdivided into the following categories:

– Financial assets and liabilities held for trading:
  Financial assets and liabilities classified as held for trading at the time of initial recognition are financial instruments acquired or incurred for the purpose of short-term profit-taking as a result of changes in market prices or of realising a profit margin. This category also includes all derivatives (apart from hedging derivatives) which qualify for hedge accounting. These are disclosed in the item "Financial assets held for trading" and "Financial liabilities held for trading".
  In accordance with the provisions of IAS 32 (IAS 32.42 in conjunction with IAS 32.48), the positive and negative fair values of OTC derivatives that offset each other at currency level were netted for OTC derivatives concluded with the same central counterparty (CCP).

– Assets subject to the requirement of measurement at fair value through profit or loss with the exception of held-for-trading portfolios:
  In accordance with the specifications, both shareholdings and assets that are neither allocated to the "Hold to maturity" nor to the "Held for sale" business model are generally subject to measurement at fair value through profit or loss. HVB Group did not exercise the option of measuring shareholdings at fair value without affecting profit or loss. As all assets measured at fair value through profit or loss are also managed on a fair value basis, any allocation of assets that do not meet cash flow criteria to the "Hold to maturity" business model is ruled out. These are to be allocated to the "Other" business model and are consequently subject to the requirement of measurement at fair value through profit or loss.

– HVB Group does not exercise the option to designate financial assets pursuant to IFRS 9.1.5 as measured at fair value through profit or loss:
  HVB Group only uses the fair value option for certain financial liabilities designated as "at fair value through profit or loss" upon initial recognition. Financial instruments are designated on the basis of the fair value-based management of the portfolios concerned.

Financial assets and liabilities at fair value through profit or loss are disclosed upon initial recognition at their fair value without any transaction costs.

Consequently, held-for-trading portfolios, assets subject to the requirement of measurement at fair value through profit or loss and liabilities allocated to the fair value option are measured at fair value. Changes in value are recognised in the income statement.

Accounting and Valuation (Continued)

Assets measured at fair value without affecting profit or loss
Certain securities holdings that are either held to maturity or can be sold have been allocated to the "Held for sale" business model. As these securities also meet cash flow criteria, the conditions for measurement at fair value without affecting profit or loss have been met. These holdings are reported under the balance sheet item named "Financial assets at FVTOCI".

Loans and receivables measured at cost
In the lending business, HVB Group focuses on customer care and customer relationships so the intention is generally to hold extended loans to maturity. If, in exceptional cases, there is no intention to hold loan receivables to maturity at the time of their addition, these are allocated to the "Other" business model. Provided the loans also meet cash flow criteria, these are allocated to the "Hold-to-maturity" business model and measured at amortised cost. In addition, securities holdings that meet cash flow criteria and are intended to be held to maturity are also measured at amortised cost. Premiums and discounts are taken to the income statement under net interest over the term of the underlying items. This is done using the effective interest method. These assets are disclosed upon initial recognition at their fair value including any transaction costs.

As the intention is generally to hold to maturity, debt instruments allocated to the "Hold-to-maturity" business model may be sold only in the following exceptional cases:
– sales occur infrequently or irregularly even if they are of significant value in this case,
– sales, if they occur frequently, are individually or in the aggregate of insignificant value,
– sales occur just before the final maturity date and the sales proceeds equal the outstanding contractual payments for the most part or
– sales are made as a result of an increase in the credit default risk.

Depending on the allocation of the debtor, the loans and receivables measured at cost are reported under the balance sheet item "Loans and receivables with banks (at cost)" or "Loans and receivables with customers (at cost)".

HVB Group did not exercise the option of designating an asset to be measured at fair value through profit or loss. The Bank also waived measuring credit exposures at fair value through profit or loss.

Determination of fair value
We can normally reliably determine the fair value of financial instruments measured at fair value. IFRS 13 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (no forced liquidation or distress sale) between market participants at the measurement date. Thus, the fair value based on a notional transfer corresponds to a selling or, in the case of a liability, the transfer price (exit price).

The fair value is determined using the same three-level fair value hierarchy under IFRS 13 as is applicable for the disclosures regarding the fair value hierarchy (Note "Fair value hierarchy"):
– Level 1: Financial instruments measured using (unadjusted) quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date
– Level 2: Assets or liabilities for which no price can be observed on an active market and whose valuation is derived from directly observable (prices) or indirectly observable (derived from prices) valuation parameters
– Level 3: Assets or liabilities for which the fair value cannot be measured exclusively on the basis of observable market data; but also on valuation parameters based on model assumptions (non-observable valuation parameters)

Suitable adjustments are applied to the fair value determined in this way in order to reflect further factors affecting the fair value (such as the liquidity of the financial instrument or model risks when the fair value is determined using a valuation model). When determining these valuation adjustments, we have exercised the option permitted by IFRS 13 under certain circumstances to determine fair value on a portfolio basis.

The risk of a counterparty defaulting on derivatives is covered by credit valuation adjustments (CVAs). Funding valuation adjustments (FVAs) are also set up for derivatives that are not fully covered by relevant collateral.

The own credit spread is also included in the underlying valuation parameters for liabilities held for sale and liabilities designated at fair value through profit or loss.

Further disclosures regarding fair values and the fair value hierarchy are given in the Note “Fair value hierarchy”, and the Note “Fair values of financial instruments compliant with IFRS 7”.

Financial guarantees

A financial guarantee is a contract that requires the issuer to reimburse the holder for a loss it incurs because a specific debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

Viewed overall, the fair value of a financial guarantee is zero when the contract is concluded because the value of the premium received will normally match the value of the guarantee obligation in standard market contracts. The guarantee premium is recognised on a pro-rata basis. The existence of an impairment is checked during the subsequent measurement.

Credit derivatives, and most notably standardised credit default swaps (CDS), are measured at fair value through profit or loss as they are considered derivatives held for trading and not financial guarantees.

Credit commitments

Credit commitments represent declarations made to the customer to extend loans, buy securities or provide guarantees and acceptances. If these have not yet been utilised, they are generally shown as contingent liabilities in the notes. Necessary impairments are recorded as provisions. An exception to this are credit commitments where the assets resulting from the drawdown are usually sold shortly after the loan has been extended. The latter are recognised at fair value through profit or loss.

Hedge accounting

The Bank exercised the option of continuing to apply the provisions of IAS 39 on Hedge Accounting.

Hedges between financial instruments are recognised almost exclusively in accordance with the forms of the fair value hedge described in IAS 39. In 2008 and 2009, HVB Group changed the previously applied macro cash flow hedge accounting to the fair value hedge similarly permitted by IAS 39 for interest rate risk at portfolio level in large areas of asset/liability interest rate risk management. This is described additionally below alongside the principles covering general fair value hedges.

Besides the portfolio fair value hedge, HVB Group has other micro fair value hedges for individual financial instruments as well as a cash flow hedge in which HVB Group designated a smaller portfolio of securities as a cash flow hedge in 2018. Furthermore, the amortisation of the cash flow hedge reserve for two cash flow hedges, which have since been terminated, will be carried out.

Accounting and Valuation (Continued)

A micro fair value hedge is generally a hedge of the exposure to changes in the fair value of a recognised asset, liability or an unrecognised firm commitment – or an identified portion thereof – that is attributable to a particular risk and that might affect net income for the period. In this respect, a high level of effectiveness is required, with the changes in the fair value of the hedged item with regard to the hedged risk and hedging derivative compensating each other within a range of 80% to 125%. Under this method, the hedging instrument is measured at fair value through profit or loss. The carrying amounts of the hedged item are adjusted by the valuation results relating to the hedged risk in a way that affects the income statement.

At our Bank, we designated micro fair value hedges for interest rate risks. For fixed-interest European government bonds or bonds of issuers with a similar risk allocated to the "Held for sale" business model, the interest rate risk of which was hedged individually and completely with interest rate swaps, we set up a separate micro fair value hedge for each transaction.

We apply the fair value hedge accounting for a portfolio hedge of interest rate risk for the accounting treatment of interest rate risk in asset/liability interest rate risk management. Recognising a fair value hedge for a portfolio of interest-bearing financial assets and liabilities using interest rate derivatives makes it possible to largely reflect the standard bank risk management procedures for the hedging of fixed interest rate risks in the accounts.

Under this accounting treatment of hedges across several items, the changes in the value of the hedged amount of the hedged items attributable to the hedged risk are carried altogether as a separate asset or liability item and not as an adjustment to the carrying amount of individual items as is the case with micro hedges. The hedged amount of the hedged items is determined as part of interest rate risk management and cannot be directly allocated to individual assets or liabilities. Where the hedge conditions are met, the offsetting changes in value of the hedged amount of the hedged items and the hedging instruments (interest derivatives) are recognised directly in profit and loss. Hedge inefficiencies arising within the necessary hedge efficiency thresholds of 80% to 125% are recognised as profit or loss in net hedging income.

Furthermore, for economic reasons cross-currency interest rate swaps (CCIRS) have been used in the refinancing of loans denominated in foreign currency. The CCIRS exchange longer dated fixed-interest positions denominated in euros for variable-yield positions denominated in foreign currency. This serves to hedge the hedged item against interest rate risk as part of the fair value hedge portfolio accordingly.

The cash flow hedge reserve existing at the changeover date and the offsetting clean fair values (fair values excluding the related accrued interest) of the existing cash flow hedge derivatives are amortised over the remaining term in net interest. This means that the amortisation of the cash flow hedge reserve existing at the changeover date will have no overall impact on profit or loss in the future until they are fully amortised. The changes in value of the same hedged items and hedging derivatives, together with all new contracts arising after the changeover date, are treated in accordance with the new fair value hedge portfolio model.

Generally, a cash flow hedge is employed to hedge the risk arising from volatile cash flows resulting from a recognised asset, recognised liability or planned transaction to be taken to the income statement. For example, derivatives are deployed in cash flow hedge accounting to hedge future streams of interest payments. In this context, payments arising from variable-interest assets and liabilities are swapped for fixed payments primarily using interest rate swaps. Hedging instruments are measured at fair value. The valuation result is divided into an effective and an ineffective portion. The effective portion of the hedging instruments is recognised in a separate item within shareholders' equity (hedge reserve) without affecting reported profit or loss. The ineffective portion of the hedging derivatives is recognised directly in profit and loss. The hedged item is recognised at amortised cost.

HVB Group reported the hedging of the planned borrowing in advance through a forward interest rate swap in the form of a micro cash flow hedge for future transactions within the framework of the participation of our subsidiary at the time UniCredit Luxembourg S.A. in the TLTRO I and II of the European Central Bank (ECB). Upon receiving the borrowed funds from the ECB, this hedge was terminated. The cash flow hedge reserve existing on termination of the hedge and the offsetting equally high fair value of the interest rate swap are reversed periodically over the term of the hedged borrowings in the income statement. The borrowings effected and the interest rate swaps were included in the general portfolio fair value hedge for interest rate risks.

9 Financial assets held for trading

This item includes securities held for trading purposes and positive fair values of traded derivatives. All other derivatives not classified as hedging derivatives (which are shown separately in the balance sheet) are similarly considered held for trading. Provided they are held for trading purposes, promissory notes, registered bonds and treasury bills are carried as other financial assets held for trading.

Financial assets held for trading purposes are carried at fair value. Gains and losses arising from the valuation and realisation of financial assets held for trading are taken to the income statement as gains less losses arising from trading securities.

With interest rate swaps, the two offsetting streams of interest payments are aggregated for each swap contract and reported in net terms as interest income or interest expense. In the case of pure derivatives trading portfolios, we report the netted interest payments under net trading income.

10 Financial assets at FVTPL

The item "Financial assets at FVTPL" is shown for the first time in the 2018 financial year in order to reflect the new measurement category introduced by IFRS 9 and contains all the assets subject to the IFRS requirement of measurement at fair value with the exception of the held-for-trading portfolios. This item thus contains all the debt instruments subject to measurement at fair value through profit or loss based on the "Other" business model as well as the shareholdings also subject to measurement at fair value through profit or loss. This includes debt instruments to be held to maturity that do not meet cash flow criteria and are thus managed on a fair value basis in line with the Bank's specifications.

The majority of debt instruments are hedged against interest rate risks with interest rate swaps. The changes in fair value of the assets and hedging derivatives are reported in the item "Net gains/losses on financial assets and liabilities at fair value" in the income statement. Current interest income from debt instruments is recorded as interest income and profit distributions from shareholdings in the item "Dividends and other income from equity investments".

11 Financial assets at FVTOCI

The balance sheet item "Financial assets at FVTOCI" is shown for the first time in the 2018 financial year in order to reflect the new measurement category introduced by IFRS 9. It contains all the assets measured at fair value through other comprehensive income on the basis of the "Held for sale" business model and the fulfilled cash flow criteria.

This item only contains interest-bearing assets that are deferred at the effective interest rate. Upon addition, they are posted at their fair value including transaction costs (acquisition cost). Current interest income is recorded under the item "Interest income" in the income statement. Impairments are recorded through profit or loss in the income statement. The difference between the amortised cost calculated in this way and the fair value of the assets is entered directly in equity in the FVTOCI reserve, whereby the changes are recognised or derecognised through other comprehensive income. A gain or loss on disposal (repayment/sale) is shown under the item "Net gains/losses on financial assets and liabilities at fair value".

12 Loans and receivables

Debt instruments allocated to the "Hold to maturity" business model are shown under the balance sheet item "Loans and receivables with banks (at cost)" and "Loans and receivables with customers (at cost)". Assets allocated to a business model other than to the "Hold to maturity" business model are not included in the balance sheet items "Loans and receivables with banks (at cost)" and "Loans and receivables with customers (at cost)". In addition to loans and receivables from the lending business, these include securities allocated to the "Hold to maturity" business model. All the instruments allocated to the "Hold to maturity" business model meet the cash flow criteria and are carried at amortised cost, provided they are not hedged items of a recognised fair value hedge. The amount shown in the balance sheet has been adjusted for allowances for losses on loans and receivables.

Accounting and Valuation (Continued)

13 Impairment of financial assets

Upon the introduction of IFRS 9, the method used to determine impairment losses was switched to the Expected Loss model. According to the criteria of IFRS 9, impairment losses have to be recognised for debt instruments that are measured at amortised cost or, alternatively, at fair value through equity. Furthermore, the rules applicable for determining an impairment are also to be applied to loan commitments or financial guarantee contracts that are not measured at fair value through profit or loss.

For the presentation of the measurement and management of credit risk, we refer to the statements made on credit risk in the Risk Report of this Management's Discussion and Analysis.

In the case of loans and receivables measured at cost, the impairment losses determined are posted to an impairment account and reduce the carrying amount; in the case of assets measured at fair value through equity, the impairment losses are determined in relation to the asset and, as a consequence of measurement at fair value, are recognised in the statement of total comprehensive income, whereas a provision is recognised for impairment losses on loan commitments and financial guarantee contracts.

HVB Group has not exercised the option of using the simplified approach pursuant to IFRS 9.5.5.15 for determining impairment losses on trade receivables, contract assets and lease receivables.

The method of calculating impairment losses is based on two pillars:
– the allocation of the asset to a stage
– the calculation of the expected loss associated with the asset.

In the process of determining the expected credit losses, not only reliable information on past events is taken into account but also the current conditions and forecasts of future economic parameters. The supervisory procedures for the determination of the probability of default (PD), loss given default (LGD) and exposure at default (EAD) represent the starting point in this connection. These are then adjusted to meet IFRS 9 requirements. The main adjustments are as follows:
– Conservative elements, which are owed purely to regulatory requirements, were removed.
– Parameters were adjusted in order to move from a regulatory calculation based on long-term averages ("through the cycle") to a more cut-off date approach ("point-in-time") which takes greater account of the current macroeconomic situation.
– In addition, forward-looking information on the macroeconomic development is taken into account in the parameters.
– The credit risk parameters were adjusted to the required multi-year horizon in Stage 2.

The following adjustments were made to the individual parameters:
– To determine a multi-year probability of default, which covers the lifetime of a financial instrument, PD curves based on long-term averages and calculated based on the default rates of the corresponding portfolios are determined as a first step. These PD curves are then adjusted to a more reference-date perspective using statistical methods and adjustments are made to integrate macroeconomic forecasts over the next three years.
– To calculate a multi-year probability of loss, the LGD used for regulatory purposes are adjusted for conservative elements, which are purely owing to regulatory requirements. Furthermore, a check is conducted to determine whether it is necessary to adjust the figures calculated based on long-term averages to current conditions and, where required, they are adjusted. In addition, the recovery rate is adjusted for the next three years on the basis of a macroeconomic forecast. For material collateral, macroeconomic forecasts are included in the market value forecast. Downturn adjustments required for regulatory purposes are not used. Nor are any internal costs of the Bank added to the loss ratio in the course of treating defaulting exposures.
– To determine the multi-year exposure at default (EAD), the parameters used by the regulatory authorities are adjusted for conservative elements arising purely from regulatory requirements. A parameter used from a regulatory perspective which covers drawdowns in excess of the existing credit line is not used under IFRS 9. An additional parameter was also introduced which reflects the expectations on average drawdowns of existing lines from the second year. Furthermore, a parameter representing an expected term for loans without a fixed term is modelled which determines the term over which an expected loss is calculated in Stage 2. For loans with existing repayment schedules, expected repayments are taken into account in determining the multi-year EAD.

The process for incorporating macroeconomic scenarios into estimates is consistent with other forecasting processes in risk management (e.g. as part of the EBA stress tests and the ICAAP framework) and benefits from UniCredit's independent research department.

Three macroeconomic developments to be expected in the future are identified. In addition to the probable scenario (baseline), a positive scenario and an adverse scenario are also estimated. The baseline scenario represents the central scenario and is considered to be the most likely to occur. The positive and the adverse scenarios represent other possible occurrences, each depicting better or worse economic developments in the countries relevant for the Bank compared to the baseline scenario. The individual scenarios are assigned probabilities of occurrence.

– The baseline scenario reflects the developments anticipated by HVB Group. It predicts continued positive economic growth albeit below the growth potential. The primary reason for this is the anticipated weakness in global trade, which will intensify in the second half of 2020, triggered mainly by a projected decline in the US economy. These challenging external conditions will put the resilience of the domestic factors influencing growth in the eurozone to the test. The monetary policy of the ECB is expected to be slightly expansive, but without any relevant influence on growth expected. In detail, annual real growth in eurozone GDP of 0.8% for 2020, 1.0% for 2021 and 1.5% for 2022 is forecast (for Germany up 0.7%, up 0.8% and up 1.8%). This scenario implies that the 3-month Euribor will remain slightly negative.
– The positive scenario is based on the hypothesis that growth in the gross domestic product at the European level in 2020 will remain stable for the most part and will rebound in 2021–2022. The key difference between this and the baseline scenario is that no slowing of the US economy is expected and thus no pressure on global trade. The monetary policy of the ECB normalises in this scenario which is reflected in an increasing deposit rate, for instance. In detail the annual real growth in GDP for the eurozone would be 1.1% in 2020, increasing to 1.6% in 2021 and 1.7% for 2022 (for Germany up 1.0%, up 1.4% and up 2.0% in 2022). This scenario implies that the 3-month Euribor will remain slightly negative. The occurrence of such a scenario should be deemed plausible and suitable at the time this scenario was defined in order to quantify an economic trend that is better than the one assumed in the baseline scenario.
– The adverse scenario reflects one of the scenarios that is used in the evaluation process for capital adequacy (ICAAP). In compliance with the ICAAP framework, the scenario has been chosen in such a way that it represents the macroeconomic and financial risks that HVB Group sees as being most relevant. In this respect, the focus is placed on countries in which the Group operates and on the business operations of HVB Group. The "widespread contagion" scenario is built on the hypothesis of intensifying political risks in the European Union caused by the burgeoning influence of populist parties in Italy, Germany and France in conjunction with, among other things, a broadening of the tensions between the Spanish government and the region of Catalonia. This context would lead to a rise in the risk premiums for various investment classes and a slowing in the economic growth both in the eurozone (in comparison to the baseline scenario, a cumulative 3.8 percentage points lower for the real growth in gross domestic product in the three-year horizon). In detail, the annual real growth of the gross domestic product in the eurozone would stand at minus 0.6% in 2020, minus 0.6% in 2021 and up 0.7% in 2022 (for Germany at minus 0.2% in 2020, minus 0.2% in 2021 and up 1.3% in 2022). In this context, it is assumed that short-term interest rates (3-month Euribor) will remain negative over the entire three-year horizon, based on the hypothesis that the ECB would prolong liquidity support for the market in such a market environment. The occurrence of such a scenario is deemed plausible and suitable at the time it was defined in order to quantify adverse economic developments. In line with the scenario and the extent of the deviation from the baseline scenario, the assumption made is that the adverse scenario is less likely than the positive scenario.

Models from the Group's central stress test area are used to adjust the "probability of default" and "loss ratio" parameters in order to calculate the expected loss. These model the relationship between macroeconomic development and the resulting development of PDs and LGDs. The parameters are adjusted on the basis of the baseline scenario by the respective differences determined for the three forecast years.

Accounting and Valuation (Continued)

Moreover, the expected loss is adjusted with a factor that compensates for the partial non-linearity that might be included in the correlation between macroeconomic changes and the change in the expected loss. This means that an adjustment factor is calculated from the three scenarios, taking account of their weighting, which is applied directly to the expected loss.

The HVB Group units responsible for the restructuring or workout of non-performing exposures determine the future incoming payments for non-performing exposures which are significant in terms of amount based on the circumstances in each case. Consequently, specific allowances are recognised for these exposures while a collective allowance is recognised on a parameter basis for non-performing exposures which are insignificant in terms of amount in line with the method used in determining the expected credit losses.

The following applies to the allocation to stages:
– Stage 1 contains newly issued credit balances, financial instruments for which there has been no significant deterioration in the creditworthiness since they were first issued and securities with a low credit risk (low credit risk exemption).
– Stage 2 contains financial instrument which, although not yet in default, have undergone a significant deterioration in terms of their creditworthiness since they were first issued.
– Stage 3 contains financial instruments in default.

An impairment loss is generally recognised at the amount of the expected 12-month credit loss for a financial instrument upon initial recognition (Stage 1). Financial assets already impaired upon initial recognition are an exception to this rule as, in these cases, the expected credit losses have already been taken into account in the fair value at which such an asset is posted.

If the credit default risk has increased significantly since initial recognition, an impairment loss must be recognised in the amount of the (residual) loss expected over the term to maturity (Stage 2). HVB Group uses an internal model to determine when a significant increase in the credit default risk has occurred. Key factors in this context are:
– a comparison of PD upon initial recognition and at the reporting date at the level of each individual transaction whereby trigger levels to be exceeded for a significant increase are defined that take account of material elements for determining an expected change in the credit default risk such as maturity, age, PD level upon initial recognition,
– absolute thresholds like the “backstops” required by the standard, such as arrears of 30 days or more,
– further internal attributes such as renegotiations of financial instruments on account of financial difficulties (forbearance measure).

If the credit default risk is no longer significantly higher on the reporting date, the asset is transferred back to Stage 1.

A statistical model for quantile regression was introduced to implement the quantitative component for the allocation to a stage. This defines a threshold that determines the maximum change between the probability of default upon addition of the financial instrument and the current reference date. An important part of this model is defining the quantile that determines the expectation concerning the share of instruments in Stage 2 in long-term funds. As the consideration of individual influencing factors differs (such as rating upon issuance, age), the quantiles also vary depending on the portfolio. Essentially, the historical default rate of the portfolio concerned is used as a basis to determine the quantile and is supported by further absolute Stage allocation criteria, such as the share of instruments with 30 days default.

The actual share of financial instruments in Stage 2 varies by the long-term average of the quantile, depending on the current macroeconomic situation and expectations of developments in the economic cycle.

HVB Group has exercised the option for securities pursuant to IFRS 9.5.5.10 according to which it can be assumed in the case of debt instruments with a low credit default risk that no significant increase in the credit default risk has occurred. Securities of this kind with an investment grade rating are generally allocated to Stage 1.

If the borrower of a debt instrument has defaulted, such credit impaired assets are allocated to Stage 3. For these assets, interest income is recognised only in the amount of the interest on the basis of the net carrying amount. As in the past, default is when a material liability of the borrower is overdue by more than 90 days or HVB Group believes the borrower is unable to meet his payment obligations in full without steps to realise collateral being taken. This presupposes that there is objective evidence that the financial asset is impaired. Objective evidence of impairment refers to events that normally lead to an actual impairment. In the case of debt instruments, these are events that could result in the borrower not being able to settle his obligations in full or at the agreed date. Objective evidence is provided only by events that have already occurred, not by events expected in the future. The assessment of the borrower's creditworthiness using internal rating processes is applicable. This assessment is reviewed periodically and when negative events occur. If the borrower is 90 days in arrears this is considered objective evidence of an impairment, similarly leading promptly to a review of the borrower's individual rating on account of the occurrence of a negative event involving the borrower. Based on internal procedures, the classification of the borrower is updated to "in default" or "not in default". As a result, the assessment of the borrower's creditworthiness is always assessed with regard to his ability to meet outstanding liabilities.

At Stage 3, the impairment is calculated as the difference between the carrying amount and the present value of the expected future cash flow. These figures are estimated by HVB Group and discounted using the corresponding interest rate. In doing so, different, realistic scenarios are estimated whereby the impairment loss is obtained from the expected value of the credit defaults weighted by the probability of occurrence for each scenario. The impairment loss calculated in this way likewise corresponds to the expected credit losses for the debt instrument but, deviating from Stage 1 and Stage 2, the probability of default is no longer taken into account as default has already occurred.

As the debt instrument is in default, it is put on a non-accrual basis, i.e. the contractual interest payments are no longer recognised in the income statement. Instead the interest income is determined on the basis of the net carrying value. For this purpose, the net carrying amount from the previous period is compounded at the original interest rate of the debt instrument over the reporting period and the impairment loss, which is calculated as the difference between the present value of the expected cash flow (net carrying amount) and the gross carrying amount, is recognised in interest income at the compounded amount through profit or loss. Furthermore, the amounts put on a non-accrual basis are recorded both in the gross carrying amount and in the impairment losses without affecting income. As, in doing so, the gross carrying amount and the impairment losses are increased by the same amount, the net carrying value does not change.

As soon as the reasons for the default no longer apply, the assets are transferred back to Stage 1 or 2, respectively, depending on whether the credit default risk is still significantly higher or not in comparison to when the assets were first acquired.

In the case of financial guarantees and irrevocable credit commitments made to a borrower in default, a possible impairment is determined in the same way; the impairment loss is recognised as a provision.

If a receivable is considered uncollectible, the amount concerned is written off, which leads to the receivable being derecognised. The amount is derecognised if the receivable in question is due, any available collateral has been realised and further attempts to collect the receivable have failed. Acute country-specific transfer risks are taken into account in the process.

For financial assets that were already in default upon initial recognition (purchased or originated credit impaired assets – POCI), the interest income is likewise recognised only at the amount of interest based on the net carrying amount. Only those new additions are recognised as POCI assets that result in more than only an insignificant increase in the existing exposure, i.e. exceed 20% of the existing net exposure (exposure after deduction of recoverable collateral). Credit losses expected upon initial recognition are already taken into consideration in the fair value when posting assets so that no impairment is recorded for POCI assets upon initial recognition. With regard to subsequent measurement, these assets are measured on the basis of the loss anticipated over the (residual) term to maturity; in the case of higher expected additions than assumed upon initial recognition, however, the assets can be written up to amounts in excess of the acquisition cost.

Accounting and Valuation (Continued)

Modification of financial assets measured at amortised cost

If the contractual terms of financial assets are modified, it is necessary to review whether such modifications are significant or insignificant. Whereas significant modifications result in the derecognition of the existing asset and the posting of a new, significantly modified asset, in the case of insignificant modifications, only the agreed modifications to the contractual cash flows are discounted and the difference between the present value of the modified contractual payments determined in this way and the carrying amount (present value of the contractual payments before modification) are recognised through profit or loss.

A significant modification to the contractual terms has occurred where compliance with cash flow conditions has changed or where conditions have been adjusted to general market terms without this adjustment being seen as a concession made to the borrower based on the borrower's credit rating. In such cases, the existing loan is derecognised and the modified loan posted as a newly extended loan.

In addition, lending agreements can be modified to ease the burden on borrowers in poor financial situations and improve the probability of the loans being serviced (forbearance). Various strategies may be used to ease the burden on the borrower. Possible measures include deferrals and temporary moratoriums, longer periods allowed for repayment, reduced interest rates and rescheduling, and even debt forgiveness.

Where the Bank waives payments by the borrower (such as waived fees, reduction of contractual interest rates, etc.) due to a deterioration in credit-worthiness, such a waiver represents objective evidence of the borrower defaulting. The derecognition of payments due or of future repayments caused by an issued waiver is recognised in the income statement as an impairment, provided an allowance had not already been set up for this in the past or recognition was waived on account of the borrower defaulting (such as putting a loan on an internal non-accrual basis).

If the modification of the agreement does not give rise to derecognition of the receivable or part of the receivable on account of the waiver of payments due or of future repayments but merely to an adjustment of future cash flows, for example through a prospective reduction in the interest rate as of the date of the modification, the gross carrying amount has to be adjusted accordingly. For this purpose, the newly agreed cash flows have to be discounted at the original effective interest rate and this present value deducted from the gross carrying amount (prior to the modification to the agreement). The difference determined in this way is recorded as modification gain or loss through the income statement. As this primarily affects non-performing, impaired receivables, the modification gain or loss is reported under the income statement item "Credit impairment losses IFRS 9".

14 Investments in associates and joint ventures accounted for using the equity method

Investments in joint ventures and associates are accounted for using the equity method.

15 Property, plant and equipment

In the reporting year as in previous years, property, plant and equipment is valued at acquisition or production cost less depreciation – insofar as the assets are depreciable – which is reduced by scheduled straight-line depreciation based on the assets' useful lives. For the wind farm, the residual carrying amount is distributed over the expected residual useful life based on the prorated consumption of value of the economic benefit potential. The wind farm was classified as "Non-current assets or disposal groups held for sale" as of 30 June 2019 and sold shortly before the end of 2019. Fixtures in rented buildings are depreciated over the term of the rental contract, taking into account any extension options, if this is shorter than the normal useful life of the asset concerned.

PROPERTY, PLANT AND EQUIPMENT	ECONOMIC LIFE
Buildings	25–60 years
Fixtures in buildings not owned	10–25 years
Plant and office equipment	3–25 years
Other property, plant and equipment	
Wind farm	28 years
Other property, plant and equipment	10–20 years

The estimated useful lives of property, plant and equipment are reviewed once a year and adjusted as appropriate should the expectations differ from earlier estimates.

Unscheduled impairments are taken in accordance with IAS 36 on property, plant and equipment whose value is impaired. An asset is considered impaired when its carrying amount exceeds its recoverable amount. The recoverable amount is normally determined on the basis of the value in use. Should the reasons for the unscheduled impairment no longer apply, a subsequent write-up is taken to the income statement; the amount of this subsequent write-up must not increase the value of the property, plant and equipment to a level in excess of the amortised acquisition or production cost.

Scheduled and unscheduled depreciation and write-ups on items of property, plant and equipment are recognised in the consolidated income statement under amortisation, depreciation and impairment losses on intangible and tangible assets within operating costs.

Subsequent expenditure relating to an item of property, plant and equipment is capitalised, provided additional future economic benefits will flow to the Bank. Expenditure on repairs or maintenance of property, plant and equipment is recognised as expense in the year in which it is incurred.

Government grants for items of property, plant and equipment (IAS 20.24) are deducted from the acquisition or production cost of the underlying assets on the assets side of the balance sheet.

With effect from 31 December 2019, the accounting method for land and buildings occupied by the bank was changed from the previous measurement at cost to the revaluation model in accordance with IAS 16.31. Details on the adjustment of the accounting method are described in the note "Consistency". Compliant with the specifications contained in IAS 8.17, the change in method is prospective. Consequently, the owner-occupied land and buildings were measured at amortised cost for the period up to and including 31 December 2019. Based on the carrying amounts thus determined, a revaluation was carried out, with effect from 31 December 2019, which involved a separation of assets into buildings and land, which are then separately measured.

If the fair value of the land or building exceeded the previous carrying amount, the increase in value was recognised in other comprehensive income and the newly created revaluation reserve allocated to shareholders' equity. If the fair value of the land or building was below the previous carrying amount, the decrease in value was recognised in consolidated profit and loss under the item "Amortisation, depreciation and impairment losses on intangible and tangible assets".

16 Lease operations

As described in the Note "Initial adoption of the new IFRS accounting rules", HVB Group has applied the new leasing standard IFRS 16 in accordance with the transitional provisions under the modified retrospective approach and has therefore not adjusted the comparative information. This means that the previous-year figures will continue to be reported in accordance with the accounting and valuation principles applicable prior to 1 January 2019, based on the previous leasing standard IAS 17 including the associated interpretations. Consequently, the material accounting policies for the prior periods are also disclosed separately.

Accounting and valuation applied from 1 January 2019 (IFRS 16)

For new agreements concluded on or after 1 January 2019, HVG Group assesses at the inception of the agreement whether the agreement constitutes or contains a lease. This is the case when the agreement gives the right to control the use of an identified asset for a specified period of time in return for a fee. HVB Group assesses whether the definition of a lease and the related guidelines in IFRS 16 are met primarily on the basis of the following criteria:

– the agreement contains an identified asset which is either explicitly specified in the agreement or implicitly specified by the fact that the asset is made available for use by HVB Group at a certain point in time;
– HVB Group is essentially entitled to derive all the economic benefits associated with the use of the identified asset throughout the period of use, taking into account the rights set out in the agreement;
– HVB Group is entitled to decide on the use of the identified asset throughout the period of use. This is particularly the case if HVB Group has the right to determine how and for what purpose the asset is used.

Furthermore, it is only necessary to reassess whether an agreement constitutes or contains a lease if the terms of the agreement change.

Accounting and Valuation (Continued)

HVB Group as lessee

In the case of agreements which constitute or contain a lease, HVB Group as the lessee generally recognises as a lease each lease component separately from the non-lease components of the agreement. In doing so, the contractually agreed consideration is allocated to the individual contractual components on the basis of the relative individual selling prices. HVB Group does not make use of the practical facilitation option, according to which a lessee can decide for individual classes of underlying assets not to separate the non-lease components and instead to account for lease and non-lease components as a single lease component.

As of 1 January 2019, leases will be accounted for by the lessee using a uniform accounting model (right of use approach); the previous classification of lease agreements under lessees as operating and finance leases was abolished upon the introduction of IFRS 16. Under the new model, HVB Group as the lessee generally recognises an asset for the right granted to use the underlying leased asset and a corresponding lease liability for the obligation to make the outstanding lease payments at the commencement date of the lease.

However, IFRS 16 provides lessees with the option of exempting short-term lease agreements with a term of up to 12 months and leases of low-value assets from recognition. HVB Group has elected to apply the simplified presentation option to all such leases and recognises the related lease payments on a straight-line basis over the term of the lease as an expense in the consolidated income statement. Leases which had a residual term of up to 12 months at the time of the first-time adoption of IFRS 16 are shown together with the short-term leases.

The right-of-use assets recognised in the consolidated balance sheet are initially measured at cost. Such cost includes the present value of all future lease payments (the amount resulting from the initial measurement of the lease liability), plus payments made on or before the commencement date of the lease, initial direct costs and estimated costs of dismantling or restoring the underlying asset or the site where it is located (to the extent that such dismantling costs give rise to an obligation that is recognised and measured in accordance with IAS 37) less any lease incentives received.

The right-of-use assets reported under property, plant and equipment are subsequently measured using the cost model. In accordance with the depreciation rules of IAS 16, the right-of-use assets are amortised on a straight-line basis over the shorter of the two useful life periods of the underlying asset and the term of the lease. If the lease payments to be taken into account also include the transfer of ownership of the leased asset at the end of the lease term, or if the cost of the right-of-use asset takes into account the fact that the lessee will exercise a purchase option, the write-downs of the right-of-use asset are made over the economic life of the underlying asset. Otherwise, the right-of-use asset is amortised over the term of the lease. Existing term and call options are taken into account if their exercise is deemed sufficiently certain. In addition, the right-of-use asset is continually tested for impairment in accordance with IAS 36, adjusted if necessary and adjusted for certain remeasurements of the lease liability. While HVB Group will in future value its land and buildings reported under property, plant and equipment in accordance with the revaluation model of IAS 16, it has decided not to apply this valuation model to the right-of-use assets relating to these investment classes.

In contrast, the fair value model is applied to right-of-use assets that meet the definition of investment properties in IAS 40 and are reported under investment properties, as this model is now also used for the subsequent measurement of investment properties in HVB Group. Consequently, HVB Group measures the right-of-use asset it has to an investment property at fair value and not at the underlying value of the asset.

The initial measurement of the lease liability is based on the present value of the lease payments not yet made on the commencement date. Lease payments comprise fixed payments (including de facto fixed payments) variable lease payments linked to an index or (interest) rate applicable on the commencement date), the amounts expected to be paid under a residual value guarantee and the exercise price of a purchase option if the lessee is reasonably certain to exercise it. Penalties for premature termination of the lease are only included in the lease payments if the lessee is reasonably certain to terminate the lease prematurely. All lease incentives expected to be received are deducted from this.

Lease payments are discounted at the interest rate underlying the lease (interest rate implicit in the lease) if it can be readily determined. Otherwise they are discounted at the lessee's incremental borrowing rate. The latter is the interest rate that a lessee would have to pay to raise funds in a similar economic environment in order to obtain an asset of similar value at comparable conditions. In order to determine the incremental borrowing rate, HVB Group uses a fixed interest rate curve based on a swap rate (base rate) and the Bank's funding premium, which reflects the nature of the lease obligations. According to this method, the lease payments not yet made are discounted to the present value at current interest rates taking into account the internally determined funding premiums. The funding premiums correspond to the parameters that the Bank uses when setting the prices for its own borrowings. As a rule, we apply the incremental borrowing rate for discounting because the interest rate implicit in the lease is generally not available to us.

Variable lease payments that are not linked to an index or (interest) rate and are therefore not taken into account in the measurement of the lease liability are recognised by lessees as an expense in the period in which they arise.

In the course of the subsequent measurement, the lease liability is updated using the effective interest method from accounting mathematics. The carrying amount of the lease liability is compounded and reduced by the amount of the lease payments made with no effect on income.

The lease liability is remeasured if future lease payments change due to a change in the index or (interest) rate, if the estimate of the expected payments under a residual value guarantee is adjusted, if the estimate of the exercise of a purchase, extension or termination option changes or if the de facto fixed lease payment changes. Accordingly, the right-of-use asset is to be adjusted by the amount resulting from the revaluation of the lease liability. If the reduction in the lease liability exceeds the carrying amount of the right-of-use asset, the resulting residual amount (difference between amount of the reduction in the lease liability and the carrying amount of the right-of-use asset) is recognised in profit or loss.

Disclosure in the consolidated financial statements of HVG Group is as follows:
- In the consolidated balance sheet we report right-of-use assets that do not meet the definition of investment property under property, plant and equipment. In contrast, right-of-use assets that meet this definition are presented in the balance sheet as investment properties. Lease liabilities are presented in the balance-sheet item "Deposits from customers" or "Deposits from banks".
- In the consolidated income statement, scheduled and unscheduled amortisation and write-downs, as well as write-ups on the right-of-use assets contained in property, plant and equipment are generally recognised in the item "Amortisation, depreciation and impairment losses on intangible and tangible assets" within operating costs. A gain or loss arising from a change in the fair value of rights to use investment properties is recognised directly in the income statement in the item "Net other expenses/income". The accrued interest on the lease liabilities contained in the deposits from customers and deposits from banks is recognised under interest expense. Expenses in connection with short-term lease agreements, leases based on a low-value assets and variable lease payments not taken into account in the measurement of the lease liabilities are recognised in the item "Other administrative expenses".

HVB Group acts as seller/lessee in sale-and-leaseback transactions in which it sells assets (properties) to another company (buyer/lessor) which it then leases back from that company. The provisions of IFRS 15 are applied in determining whether the transfer of the assets is to be accounted for as a sale. If the transfer of the asset as a result of the transfer of control constitutes a sale, the seller/lessor must recognise the right-of-use asset relating to the leaseback at that portion of the former carrying amount relating to the right-of-use asset retained by it. Accordingly, any gain or loss on the transaction is recognised only to the extent that it relates to the rights transferred to the buyer/lessor. The pro rata unrealised gain on the sale resulting from the adjustment of the initial measurement of the right-of-use asset is subsequently recognised as a reduction of the ongoing write-downs of the right-of-use asset over the term of the leaseback.

Accounting and Valuation (Continued)

If the transaction is not carried out at fair value or at standard market conditions but, for example, a purchase price premium is compensated by higher lease payments, the differences are considered to be financing transactions. Accordingly, the acquisition cost of the right-of-use asset is reduced by these financing components in order to recognise the right-of-use asset and the income from the sale of the asset. However, if the transfer of the assets does not constitute a sale because control is not transferred, the transaction is presented in the balance sheet of the seller/lessee as a financing transaction. The seller/lessee continues to recognise the transferred assets and recognises the financial liability in the amount of the income from the transfer in accordance with IFRS 9.

HVB Group as lessor

In the case of agreements that constitute or contain a lease, HVB Group as a lessor reports as a lease each lease component separately from the non-lease components of the agreement and applies the respective regulations of IFRS 15 to the distribution of the contractually agreed compensation between the individual components.

Leases in which HVB Group appears as the lessor are classified as either finance or operating leases on commencement of the lease. If the terms of the lease essentially transfer all the risks and rewards incidental to ownership to the lessee, the lease is classified as a finance lease. All other leases are classified as operating leases. The classification is only reassessed in the event of a change in the lease agreement.

In the case of a sublease, HVB Group acts as an intermediate lessor and accounts for the principal lease and the sublease as two separate agreements. The classification of the sublease as a finance or operating lease is based on the right-of-use asset and not on the asset from the principal lease underlying the lease. If the principal lease is a short-term lease to which HVB Group applies the above described exemption, HVB Group classifies the sublease as an operating lease.

– Operating leases
  In the case of operating leases, the lessor, as the beneficial owner, recognises the underlying asset in its consolidated balance sheet. The leased assets are carried under property, plant and equipment or investment properties and measured in accordance with the relevant methods. Lease income from operating leases is recognised on a straight-line basis over the term of the respective lease and shown under other operating income. Initial direct costs incurred in negotiating and agreeing a lease are added to the carrying amount of the leased asset and allocated on a straight-line basis over the term of the lease.
– Finance leases
  If the lessor transfers the underlying asset to the lessee for use under a finance lease, the lessor must derecognise it from its consolidated balance sheet on the commencement date and recognise a finance lease receivable from the lessee. The initial measurement of the finance lease receivable included in the item “Loans and receivables with customers (at cost)” or “Loans and receivables with banks (at cost)” is carried at the net investment in the lease using the lessor’s interest rate underlying the lease. Initial direct costs are included in the initial measurement of the net investment in the lease and reduce the income recognised over the lease term. The lease payments to be included in the amount receivable under the lease generally correspond to the payments that must also be taken into account upon the initial measurement of a lessee’s lease liability. Subsequently, the lease payments received by the lessee are divided into an interest portion recognised in the income statement and a redemption portion. Interest income is recognised over the term of the lease using the effective interest method; the redemption portion reduces the outstanding receivable as a repayment of the principal. Derecognition and impairment provisions of IFRS 9 are to be applied to the amounts receivable under the lease. If the estimated unguaranteed residual values are used in the calculation of the gross investment in the lease, the lessor shall periodically review these values.

Variable lease payments are recognised as income by the lessor in the period in which they arise.

Accounting and valuation applied prior to 1 January 2019 (IAS 17)
For contracts concluded before 1 January 2019, HVB Group assessed whether an agreement constitutes or contains a lease on the basis of the definition criteria applicable to date. In accordance with IAS 17 / IFRIC 4, a lease is an agreement in which the lessor transfers the right to use an asset to the lessee for an agreed period of time in return for payment or a series of payments. The determination whether an agreement constitutes or contains a lease was based on the economic content of the agreement. Accordingly, HVB Group nevertheless accounted for agreements that did not take the legal form of a lease as leases, provided compliance with the agreement depended on the use of a specific asset and the agreement transferred the right to use the asset. In the case of agreements that constituted or contained a lease, HVB Group generally separated the lease payments from the other payments based on their relative fair values and generally accounted for each lease component as an individual lease separately from the non-lease components of the agreement.

Lease agreements are to be classified as finance and operating leases. A lease is classified as an operating lease if the lessor essentially retains a significant portion of the risks and rewards incidental to ownership of the leased asset. By contrast, agreements are considered to be a finance lease if all the risks and rewards incidental to ownership of the asset are essentially transferred to the lessee. It is hereby irrelevant whether civil law ownership of the leased asset is transferred.

At HVB Group, leased assets include both real estate and moveable assets.

HVB Group as lessee
- Operating leases
  Lease payments made by the lessee under operating leases are recognised as an expense on a straight-line basis over the lease term and carried under other operating expenses or operating costs if they represent lease expenses. Lease incentives received are recognised as a component of total lease expense over the lease term. The lease term commences as soon as the lessee controls the physical use of the leased asset. The corresponding leased assets are not capitalised in in the lessee's consolidated balance sheet.
- Finance leases
  In the case of finance leases, the lessee reports the leased assets separately in its balance sheet under property, plant and equipment, investment properties or intangible assets, and a liability under liabilities. The asset and the corresponding liability are each initially recognised at the fair value of the leased asset at the inception of the lease, or if, lower, the present value of the minimum lease payments. Minimum lease payments are those payments that the lessee has to make over the term of the lease, with the exception of conditional lease payments (contingent rental payments). The internal rate of return underlying the lease is used to calculate the present value of the minimum lease payments. After initial recognition, the asset is accounted for in accordance with the accounting policy applicable to it. The lease payments made under a finance lease are divided into an interest portion and a redemption portion. The redemption portion reduces the residual debt while the interest portion is treated as interest expense.

HVB Group as lessor
- Operating leases
  Assets leased to the lessee under an operating lease are considered held by the lessor, who should continue to account for them. The leased assets are carried in the consolidated balance sheet under property, plant and equipment, investment properties or intangible assets and measured in accordance with the relevant methods. The lease proceeds are recognised on a straight-line basis over the lease term and disclosed under other operating income.
- Finance leases
  Where assets are transferred under a finance lease, the lessor is required to remove the leased asset from its balance sheet and recognise a receivable from the lessee. The receivable is carried at the amount of the net investment in the lease when the lease agreement was concluded. The lease payments received are divided into an interest portion recognised in the income statement and a redemption portion. The interest income is recognised over the period of the lease in such a way that it essentially reflects a constant periodic return on the net investment in the lease; the redemption portion represents a repayment of the principal that reduces the amount of the still outstanding receivable.

Conditional lease payments (contingent rental payments) made in connection with operating and finance leases are recognised as an expense by the lessee and as income by the lessor in the period in which they accrue.

For more information, please refer to the Note "Information regarding lease operations".

Accounting and Valuation (Continued)

17 Investment properties

Real estate (land and buildings) that HVB Group holds as investment property to earn rental income and/or for capital appreciation over the long term is measured using the fair value model in accordance with IAS 40.30 in conjunction with IAS 40.33. This also applies to the rights of use under leases that are classified as investment property. There is no scheduled depreciation over the economic life. Accordingly, changes in the fair value are recognised in the income statement under the item "Net other expenses/income". Current expenses and rental income for land and buildings held as an investment is also reported in this item.

The fair value of investment properties is determined as follows: the properties to be measured are always unique, so that there are no prices that are observable for these properties. Consequently, fair value is to be determined on the basis of recognised valuation methods (Stage 3). Only in exceptional cases can binding offers or non-binding reliable offers for a property be made in the course of a sale process (such as for investment properties classified as non-current assets or disposal groups held for sale), so that fair value can be determined on the basis of prices observable on the market (Stage 2). The valuation shall be carried out at regular intervals.

The appraisals prepared to calculate the fair values are based on recognised appraisal methods used by independent external assessors, primarily taking the form of asset value and income approach. In the income approach, current market rents, management and maintenance costs and property yields are applied in the case of developed land. Where necessary, property-specific considerations are also taken into account when determining the value. Among other things, these property-specific factors include vacancy rates, deviations between current contractual rents and current market rents, as well as the condition of the buildings' technical systems. In the case of undeveloped land, figures for sales of nearby land that have been completed are normally taken as a basis; where these are not available, the standard land value is employed as a benchmark, with adjustments made for the individual location, size and layout of the land, among other factors.

In some cases, it may prove difficult to classify a property as an investment property rather than property, plant and equipment. Classification is especially difficult if part of the property is held by the Group as an investment while another part is used for the Bank's own purposes as an administration building, and the parts of the property cannot be sold separately or leased out under a finance lease, such that the two parts will not be accounted for separately. In such cases, HVB Group classifies a mixed usage property in full as an investment property if more than 90% of the property is leased to an external third party and the part of the property used by the Bank is of subordinate importance. The whole property is classified as property, plant and equipment if the part of the property leased externally totals 90% or less.

18 Intangible assets
The main items included in intangible assets are goodwill arising from the acquisition of fully consolidated subsidiaries and software. An intangible asset will only be recognised if it is probable that the expected future economic benefits attributable to the asset will flow to the entity and the cost of the asset can be measured reliably.

Goodwill has an indefinite useful life and is therefore not subject to scheduled amortisation. Consequently, it is only tested for impairment compliant with IAS 36 and not amortised (impairment only approach). The value of goodwill is tested annually and where there is an indication of impairment. Unscheduled impairment losses are taken where necessary. It is not permitted to write up in subsequent periods any impairment losses recognised on goodwill.

Software has a limited useful life and is valued at amortised acquisition or production cost. Scheduled amortisation is taken on a straight-line basis over an expected useful life of three to five years. Other intangible assets are also recognised at amortised acquisition or production cost less cumulative amortisation, as they have a limited useful life. Scheduled amortisation is taken on a straight-line basis over an expected useful life of up to ten years.

Where intangible assets additionally suffer impairment, we recognise an unscheduled impairment loss compliant with IAS 36. Should the reason for the unscheduled impairment no longer apply, write-ups are taken to the income statement in an amount no more than the amortised acquisition or production cost.

Unscheduled impairment losses on goodwill are shown in a separate item in the income statement.

Scheduled and unscheduled amortisation, impairments and write-ups on software and other intangible assets are recognised in the income statement under the item "Amortisation, depreciation and impairment losses on intangible and tangible assets" within operating costs.

19 Non-current assets or disposal groups held for sale
Under IFRS 5, non-current assets or disposal groups held for sale which are expected to be sold within one year are to be recognised as non-current assets or disposal groups held for sale. Upon reclassification, these are generally carried at the lower of the carrying amount or fair value less costs to sell at the reporting date. Upon subsequent measurement following reclassification, the non-current assets or disposal groups held for sale are, if necessary, written down to a lower fair value less costs to sell if this has fallen at subsequent reporting dates. Should the fair value increase, the total may be written up to an amount that is no more than the cumulative impairment loss.

Financial instruments as defined by IFRS 9 and non-current assets measured according to the fair value model in IAS 40, for which the measurement requirements of the corresponding IFRS apply, are among the items exempt from the IFRS 5 measurement requirements.

20 Liabilities
Deposits from banks and customers, and debt securities in issue that are not hedged items of an effective micro fair value hedge are reported at amortised cost. Upon initial recognition, they are disclosed at their fair value including any transaction costs.

Accounting and Valuation (Continued)

21 Financial liabilities held for trading
This item includes the negative fair values of traded derivatives and all other derivatives that are not classified as hedging derivatives (which are recognised separately). Also included here are warrants, certificates and bonds issued by our trading department, liabilities under repurchase agreements as well as delivery obligations arising from short sales of securities held for trading purposes.

Financial liabilities held for trading are carried at fair value. Gains and losses arising from the valuation and realisation of financial liabilities held for trading are taken to the income statement as net trading income. We act as market maker for the structured products we issue.

With interest rate swaps, the two offsetting streams of interest payments are aggregated for each swap contract and reported in net terms as interest income or interest expense. In the case of pure derivatives trading portfolios, we report the netted interest payments under net trading income.

22 Financial liabilities at FVTPL
HVB Group designated certain liabilities as financial instruments to be measured at fair value through profit and loss (fair value option) upon initial recognition. In this context, financial instruments issued are designated on the basis of fair value-based management of the portfolios concerned.

Financial liabilities at fair value through profit or loss are disclosed upon initial recognition at their fair value without any transaction costs. Upon subsequent measurement, changes in fair value are recognised through profit or loss in the item “Net gains/losses on financial assets and liabilities at fair value”. If part of the change in fair value is attributable to changes in own credit spread, this partial amount is corrected again in the income statement and then recognised through other comprehensive income. This procedure does not lead to any accounting anomaly in the income statement.

In equity, the reserve for the own credit spread is introduced under “Other reserves”. If there are any changes in the financial liabilities at FVTPL in the course of measurement at fair value on account of the own credit spread, these changes are recognised through other comprehensive income. If this reserve still contains amounts on the date of disposal of the liability, the relevant amounts are not recognised in the income statement and are generally reclassified to retained earnings.

23 Hedge adjustment of hedged items in the fair value hedge portfolio
Net changes in the value of the hedged amount of hedged items are carried in this hedge adjustment of the fair value hedge portfolio to be shown separately (see the Note “Hedge adjustment of hedged items in the fair value hedge portfolio”).

24 Other liabilities
Compliant with IAS 37, accruals and other items are shown under other liabilities. These reflect future expenditure of uncertain timing or amount, but the uncertainty is much less than for provisions. Accruals are liabilities for goods and services received that have been neither paid for nor invoiced by the supplier, nor formally agreed. This also includes current liabilities to employees, such as flexi-time credits and holiday entitlements. Accruals are carried at the amount likely to be used.

25 Provisions

Present legal or constructive obligations as a result of past events involving a probable outflow of resources, and whose amount can be reliably estimated, are recognised as provisions.

When assessing provisions for uncertain liabilities and anticipated losses on onerous transactions, we use the best estimate compliant with IAS 37.36 ff. Long-term provisions are discounted.

In accordance with IAS 19, provisions for pensions and similar obligations arising from defined benefit plans are recorded on the basis of external actuarial reports by applying the projected unit credit method, with each pension plan being valued separately. This accrued benefit method pro-rated on service takes into account dynamic considerations when determining the expected pension benefits upon retirement and distributes these over the beneficiaries' entire period of employment. This means that the measurement of the defined benefit obligation is based on an actuarially calculated present value of the future benefit entitlement for services already rendered (vested benefit entitlements), taking into account the expected compensation increases including career trends and forecast pension progression. The actuarial assumptions to be defined when measuring the benefit obligation vary in line with the economic and other underlying conditions in the country in which the plans exist.

The underlying valuation assumptions may differ from the actual developments as a result of changing market, economic and social conditions. The actuarial gains or losses resulting from the change to the valuation parameters may have a significant impact on the amount of the obligations for pensions and similar post-employment benefits.

The discount rate used to discount the defined benefit obligations (actuarial interest rate) is determined by reference to yields recorded on the market at the reporting date for high quality, fixed-rate corporate bonds and with maturities and currencies that match the obligations to be measured. A basket of AA-rated corporate bonds denominated in euros serves as the data basis for determining the discount rate for the obligations. These individual bond data are translated into a yield curve which forms the basis for determining the discount rate by using a numerical compensation technique.

Funded pension obligations differ from unfunded pension obligations in that plan assets are allocated to cover the entitlements of the beneficiaries. The beneficiaries include active employees, former employees with vested benefit entitlements, and pensioners and their surviving dependants. Both HVB and a number of subsidiaries have set up plan assets in external, restricted-access pension organisations to fund their pension obligations.

If the beneficiaries' benefit entitlements or the Group's benefit obligations are not funded by assets, HVB Group recognises a pension provision in the amount of the present value of the defined benefit obligation (DBO) in its consolidated balance sheet.

In the case of funded pension obligations, by contrast, the present value of the defined benefit obligation is set against the fair value of the plan assets to determine the net defined benefit liability or net defined benefit asset from the defined benefit plans. The net amount is recognised in the consolidated balance sheet as a pension provision in the event of an excess of liabilities over assets or under other assets in the event of an excess of assets over liabilities adjusted for any effects of the asset ceiling. In the event of excess allocations to the plan, the amount of the net defined benefit asset recognised in the balance sheet is limited to the present value of the economic benefits associated with the surplus plan assets.

In the case of defined benefit obligations, actuarial gains and losses are recognised immediately and in full in other comprehensive income (OCI) in the period in which they accrue. Consequently, the pension provision or other asset recognised in the consolidated balance sheet corresponds to the actual deficit or surplus for a given commitment.

Accounting and Valuation (Continued)

Under the net interest approach, the net interest to be recognised in profit or loss for the period is calculated by multiplying the net defined benefit liability (asset) from defined benefit plans by the discount rate underlying the measurement of the defined benefit obligation. Since any plan assets are deduced from the net defined benefit liability (asset), this calculation method implicitly assumes the return on plan assets in the amount of the discount rate.

If the present value of a defined benefit obligation changes as a result of a plan amendment or plan curtailment, the Group recognises the ensuing effects in full as past service cost in the profit or loss for the period. The amount is normally recognised at the date when the plan amendment or plan curtailment occurs. The gains and losses when a plan is settled are also recognised directly in profit or loss when the settlement occurs.

The net pension expense of defined benefit obligations consists of a service cost component, a net interest component and a remeasurement component. This is recognised in the consolidated income statement and consolidated statement of total comprehensive income as follows:

The service cost component consists of the current and past service cost including the gains and losses on plan settlements. The net interest component comprises the interest expense on the defined benefit obligation, the interest income on plan assets and, in the event of excess allocations to the plan, the interest on any effects arising from the adjustment of the asset surplus to reflect the asset ceiling. The service cost and net interest components are taken to the consolidated income statement in profit or loss for the period. HVB Group also recognises the net interest component under pension and other employee benefit costs in payroll costs alongside the service cost component.

The remeasurement component encompasses the actuarial gains and losses arising from the valuation of the defined benefit obligation, the difference between the typical return on plan assets assumed at the beginning of the period in the amount of the discount rate and the actual return realised on plan assets and, in the event of excess allocations to the plan, any adjustment of the asset surplus to reflect the asset ceiling, excluding the amounts already recognised in net interest. This component is recognised immediately in shareholders' equity without affecting profit or loss. The remeasurements recognised in other comprehensive income in the consolidated statement of total comprehensive income may not be reclassified in later periods in profit or loss (no recycling).

The disclosure requirements for defined benefit plans contain a principles-based disclosure concept requiring companies to make judgements regarding the necessary level of detail or any emphases in the disclosures pertaining to defined benefit plans. The reporting is intended to meet the information needs of the users of the financial statements and give them a wide-ranging understanding of the risk structure and risk management of the pension plans (pension governance).

In contrast to defined benefit plans, no provisions for pensions and similar obligations are recognised for defined contribution plans. The amounts paid are recognised in the period of the payment taken to the income statement under payroll costs.

The provisions for pensions and similar obligations are described in detail in the Note "Provisions".

In accordance with IAS 19, the provisions for partial retirement and similar benefits recognised under other provisions are measured on the basis of external actuarial reports.

The top-up amounts promised under partial-retirement agreements are accounted for as other long-term employee benefits and the associated expenses accrued over their vesting period. HVB Group applies the first-in first-out (FiFo) method for the straight-line accrual of top-up benefits. The benefits are discounted to determine their present value. Remeasurements are recognised in profit or loss in the period in which they arise.

The other long-term employee benefits also include the deferred employee compensation under the Group's bonus programmes, if not expected to be settled wholly before twelve months after the end of the reporting period. The Group has a net liability in the amount of the future benefits to which the employees are entitled in exchange for the work performed in the current period and earlier periods. HVB Group recognises a bonus provision in the amount of the present value of these benefits in its consolidated balance sheet, with allocations made to the promised bonus amounts over the respective vesting period on a pro rata basis. Remeasurements of the net liability are recognised directly in profit or loss for the period.

The employee compensation schemes are described in detail in the Note "Operating costs".

26 Foreign currency translation

The consolidated financial statements are prepared in euros, which is the reporting currency of the corporate group. Amounts in foreign currency are translated in accordance with the principles set forth in IAS 21. This standard calls for monetary items not denominated in the respective functional currency (generally the local currency in each case) and cash transactions not completed at the valuation date to be translated into euros at the reporting date using current market rates. Non-monetary items carried at fair value are similarly translated into euros using current market prices at the valuation date. Non-monetary items carried at cost are translated using the historic rate applicable at the time of acquisition.

Income and expense items arising from foreign currency translation at the individual Group companies are stated under net trading income in the income statement.

Where they are not stated in euros, the assets and liabilities reported by our subsidiaries are translated using current market rates at the reporting date in the consolidated financial statements. Average rates are used to translate the income and expenses of these subsidiaries.

Exchange rate differences resulting from the translation of financial statements of international business units are recognised in shareholders' equity without affecting profit or loss and are only taken to the income statement if the operation is sold in part or in full.

27 Income tax for the period

Income tax for the period is accounted for in accordance with the principles set forth in IAS 12. Current taxes are determined taking into account local laws in the respective tax jurisdictions concerned. Apart from a few exceptions allowed for in the standard, deferred tax assets and liabilities are recognised for all temporary differences between the values stated in accordance with IFRS and the values stated for tax-reporting purposes (balance sheet approach). Deferred tax assets arising from unused losses carried forward for tax-reporting purposes are shown where permitted by IAS 12.

Since the concept is based on the approach using future tax assets and liabilities under the liability method, the assets and liabilities are computed using the relevant local tax rates that are expected to apply when the differences are reversed. Deferred tax assets and liabilities are offset provided the offsetting requirements defined in IAS 12 are met.

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Segment Reporting

28 Method of segment reporting by business segment

In segment reporting, the activities of HVB Group are divided into the following business segments:
– Commercial Banking
– Corporate & Investment Banking (CIB)
– Group Corporate Centre
– Other

For the first time in 2019, Other is reported as a separate business segment separately from consolidation effects. The previous-year figures have been adjusted accordingly. In the past, both segments were presented together as the "Other/consolidation" business segment.

Segment reporting is based on the internal organisational and management structure together with internal financial reporting. In accordance with IFRS 8 "Operating Segments", segment reporting thus follows the Management Approach, which requires segment information to be presented externally in the same way as it is reported to the Management Board, as the responsible management body, and is used for the allocation of resources (such as risk-weighted assets compliant with CRR II) to the business segments and for assessing the profitability. In this context, the segment data are determined in accordance with International Financial Reporting Standards (IFRS).

In segment reporting, the business segments operate as autonomous companies with their own equity resources and responsibility for profits and losses. The business segments are delimited by responsibility for serving customers. For a description of the customer groups assigned to the individual business segments and the main components of the segments, please refer to the section entitled "Components of the business segments of HVB Group".

The income statement items of net fees and commissions, net trading profit and net other expenses/income shown in the business segments are based almost exclusively on transactions involving external customers. Net interest is assigned to the business segments in accordance with the market interest calculation method on the basis of the external interest income and interest expenses. For this reason, a separate presentation broken down by external/internal revenues (operating income) has not been included.

The equity capital allocation used to calculate the return on investment on companies assigned to several business segments (HVB and, until the merger effective as of 1 July 2018, UniCredit Luxembourg S.A.) is based on a uniform core capital allocation for each business segment. Pursuant to CRR II, this involves allocating 12.5% (previous year: 12.5%) of core capital from risk-weighted assets to the business segments. The average tied-up core capital calculated in this way is used to compute the return on investment, which is disclosed under net interest. The percentage used for the return on the equity capital allocated to the companies HVB and, until the merger as of 1 July 2018, UniCredit Luxembourg S.A. equals the base rate plus a premium in the amount of the average spread curve for the medium and long-term lending business of HVB. This rate is set for one year in advance as part of each budgeting process. The percentage changed to 0.98% in financial year 2019 after 1.07% in the previous financial year. Equity capital is not standardised for the other companies included in the consolidated financial statements.

Operating costs, which contain payroll costs, other administrative expenses as well as amortisation, depreciation and impairment losses on tangible and other intangible assets (without goodwill), are allocated to the appropriate business segment according to causation. The Chief Operating Office (Other) and the Group Corporate Centre business units are treated as external service providers, charging the business segments for their services at a price which covers their costs. The method of calculating the costs of general banking services involves employing a weighted allocation key (costs, income, FTEs, base amount) for each business segment to determine the assigned costs that cannot be allocated directly. The majority of the depreciation and impairment losses taken on property, plant and equipment are posted for the BARD Offshore 1 wind farm allocated to the Corporate & Investment Banking business segment and the real estate companies of HVB Group included in the Chief Operating Office business unit (Other).

At the beginning of the 2019 financial year, the return on investment was recalculated. As a result, shifts occurred in net interest in the income statement, broken down by business segment. In addition, adjustments were made within income in the items "Dividends and other income from equity investments", "Net other expenses/income" and "Net trading income". In the second half of 2019, the valuation of investment properties was changed to fair value measurement through profit or loss. The presentation of net income from investments was changed accordingly.

The previous-year figures affected by this reorganisation have been adjusted accordingly.

The profit of €1 million (previous year: €4 million) from shares in associates relates to the company Comtrade Group B.V., Rotterdam, accounted for using the equity method. The company is assigned to the CIB business segment. The disclosure in profit and loss is made under the item "Dividends and other income from equity investments" in the income statement. The carrying amount of the companies accounted for using the equity method is €10 million (previous year: €23 million). The companies Nautilus Tankers Limited, Valetta and paydirekt Beteiligungsgesellschaft privater Banken mbH, Berlin accounted for in the previous year using the equity method and SwanCap Partners GmbH, Munich recognised under "Non-current assets or disposal groups held for sale" were sold in 2019. The net income of €16 million from the sale is recognised in the Consolidated Income Statement under the item "Net income from investments" and allocated to the CIB business segment.

29 Components of segment reporting by business segment

Commercial Banking business segment

The Commercial Banking business segment serves all customers in Germany with a need for standardised or personalised service and advice. In this context, its Private Clients Bank and Unternehmer Bank business units offer a wide range of banking services. Depending on the service approach, a needs-based distinction is made within Commercial Banking between retail customers, private banking clients, high net worth individuals/ultra high net worth individuals and family offices under Wealth Management, business and corporate customers, and commercial real estate customers. At the same time, the Commercial Banking business segment builds on a shared "HypoVereinsbank" brand and a largely identical sales network.

In line with the universal bank model, the range of products and services of Commercial Banking enables comprehensive customer support to be provided. This extends from payment services, mortgage loans, consumer loans, savings-and-loan and insurance products and banking services for retail customers through to business loans and foreign trade financing for corporate customers, fund products for all asset classes, advisory and brokerage services in the securities business and liquidity and financial risk management, advisory services for high net worth private customers through to investment banking products for companies requiring capital-market access. The wealth management approach includes not only customised portfolio concepts and financing solutions for high net worth private customers with an entrepreneurial background but also the brokerage of shareholdings.

The Private Clients Bank business unit serves retail customers in the Retail Banking business and the Private Banking business in all areas of demand. In this context, we are continuing along the path already taken towards a root-and-branch modernisation of the retail customer business by expanding our digital offering and are thus underlining our positioning as a provider of quality services. Our aspiration is to be the best customer bank in Germany: in terms of quality, innovation and empathy. To achieve this, we set high standards for the quality of advice given and services provided involving a modern approach and an innovative omni-channel business model. In the retail customer business, HVB's financial concept promotes a high standard of quality in advisory services and is one of the most innovative forms of personal advice provided in Germany. In the Private Banking relationship model, very high net worth clients are served by advisors and a network of highly qualified specialists based on a 360-degree advisory approach with the aim of achieving a sustainable increase in the prosperity of our customers and thus maintaining long-term, trusting customer relationships.

The Unternehmer Bank business unit bundles the corporate banking business in Germany. In this respect, Unternehmer Bank is one of the largest lenders to the German Mittelstand and their first choice from among the banks for Mittelstand companies. The corporate banking business is the place where companies requiring complex advisory services on the Key Account relationship model find the right address for customised solutions, also in particular for large transaction volumes, capital market transactions and international issues.

Segment Reporting (Continued)

In the Mid & Small Cap relationship model for corporate and business customers, the product portfolio covers tailored financing offers, for example through the use of subsidies or leasing offers as well as solutions for the management of financial risks, in addition to the traditional bank services of payments and lending. Furthermore, the services provided for special target groups, such as insolvency administrators, healthcare professionals or public sector workers, are being continuously refined.

The distinguishing features of the Real Estate relationship model are individual solutions for commercial real estate customers, institutional investors, residential construction firms, property developers and building contractors. In this context, customers benefit particularly from specific financing expertise, for example in the Real Estate Structured Finance and Loan Syndication product areas.

The Commercial Banking business segment is run by two members of the Management Board who bear joint responsibility. The business management and support functions are performed by a staff unit assigned to each of the business units. Reciprocal cross-servicing ensures that the products required are maintained only once.

The market environment for Commercial Banking is characterised by persistently low interest rates, a fragmented competitive situation with a growing number of digital competitors and rising regulatory costs. In addition, increasing digitalisation is causing a lasting change in customer requirements, which is characterised by greater demand for omni-channel solutions and seamless customer experience. HVB Group is facing up to the challenges posed by this framework in Commercial Banking with a premium positioning and a diverse set of measures of growth and efficiency activities, which also include clearly defined digitalisation initiatives.

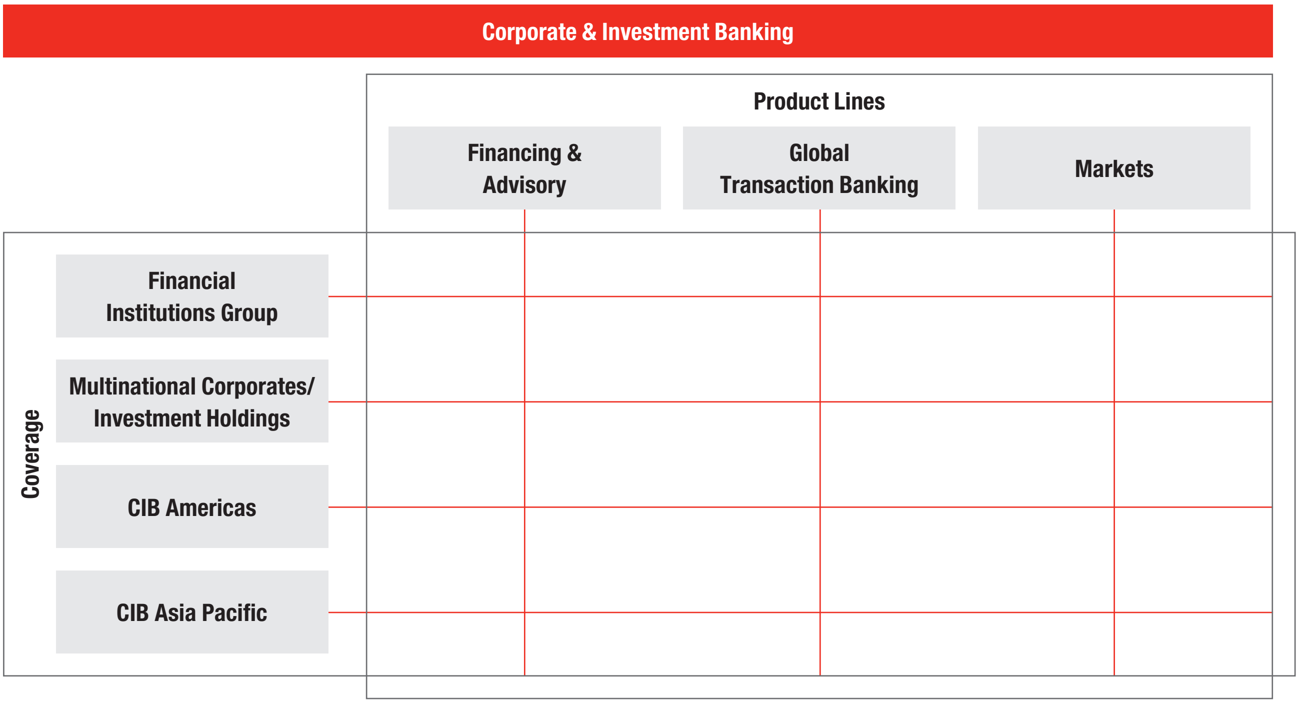
Corporate & Investment Banking business segment (CIB)

CIB is a business segment of UniCredit with global operations. It has a matrix organisational structure and has business activities at the three most important group companies: UniCredit Bank AG, UniCredit Bank Austria AG and UniCredit S.p.A.

The success of CIB's business stems not only from the close cooperation and coordination between customer care and the product units but also from collaboration with other countries and business segments of UniCredit as well as the pertinent credit risk management units.

As CIB acts as a global business segment, all statements and definitions apply both to CIB within HVB Group and CIB at a global level. In the form of its CIB business segment, which acts as a centre of competence for international markets and investment banking operations, HVB Group takes a share in structuring the global strategy of CIB. The member of UniCredit Bank's Management Board responsible for CIB has decided to apply the global CIB strategy to UniCredit Bank AG's CIB business in order to ensure a uniform approach worldwide for our customers.

CIB offers its customers:
– corporate banking and transaction services
– structured finance, capital markets and investment products
– access to Western, Central and Eastern Europe



Service is organised horizontally:
Financial Institutions Group (FIG), Multinational Corporates (MNC) and Investment Holdings (GFO), CIB Americas and CIB Asia Pacific.

Vertically, there are three product factories:
Financing & Advisory (F&A) provides customer support worldwide in the areas of Financial Sponsor Solutions (FSS), Infrastructure & Power Project Finance (IPPF), Natural Resources (NR), Commodity Trade Finance (CTF) and Structured Trade and Export Finance (STEF). Further global business lines include Global Syndicate & Capital Markets (GSCM) and Corporate Finance Advisory (CFA). The local business units Corporate Structured Finance (CSF) and Real Estate Structured Finance (RESF) cooperate closely with the Commercial Banking business segment. The local unit Global Shipping (GLOS) conducts transactions worldwide. Portfolio & Pricing Management (PPM) is responsible for the management of all LP (Leveraged and project finance, covered by the Financial Sponsor Solutions, Infrastructure & Power Project Finance and Natural Resources business lines) portfolio transactions within UniCredit Group. RESF and CSF portfolios are managed by PPM in cooperation with representatives of the sales channels at the level of UniCredit Bank AG.

Global Transaction Banking (GTB) offers a broad array of innovative products in the areas of cash management and trade finance, thus meeting customer needs in connection with transactions in the areas of payment services, account information, cash flow optimisation, liquidity management and mainly short-term import and export financing services.

The main product areas in cash management include clearing and foreign currency products, client access through electronic channels of access, payment products with payment services and account information, liquidity management with cash pooling and other optimisation procedures, cash innovations with company customer cards and dealer solutions and the business with sight deposits.

Trade finance offers supply chain finance solutions and conventional international trade products such as guarantees, letters of credit, collection services, etc. along the customer's value chain.

Segment Reporting (Continued)

Markets is a customer-oriented business that supports the corporate and institutional business of UniCredit as an integral part of the CIB value chain. This product area extends over all asset classes: interest, foreign exchange, commodities and equity derivatives. It offers institutional customers, business customers and private investors risk management solutions and investment products through the Group's own or external networks.

With a view to achieving its objectives, CIB developed and implemented several key strategic initiatives last year, the basic purpose of which is to provide support to the relationship managers in their customer care tasks:
– value chains, growing importance of the approach of an integrated value chain across team boundaries
– shared goals, a structured objective-setting process between customer care and product lines
– senior bankers who serve selected key corporate and institutional customers as well as investment holdings/family offices
– capital structure advisory which enables the Bank to hold a focused and discerning strategic dialogue with customers

We are aiming to further expand our central role with core CIB customers, exploit opportunities with Mittelstand customers and become Europe's powerhouse for trade finance. We wish to increase our international footprint by selling our international services to customers in our core countries, strategically expand our presence in countries given special priority as well as standardising and refining our operating platform.

At the same time, we are planning to expand our presence along the future developments of trade flows and to win as customers the best international actors outside of our home markets. Furthermore, we would like to become the "go-to bank" for business customers by expanding the cross-selling opportunities as well as the underwriting and distribution capacities. We are also striving to heighten the service commitment for banks.

In addition, CIB maintains a close cooperation with Commercial Banking. With a view to promoting the realisation of synergies within the UniCredit corporate group and the "One Bank" approach, the UniCredit International Centres ("UIC") concept was extended from Commercial Banking to CIB. The Head of UIC Germany reports to the Management Board members responsible for CIB and Unternehmer Bank (UBK) in order to ensure an end-to-end and systematic approach to international business. The duties of the International Centre extend from serving inbound customers through to support for and coordination of outbound activities.

Group Corporate Centre business segment
The Group Corporate Centre business segment includes profit contributions that do not fall within the jurisdiction of the individual business segments. Among other items, this includes the CFO, CRO and the CEO business units as well as the profits and losses of consolidated subsidiaries and non-consolidated holdings, provided they are not assigned to the other business segments. Furthermore, this business unit incorporates the net income from securities holdings for which the Management Board is responsible. Also incorporated in this business unit are the amounts arising from decisions taken by management with regard to asset/liability management. This includes contributions to earnings from securities and money trading activities involving UniCredit S.p.A. and its subsidiaries. The Group Corporate Centre business segment also includes the Real Estate Restructuring (RER) customer portfolio.

Other business segment
The Other business segment encompasses the Chief Operating Office. It acts as a central internal service provider for customers and employees. The Chief Operating Office activities extend to purchasing, organisation, corporate security, logistics and facility management, cost management and back-office functions for credit, accounts, foreign exchange, money market and derivatives as well as in-house consulting. Payments, securities settlement, IT application development and IT operations have been outsourced. Strategic real estate management at HVB is similarly the responsibility of the Chief Operating Office business unit and is carried out by the Real Estate unit (GRE), HVB Immobilien AG, Munich and UniCredit Services S.C.p.A., Milan, respectively, as engaged by HVB Immobilien AG, Munich by way of an operating contract.

Information on products and services at company level
The information required by IFRS 8.32 on income from external customers generated from the products and services of HVB Group are contained under the disclosures regarding the income statement in these notes to the consolidated financial statements.

30 Income statement, broken down by business segment

Income statement, broken down by business segment for the period from 1 January to 31 December 2019 (€ millions)

INCOME/EXPENSES	COMMERCIAL BANKING	CORPORATE & INVESTMENT BANKING	GROUP CORPORATE CENTRE	OTHER	CONSOLIDATION	HVB GROUP
Net interest	1,466	891	60	(5)	(24)	2,388
Dividends and other income from equity investments	2	1	1	—	—	4
Net fees and commissions	722	258	(6)	—	(1)	973
Net trading income	63	636	4	—	—	703
Net other expenses/income	4	141	75	74	6	300
OPERATING INCOME	**2,257**	**1,927**	**134**	**69**	**(19)**	**4,368**
Payroll costs	(603)	(392)	(349)	(109)	—	(1,453)
Other administrative expenses	(1,012)	(696)	317	153	18	(1,220)
Amortisation, depreciation and impairment losses on						
intangible and tangible assets	(14)	(389)	(8)	(72)	—	(483)
Operating costs	**(1,629)**	**(1,477)**	**(40)**	**(28)**	**18**	**(3,156)**
OPERATING PROFIT/(LOSS)	**628**	**450**	**94**	**41**	**(1)**	**1,212**
Net write-downs of loans and provisions for guarantees						
and commitments	(112)	(15)	12	—	—	(115)
NET OPERATING PROFIT/(LOSS)	**516**	**435**	**106**	**41**	**(1)**	**1,097**
Provisions for risks and charges	111	199	26	(23)	—	313
Restructuring costs	(118)	(58)	(101)	(86)	—	(363)
Net income from investments	14	6	313	111	—	444
PROFIT/(LOSS) BEFORE TAX	**523**	**582**	**344**	**43**	**(1)**	**1,491**
Income tax for the period	(189)	(244)	(107)	(12)	1	(551)
PROFIT AFTER TAX	**334**	**338**	**237**	**31**	**—**	**940**
Impairment on goodwill	(130)	—	—	—	—	(130)
CONSOLIDATED PROFIT/(LOSS)	**204**	**338**	**237**	**31**	**—**	**810**
attributable to the shareholder of UniCredit Bank AG	204	338	220	31	—	793
attributable to minorities	—	—	17	—	—	17

Segment Reporting (Continued)

Reconciliation of the segmented income statement to the income statement (€ millions)

INCOME/EXPENSES	INCOME STATEMENT, BROKEN DOWN BY BUSINESS SEGMENT	RECLASSIFICATION	CONSOLIDATED INCOME STATEMENT
Net interest	2,388	—	2,388
Dividends and other income from equity investments	4	20	24
Dividends from assets mandatorily at FVTPL		20	
Net fees and commissions	973	—	973
Net trading income	703	(124)[1]	579
Financial assets mandatorily at FVTPL		11	
Financial liabilities designated at FVTPL		(54)	
Buy-backs of securities issued		(1)	
Effects arising from hedge accounting		(48)	
Fair value equity		(13)	
Dividends from assets mandatorily at FVTPL		(20)	
Net gains/(losses) on financial assets and liabilities at fair value	—	108	108
Financial assets mandatorily at FVTPL		(11)	
Financial liabilities designated at FVTPL		54	
Net gains/(losses) on the sale of financial securities (held-for-sale business model)		4	
Effects arising from hedge accounting		48	
Fair value equity		13	
Net gains/(losses) on derecognition of financial instruments measured at cost	—	13	13
Net gains/(losses) on the sale of performing loans and receivables and securities		12	
Buy-backs of securities issued		1	
Net other expenses/income	300	442	742
Net gains/(losses) on the sale of performing loans and receivables and securities		(12)	
Income from the sale of land and buildings		60	
Income from valuation/disposal of investment properties		368	
Income from the sale of other assets		26	
OPERATING INCOME	**4,368**	**459**	**4,827**
Payroll costs	(1,453)	—	(1,453)
Other administrative expenses	(1,220)	—	(1,220)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(483)	—	(483)
Operating costs	**(3,156)**	**—**	**(3,156)**
OPERATING PROFIT	**1,212**	**459**	**1,671**
Net write-downs of loans and provisions for guarantees and			
commitments IAS 39/Credit impaired losses IFRS 9	(115)	—	(115)
NET OPERATING PROFIT	**1,097**	**459**	**1,556**
Provisions for risks and charges	313	—	313
Restructuring costs	(363)	—	(363)
Net income from investments	444	(444)[1]	n/a
Net gains/(losses) on the sale of securities (held-for-sale business model)		(4)	
Income from the sale of land and buildings		(60)	
Income from valuation/disposal of investment properties		(368)	
Income from the sale of other assets		(26)	
Net gains/(losses) on disposal of investments		15	
Net gains/(losses) on disposal of investments	n/a	(15)	(15)
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	**—**	**1,491**	**1,491**
Impairment on goodwill	—	(130)	(130)
PROFIT BEFORE TAX	**1,491**	**(130)**	**1,361**
Income tax for the period	(551)	—	(551)
PROFIT AFTER TAX	**940**	**(130)**	**810**
Impairment on goodwill	(130)	130	—
CONSOLIDATED PROFIT/(LOSS)	**810**	**—**	**810**
attributable to the shareholder of UniCredit Bank AG	793	—	793
attributable to minorities	17	—	17

1 Rounding difference.

Income statement, broken down by business segment for the period from 1 January to 31 December 2018 (€ millions)

INCOME/EXPENSES	COMMERCIAL BANKING	CORPORATE & INVESTMENT BANKING	GROUP CORPORATE CENTRE	OTHER	CONSOLIDA-TION	HVB GROUP
Net interest	1,468	991	56	(5)	(26)	2,484
Dividends and other income from equity investments	(1)	6	—	—	—	5
Net fees and commissions	761	263	(7)	—	(4)	1,013
Net trading income	69	527	24	1	—	621
Net other expenses/income	11	198	88	80	9	386
OPERATING INCOME	**2,308**	**1,985**	**161**	**76**	**(21)**	**4,509**
Payroll costs	(604)	(387)	(367)	(110)	—	(1,468)
Other administrative expenses	(1,057)	(750)	332	121	(10)	(1,364)
Amortisation, depreciation and impairment losses on						
intangible and tangible assets	(12)	(115)	(6)	(71)	(5)	(209)
Operating costs	**(1,673)**	**(1,252)**	**(41)**	**(60)**	**(15)**	**(3,041)**
OPERATING PROFIT/(LOSS)	**635**	**733**	**120**	**16**	**(36)**	**1,468**
Net write-downs of loans and provisions for guarantees and commitments	(197)	130	51	—	—	(16)
NET OPERATING PROFIT/(LOSS)	**438**	**863**	**171**	**16**	**(36)**	**1,452**
Provisions for risks and charges	(298)	(620)	1	(2)	—	(919)
Restructuring costs	(30)	—	6	10	—	(14)
Net income from investments	10	(1)	443	69	—	521
PROFIT/(LOSS) BEFORE TAX	**120**	**242**	**621**	**93**	**(36)**	**1,040**
Income tax for the period	(64)	(136)	(42)	(27)	—	(269)
PROFIT/(LOSS) AFTER TAX	**56**	**106**	**579**	**66**	**(36)**	**771**
Impairment on goodwill	—	(288)	—	—	—	(288)
CONSOLIDATED PROFIT/(LOSS)	**56**	**(182)**	**579**	**66**	**(36)**	**483**
attributable to the shareholder of UniCredit Bank AG	56	(182)	561	66	(36)	465
attributable to minorities	—	—	18	—	—	18

Segment Reporting (Continued)

Development of the Commercial Banking business segment (€ millions)

INCOME/EXPENSES	2019	2018
Net interest	1,466	1,468
Dividends and other income from equity investments	2	(1)
Net fees and commissions	722	761
Net trading income	63	69
Net other expenses/income	4	11
OPERATING INCOME	**2,257**	**2,308**
Payroll costs	(603)	(604)
Other administrative expenses	(1,012)	(1,057)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(14)	(12)
Operating costs	**(1,629)**	**(1,673)**
OPERATING PROFIT	**628**	**635**
Net write-downs of loans and provisions for guarantees and commitments	(112)	(197)
NET OPERATING PROFIT	**516**	**438**
Provisions for risks and charges	111	(298)
Restructuring costs	(118)	(30)
Net income from investments	14	10
PROFIT BEFORE TAX	**523**	**120**
Income tax for the period	(189)	(64)
PROFIT AFTER TAX	**334**	**56**
Impairment on goodwill	(130)	—
CONSOLIDATED PROFIT/(LOSS)	**204**	**56**
attributable to the shareholder of UniCredit Bank AG	204	56
attributable to minorities	—	—
Cost-income ratio in %[1]	72.2	72.5

1 Ratio of operating costs to operating income.

In 2019, the Commercial Banking business segment generated an operating profit (before net write-downs of loans and provisions for guarantees and commitments) of €628 million and is thus roughly at the previous year's level (down €7 million or 1.1%).

At €2,257 million, operating income fell slightly by €51 million, or 2.2%, compared with the previous-year period (€2,308 million). Despite the still extremely low level of interest rates, net interest of €1,466 million contained in operating income almost matched the level in the previous-year period (€1,468 million). This development trend was supported in the retail banking business by sharp rises in both real estate financing (up 4%) and in consumer lending activities (up 4%) as well as, above all, a good increase in the lending business in corporate customer activities. The customer deposit business continued to be heavily weighed down by the persistently ultra-low interest rates.

Compared with the previous-year period, net fees and commissions fell, solely due to changes in accounting methods and non-recurrent effects in 2018, by €39 million, or 5.1%, to €722 million and net trading income by €6 million, or 8.7%, to €63 million. The decline in net trading income was mainly due to negative effects of the change in the credit value adjustment of interest rate derivatives with corporate clients. Net other expenses/income totalled €4 million in 2019. The increase in this expense compared with the previous-year period (€11 million) is attributable to a higher charge for the European bank levy and falling profit contributions from our WealthCap subsidiary. This item also includes a non-recurrent effect of €5.5 million resulting from the derecognition of savings accounts that have not generated revenue for several decades and which are unlikely to be claimed with a degree of certainty. The underlying legal claim of the customers vis-à-vis the Bank for payment of the credit balances continues to exist. Dividends and other income from equity investments contributed €2 million to operating income in 2019 (previous-year period: minus €1 million).

As expected, a reduction of 2.7%, or €43 million, to €1,629 million was achieved in operating costs in 2019. This is attributable to lower other administrative expenses, which fell by 4.4%, or €45 million, to €1,057 million compared with the previous-year period. This decline is due to lower internal charges from other service units of the Bank, for example for IT and payment transaction expenses, and partly also to changes in accounting methods.

The cost-income ratio decreased slightly to 72.2% in the current reporting period compared with 72.5% in 2018.

In 2019, there was a net addition of €112 million to net write-downs of loans and provisions for guarantees and commitments compared with €197 million in the previous-year period.

There was a strong increase of €78 million, or 17.8%, to €516 million in net operating profit in the 2019 reporting year (previous-year period: €438 million). The decrease in net write-downs of loans and provisions for guarantees and commitments more than offset the lower operating income.

In 2019, there was net income of €111 million from the reversal of provisions after additions of €298 million in the previous year. In April 2019, the Bank reached a settlement with the US and New York authorities to conclude the proceedings for violations of US economic sanctions in the period from 2002 to 2012. The amounts payable according to the settlement are lower than the provisions set aside for it, which means that the excess was able to be reversed. Net additions to provisions for risks and charges in 2018 are largely due to the increase in provisions for this matter.

In the reporting year, net restructuring costs of €118 million arose in connection with the implementation of the Team 23 four-year strategic plan. These provisions essentially contain provisioning requirements for early retirement schemes or severance payments. In the previous year, net restructuring costs of €30 million were reported.

At €14 million, net income from investments is higher than the figure in the previous year (€10 million).

Overall, the Commercial Banking business segment generated a profit before tax of €523 million in 2019, which is significantly higher than the previous-year figure of €120 million.

The income tax expense for the reporting period increased substantially by €125 million to €189 million compared with 2018.

The Commercial Banking business segment reports a profit after tax of €334 million for 2019, which is significantly above the previous year's comparative figure of €56 million.

In the reporting year, the remaining goodwill of €130 million for the Commercial Banking business segment was completely written off.

Segment Reporting (Continued)

Development of the Corporate & Investment Banking business segment (€ millions)

INCOME/EXPENSES	2019	2018
Net interest	891	991
Dividends and other income from equity investments	1	6
Net fees and commissions	258	263
Net trading income	636	527
Net other expenses/income	141	198
OPERATING INCOME	**1,927**	**1,985**
Payroll costs	(392)	(387)
Other administrative expenses	(696)	(750)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(389)	(115)
Operating costs	**(1,477)**	**(1,252)**
OPERATING PROFIT	**450**	**733**
Net write-downs of loans and provisions for guarantees and commitments	(15)	130
NET OPERATING PROFIT	**435**	**863**
Provisions for risks and charges	199	(620)
Restructuring costs	(58)	—
Net income from investments	6	(1)
PROFIT BEFORE TAX	**582**	**242**
Income tax for the period	(244)	(136)
PROFIT AFTER TAX	**338**	**106**
Impairment on goodwill	—	(288)
CONSOLIDATED PROFIT/(LOSS)	**338**	**(182)**
attributable to the shareholder of UniCredit Bank AG	338	(182)
attributable to minorities	—	—
Cost-income ratio in %[1]	76.6	63.1

1 Ratio of operating costs to operating income.

In the current 2019 financial year, the Corporate & Investment Banking business segment generated operating income of €1,927 million and thus remained 2.9% lower than the year-ago figure of €1,985 million.

The primary cause of this development in 2019 is the decline in net interest, which is down by 10.1%, or €100 million, to €891 million compared with the previous-year period. This trend is primarily attributable to the persistently low interest rate environment. In addition, there was a significant decrease in trading-induced interest compared with the previous-year period in connection with CIB's current trading strategy.

At €258 million, net fees and commissions were €5 million, or 1.9%, lower than in the previous-year period. This development is due to lower commissions and advisory fees, which despite greater demand from companies for equity or borrowings using capital market products, such as bonds or share issues, were unable to be offset.

Net other expenses/income fell significantly to €141 million (previous-year period: €198 million) whereby the previous-year total includes a positive non-recurring effect in connection with the BARD Offshore 1 wind farm. There were no dividends and other income from equity investments in 2019 (previous-year period: €6 million).

Net trading income was up compared with the previous-year period, increasing a significant €109 million, or 20.7%, to €636 million. This increase is due in particular to the areas of fixed income products as well as equity and commodity products. The key drivers in this context are a positive development in the customer business coupled with an improved market environment. By contrast, valuation adjustments, which primarily include credit value adjustments and funding value adjustments, made a negative contribution to net trading income.

Operating costs rose a sharp €225 million, or 18.0%, to €1,477 million compared with the previous-year period. This is mainly due to the unscheduled write-down of €315 million on the BARD Offshore 1 wind farm, which was classified as "Non-current assets or disposal groups held for sale" at 30 June 2019. The carrying amount was thus to be written down to the expected selling price. Furthermore, payroll costs rose year on year by a slight €5 million, or 1.3%, to €392 million as a result of a positive non-recurring effect in the previous year whereas other administrative expenses fell by €54 million, or 7.2%, to €696 million.

The cost-income ratio rose to 76.6% in the reporting period compared with 63.1% in the 2018 financial year on account of the decline in the earnings trend and the unscheduled write-down. Operating profit fell by €283 million, or 38.6%, to €450 million.

In the 2019 financial year, there was a net addition of €15 million in net write-downs of loans and provisions for guarantees and commitments after a net reversal of €130 million was reported in the previous-year period.

In the 2019 financial year, there was net income of €199 million from the reversal of provisions for risks and charges after net additions of €620 million in the previous-year period. In April 2019, the Bank reached a settlement with the US and New York authorities to conclude the proceedings for violations of US economic sanctions in the period from 2002 to 2012. The amounts payable according to the settlement are lower than the provisions set aside for it, which means that the excess was able to be reversed. Net additions to provisions for risks and charges in the 2018 financial year are largely due to the increase in provisions for this matter. Net income from investments totalled €6 million in the 2019 financial year after no significant contribution to profit was recorded in the previous-year period.

The Corporate & Investment Banking business segment generated profit before tax of €582 million in the 2019 financial year, which, however, is significantly higher than the previous-year figure of €242 million.

The income tax expense for the reporting period increased by €108 million, or 79.4%, to €244 million compared with the 2018 financial year.

The Corporate & Investment Banking business segment reports a profit after tax of €338 million for the 2019 financial year and was thus significantly higher than the previous-year figure of €106 million.

Segment Reporting (Continued)

Development of the Group Corporate Centre business segment

(€ millions)

INCOME/EXPENSES	2019	2018
Net interest	60	56
Dividends and other income from equity investments	1	—
Net fees and commissions	(6)	(7)
Net trading income	4	24
Net other expenses/income	75	88
OPERATING INCOME	**134**	**161**
Payroll costs	(349)	(367)
Other administrative expenses	317	332
Amortisation, depreciation and impairment losses on intangible and tangible assets	(8)	(6)
Operating costs	**(40)**	**(41)**
OPERATING PROFIT	**94**	**120**
Net write-downs of loans and provisions for guarantees and commitments	12	51
NET OPERATING PROFIT	**106**	**171**
Provisions for risks and charges	26	1
Restructuring costs	(101)	6
Net income from investments	313	443
PROFIT BEFORE TAX	**344**	**621**
Income tax for the period	(107)	(42)
PROFIT AFTER TAX	**237**	**579**
Impairment on goodwill	—	—
CONSOLIDATED PROFIT/(LOSS)	**237**	**579**
attributable to the shareholder of UniCredit Bank AG	220	561
attributable to minorities	17	18
Cost-income ratio in %[1]	29.9	25.5

1 Ratio of operating costs to operating income.

In the reporting period, the Group Corporate Centre business segment generated operating income of €134 million, therefore falling by €27 million, or 16.8%, compared with the previous-year period.

In the 2019 financial year, net interest improved by €4 million to €60 million compared with €56 million in the previous-year period. This slight increase is primarily due to asset/liability management. Dividends and other income from equity investments totalled €1 million in the reporting period. Net fees and commissions were up by €1 million compared with 2018 and report a commission expense of €6 million for the current reporting period. Net trading income fell by €20 million, or 83.3%, from €24 million in the previous year to €4 million in 2019 on account of IFRS 9 fair value adjustments. With a decrease of €1 million in operating costs compared with the previous-year period, the operating profit amounted to €94 million after €120 million in the previous year.

There were net reversals of €12 million in net write-downs of loans and provisions for guarantees and commitments in the reporting period and of €51 million in the previous-year period, representing a decline of 76.5%. In the reporting year, net operating profit thus totalled €106 million after €171 million in 2018.

At €313 million, net income from investments was €130 million lower than in the previous-year period (€443 million). This mainly relates to the IAS 40 fair value adjustments in connection with the sale of the properties recognised in the balance-sheet item "Non-current assets or disposal groups held for sale" which were held by our companies Acis Immobilien und Projektentwicklungs GmbH & Co. Oberbaum City KG and NF Objekte Berlin GmbH as well as the disposals of AGROB and EOF.

Particularly on account of the net income from investments and restructuring costs, the profit before tax of the Group Corporate Centre business segment, at €344 million in the reporting period, was significantly lower than the profit before tax of €621 million in the previous year. For the reporting period, the income tax expense increased significantly by €65 million to €107 million compared with 2018.

The Group Corporate Centre business segment reports a profit after tax of €237 million for the 2019 reporting year, which is a sharp €342 million lower than the comparable figure of €579 million in the previous year. There were no expenses for the impairment of goodwill.

As a result of the lower operating income year on year, operating costs at the previous year's level, restructuring costs and lower net income from investments, the cost-income ratio for the reporting period deteriorated to 29.9% compared with 25.5% in 2018.

Segment Reporting (Continued)

Development of the Other business segment

(€ millions)

INCOME/EXPENSES	2019	2018
Net interest	(5)	(5)
Dividends and other income from equity investments	—	—
Net fees and commissions	—	—
Net trading income	—	1
Net other expenses/income	74	80
OPERATING INCOME	**69**	**76**
Payroll costs	(109)	(110)
Other administrative expenses	153	121
Amortisation, depreciation and impairment losses on intangible and tangible assets	(72)	(71)
Operating costs	**(28)**	**(60)**
OPERATING PROFIT	**41**	**16**
Net write-downs of loans and provisions for guarantees and commitments	—	—
NET OPERATING PROFIT	**41**	**16**
Provisions for risks and charges	(23)	(2)
Restructuring costs	(86)	10
Net income from investments	111	69
PROFIT BEFORE TAX	**43**	**93**
Income tax for the period	(12)	(27)
PROFIT AFTER TAX	**31**	**66**
Impairment on goodwill	—	—
CONSOLIDATED PROFIT/(LOSS)	**31**	**66**
attributable to the shareholder of UniCredit Bank AG	**31**	**66**
attributable to minorities	—	—
Cost-income ratio in %[1]	40.6	78.9

1 Ratio of operating costs to operating income.

The Other business segment, which is shown separately for the first time in the reporting period, generated operating income of €69 million in 2019 and is thus €7 million, or 9.2% lower, than the previous year's figure of €76 million.

The change in operating costs by €32 million, or 53.3%, to €28 million is largely due to an increase of €32 million, or 26%, to €153 million in other administrative expenses in 2019 compared with €121 million in the previous-year period. As expected, payroll costs fell by €1 million to €109 million. Amortisation, depreciation and impairment losses on intangible and tangible assets come to €72 million in the reporting period and are thus a marginal 1.4% higher than the €71 million reported in the previous-year period.

As a result of lower operating costs, the Other business segment generated operating profit of €41 million in the reporting period after €16 million in the previous-year period.

Together with operating income at the previous year's level, the cost-income ratio improved to 40.6% in the reporting period compared with 78.9% in 2018.

In the Other business segment, no expenses arose for net write-downs of loans and provisions for guarantees and commitments in the reporting period or in the previous-year period. Net operating profit thus totalled €41 million in the reporting period.

In the current reporting period, "Provisions for risks and charges" come to €23 million and are thus €21 million up on the previous-year period. "Restructuring costs" amount to €86 million and have thus increased by €96 million compared with 2018.

Net income from investments posted a year-on-year increase from €69 million to €111 million.

Overall, the Other business segment generated profit before tax of €43 million in 2019, which represents a decline of €50 million, or 54%, compared with the previous-year period.

Income tax expense for the reporting period fell to €12 million compared with 2018.

For 2019, the Other business segment reported profit after tax of €31 million, which represents a substantial €35 million decrease compared with the previous year's figure (€66 million).

Segment Reporting (Continued)

31 Balance-sheet figures, broken down by business segment

(€ millions)

	COMMERCIAL BANKING	CORPORATE & INVESTMENT BANKING	GROUP CORPORATE CENTRE	OTHER	CONSOLIDATION	HVB GROUP
Loans and receivables with banks (at cost)						
31/12/2019	30	30,701	371	272	(402)	30,972
31/12/2018	—	—	—	—	—	—
Loans and receivables with customers (at cost)[1]						
31/12/2019	86,294	43,168	1,100	—	(2,484)	128,078
31/12/2018	83,502	42,208	458	—	(2,542)	123,626
Goodwill						
31/12/2019	—	—	—	—	—	—
31/12/2018	130	—	—	—	—	130
Deposits from customers						
31/12/2019	91,188	32,234	1,907	—	(402)	124,927
31/12/2018	90,299	29,234	1,623	117	(235)	121,038
Risk-weighted assets compliant with Basel III						
(including equivalents for market risk						
and operational risk)						
31/12/2019	31,334	45,370	5,036	3,498	217	85,455
31/12/2018	31,501	44,521	5,077	2,008	(515)	82,592

1 "Loans and receivables with customers (at cost)" do not contain any securities holdings for internal management purposes.
2 Balance-sheet figures for non-current assets or disposal groups held for sale are shown separately in the Notes "Non-current assets or disposal groups held for sale" and "Liabilities of disposal groups held for sale".

32 Employees, broken down by business segment[1]

	31/12/2019	31/12/2018
Commercial Banking	6,163	6,074
Corporate & Investment Banking	1,860	1,973
Group Corporate Centre	3,099	3,257
Other	1,072	948
Consolidation	—	—
Total	**12,194**	**12,252**

1 In full-time equivalents (FTEs).

33 Segment reporting by region

The allocation of amounts to regions is based on the head office of the Group companies or offices involved.

Income statement, broken down by region (€ millions)

	2019		2018	
	OPERATING INCOME	OPERATING PROFIT/(LOSS)	OPERATING INCOME	OPERATING PROFIT/(LOSS)
Germany	4,787	1,574	4,880	1,697
Italy	85	145	13	1
Luxembourg	39	31	123	135
United Kingdom	169	67	213	60
Rest of Europe	16	50	10	31
Americas	112	67	115	51
Asia	58	30	62	16
Consolidation	(439)	(293)	(454)	(44)
HVB Group	**4,827**	**1,671**	**4,962**	**1,947**

Total assets, broken down by region (€ millions)

	2019	2018
Germany	282,334	264,041
Italy	26,417	25,688
Luxembourg	12,899	14,865
United Kingdom	11,216	11,384
Rest of Europe	8,924	8,016
Americas	6,287	7,230
Asia	8,880	9,811
Consolidation	(53,359)	(53,701)
HVB Group	**303,598**	**287,334**

Segment Reporting (Continued)

Property, plant and equipment, broken down by region

(€ millions)

	2019	2018
Germany	2,390	2,455
Italy	21	—
Luxembourg	27	27
United Kingdom	34	3
Rest of Europe	1	1
Americas	28	2
Asia	6	1
Consolidation	—	—
HVB Group	**2,507**	**2,489**

Investment properties, broken down by region

(€ millions)

	2019	2018
Germany	263	491
Italy	—	—
Luxembourg	90	72
United Kingdom	—	—
Rest of Europe	—	—
Americas	—	—
Asia	—	—
Consolidation	—	—
HVB Group	**353**	**563**

Intangible assets, broken down by region

(€ millions)

	2019	2018
Germany[1]	15	149
Italy	—	—
Luxembourg	—	—
United Kingdom	—	—
Rest of Europe	—	—
Americas	—	—
Asia	—	—
Consolidation	—	—
Total	**15**	**149**

1 Includes goodwill in the previous year.

Employees, broken down by region[1]

	2019	2018
Germany	11,139	11,236
Italy	241	226
Luxembourg	30	85
United Kingdom	324	379
Rest of Europe	203	62
Africa	—	2
Americas	117	121
Asia	140	141
HVB Group	**12,194**	**12,252**

1 In full-time equivalents (FTEs).

Notes to the Income Statement

34 Net interest

(€ millions)

	2019	2018
Interest income	3,845	3,753
from financial assets at cost	2,894	2,943
from financial assets at FVTOCI	41	17
from financial assets at FVTPL and hedging derivatives	455	550
from financial assets held for trading	343	126
other interest income	112	117
Negative interest on financial assets	(131)	(154)
Interest expense	(1,573)	(1,387)
from financial liabilities at cost	(999)	(930)
of which: from lease liabilities	(6)	n/a
from financial liabilities at FVTPL and hedging derivatives	(76)	(77)
from financial liabilities held for trading	(471)	(380)
other interest expense	(27)	—
Negative interest on financial liabilities	247	272
Total	**2,388**	**2,484**

In the reporting year, HVB Group generated €29 million (previous-year period: €36 million) in interest income on impaired financial assets that are valued at cost.

Negative interest mainly relates to securities repurchase agreements, overnight deposits and forward transactions with banks and institutional investors.

Net interest attributable to related parties

The item "Net interest" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	28	44
of which:		
UniCredit S.p.A.	10	17
sister companies	18	26
subsidiaries	—	1
Joint ventures	7	5
Associates	4	20
Other participating interests	13	11
Total	**52**	**80**

35 Dividends and other income from equity investments

(€ millions)

	2019	2018
Dividends and other similar income	23	21
Companies accounted for using the equity method	1	4
Total	**24**	**25**

36 Net fees and commissions

(€ millions)

	2019	2018
Fee and commission income	1,286	1,284
Securities services for clients	566	567
Payment transactions	298	293
Loan business	147	160
Guarantees	127	121
Distribution of third party products	105	85
Other commission income	43	58
Fee and commission expense	(313)	(311)
Securities services for clients	(163)	(171)
Payment transactions	(70)	(71)
Loan business	(16)	(7)
Guarantees	(6)	(5)
Distribution of third party products	—	—
Other commission expense	(58)	(57)
Net fees and commissions	**973**	**973**

Fee and commission income of €77 million (previous-year period: €86 million) and fee and commission expense of €3 million (previous-year period: €1 million) relate to financial instruments not measured at fair value through profit or loss.

Fees and commissions charged for individual services are recognised as soon as the service has been performed. In contrast, deferred income is recognised for fees and commissions relating to a specific period (such as fees for financial guarantees).

Net fees and commissions from related parties

The item "Net fees and commissions" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	(27)	(20)
of which:		
UniCredit S.p.A.	(5)	(19)
sister companies	(22)	(2)
subsidiaries	—	1
Joint ventures	—	1
Associates	—	2
Other participating interests	—	—
Total	**(27)**	**(17)**

Notes to the Income Statement (Continued)

37 Net trading income

(€ millions)

	2019	2018
Net gains on financial assets held for trading[1]	579	693
Total	**579**	**693**

1 Including dividends on financial instruments held for trading.

The net gains on holdings at fair value through profit or loss generally only contain the changes in fair value disclosed in the income statement.

For hedged forward exchange transactions in the non-trading portfolio used for liquidity management of foreign currency holdings, the swap rate is accrued or deferred over the remaining term of the transactions and reported in net interest.

The interest income from trading portfolios is normally disclosed under net interest. To ensure that the full contribution of these activities to profits is disclosed, the interest cash flows are carried in net trading income for the interest rate swap trading book, which exclusively contains interest rate derivatives.

38 Net gains/losses on financial assets and liabilities at fair value

(€ millions)

	2019	2018
Financial assets mandatorily at FVTPL	(11)	(42)
Financial liabilities designated at FVTPL	54	(95)
Derecognition from OCI	4	2
Effects arising from hedge accounting	48	13
Fair value equity	13	12
Total	**108**	**(110)**

(€ millions)

	2019	2018
Fair value hedges	48	13
Changes in fair value of hedges items	(298)	21
Portfolio fair value hedges	(411)	(33)
Micro fair value hedges	113	54
Changes in fair value of hedging derivatives	346	(8)
Portfolio fair value hedges	458	46
Micro fair value hedges	(112)	(54)
Cash flow hedges	—	—
Net gains/(losses) of the cash flows hedge (only ineffective part)	—	—
Total	**48**	**13**

The hedge accounting effects of the main hedge accounting approaches of HVB Group are described below:

Micro fair value hedge for holdings at FVTOCI

(€ millions)

	REMAINING TERM			CUMULATIVE AMOUNT OF THE HEDGE-RELATED ADJUSTMENT TO THE FAIR VALUE INCLUDED IN THE CARRYING AMOUNT OF THE HEDGED ITEM RECOGNISED IN THE BALANCE SHEET		CARRYING AMOUNTS		CHANGE IN FAIR VALUE USED TO RECOGNISE AN INEFFECTIVENESS IN THE HEDGE FOR THE PERIOD
	LESS THAN 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
Balance at 31/12/2019								
Nominal								
Hedged items	550	10,167	3,533					
Hedging transactions	550	10,167	3,533					
Interest rate sensitivities in BPV								
Hedged items	—	(4)	(2)					
Hedging transactions	—	4	2					
Balance sheet values								
Hedged items				142		14,370		
Hedging transactions						2	357	
Hedge result								1
Hedged items								113
Hedging transactions								(112)
Balance at 31/12/2018								
Nominal								
Hedged items	2,300	2,941	2,038					
Hedging transactions	2,300	2,941	2,038					
Interest rate sensitivities in BPV								
Hedged items	—	(1)	(1)					
Hedging transactions	—	1	1					
Balance sheet values								
Hedged items				49		7,370		
Hedging transactions						7	96	
Hedge result								—
Hedged items								54
Hedging transactions								(54)

The table above compares the nominal amounts of the hedged items and the hedging transactions. In addition, the interest rate sensitivities are stated in basis point values (BPV). This means that if the interest rate changes by one basis point (0.01%), the fair value will change by the amount stated in euro millions. The statement of interest sensitivities in BPV is a suitable instrument for describing the effectiveness of a hedge.

Securities holdings, which are allocated to the balance sheet item "Financial assets at FVTOCI", are separately hedged against interest rate risks for each transaction through a hedging transaction. This includes up-front payments on conclusion of the interest rate swaps to compensate for premiums and discounts in the purchase price of the securities which means that their fair value is not equal to zero at the inception of the hedge. Furthermore, the fair value of the derivatives also contains accrued interest (dirty fair value) whereas accrued interest for the hedged items is allocated to these directly and is thus not included in the cumulative amount of the hedge-related adjustments to the carrying amount of the hedged items. Consequently, the net fair value of the hedging derivatives does not reflect the cumulative amount of the hedge-related adjustments to the carrying amount of the hedged items.

Notes to the Income Statement (Continued)

Portfolio fair value hedge

(€ millions)

	REMAINING TERM			CUMULATIVE AMOUNT OF THE HEDGE-RELATED ADJUSTMENT TO THE FAIR VALUE INCLUDED IN THE CARRYING AMOUNT OF THE HEDGED ITEM RECOGNISED IN THE BALANCE SHEET		CARRYING AMOUNTS		CHANGE IN FAIR VALUE USED TO RECOGNISE AN INEFFECTIVENESS IN THE HEDGE FOR THE PERIOD
	LESS THAN 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
Balance at 31/12/2019								
Interest rate sensitivities in BPV								
Hedged items								
EUR	1	5	12					
USD	—	—	—					
CHF	—	—	—					
GBP	—	—	—					
Hedging transactions								
EUR	(1)	(6)	(11)					
USD	—	—	—					
CHF	—	—	—					
GBP	—	—	—					
Balance sheet values								
Hedged items				40	1,636			
Hedging transactions						262	456	
Hedge result								48
Hedged items								(415)
Hedging transactions								463
Balance at 31/12/2018								
Interest rate sensitivities in BPV								
Hedged items								
EUR	—	8	10					
USD	—	—	—					
CHF	—	—	—					
GBP	—	—	—					
Hedging transactions								
EUR	—	(8)	(10)					
USD	—	—	—					
CHF	—	—	—					
GBP	—	—	—					
Balance sheet values								
Hedged items				36	1,210			
Hedging transactions						269	502	
Hedge result								13
Hedged items								(33)
Hedging transactions								46

HVB Group has exercised the option of continuing to apply the provisions of IAS 39 on hedge accounting. The portfolio fair value hedge will thus be continued.

In line with the standard bank risk management procedures for the hedging of fixed interest rate risks, the interest rate risks entailed in the hedged items are managed on a cross-item basis in the portfolio fair value hedge. For this purpose, the interest-relevant cash flows of the hedged items are allocated separately by currency to maturity buckets and the net position is determined. The interest rate hedging derivatives concluded thus relate to net interest rate risk positions across several items in the respective maturity buckets and not to specific hedged items. As a hedged item may thus have different effects in the respective maturity bucket, the effects of hedge accounting are presented by reference to interest sensitivity. The statement of interest sensitivity by maturity bucket represents an adequate measure for determining the hedged interest rate risks. The table shows the changes in fair value in € millions if the interest rate changes by one basis point (BPV or 0.01%).

39 Net gains/losses on derecognition of financial instruments measured at cost

(€ millions)

	2019	2018
Loans and receivables (performing)	5	27
Buy-backs of securities issued	1	(1)
Promissory notes (assets side)	7	26
Total	**13**	**52**

40 Net other expenses/income

(€ millions)

	2019	2018
Other income	1,066	1,157
Disposal of land and buildings	60	1
Rental income	139	186
Valuation/disposals of investment properties	444	488
Other	423	482
Other expenses	(324)	(312)
Disposal of land and buildings	—	—
Valuation/disposals of investment properties	(39)	(9)
Expenses of investment properties	(28)	(55)
Bank levy	(104)	(93)
Other	(153)	(155)
Total	**742**	**845**

With regard to recognition of rental income and current operating expenses for investment properties, we have switched to the gross method of recognition. Formerly, the rental income was reduced by the current expenses and only the net amount was recognised as other income, while the breakdown was disclosed in the notes to the table. With the adjustment to the table for reporting year 2019, rental income from investment properties and mixed usage buildings of €139 million was recognised as other income and current expenses for investment properties of €28 million as other expenses. The figures for the previous year were adjusted accordingly such that other income increased by €55 million and other expenses increased by the same amount.

Net other expenses/income contains income of €242 million (previous year: €263 million) in the item "Other" and expenses of €59 million (previous year: €75 million) in "Other" in connection with the BARD Offshore 1 wind farm.

The line item "Valuation/disposals of investment properties" includes either income from valuation gains and disposals or expenses due to valuation losses and sales. Due to measurement at fair value through profit or loss of investment properties, the measurement generally has to be adjusted to the anticipated gain from the sale even before the derecognition of the asset because a certain amount of time elapses between the receipt of a binding offer for purchase/conclusion of a purchase agreement and the transfer of rights and obligations vis-à-vis the property (derecognition) in which the measurement must be adjusted at fair value through profit or loss. To that extent, both items are shown in a single line.

Notes to the Income Statement (Continued)

Net other expenses/income attributable to related parties

The item "Net other expenses/income" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	98	87
of which:		
UniCredit S.p.A.	19	14
sister companies	79	73
Joint ventures	—	—
Associates	—	—
Other participating interests	—	—
Total	**98**	**87**

41 Operating costs

(€ millions)

	2019	2018
Payroll costs	(1,453)	(1,468)
Wages and salaries	(1,168)	(1,176)
Social security costs	(175)	(179)
Pension and other employee benefit costs	(110)	(113)
Other administrative expenses	(1,220)	(1,364)
Amortisation, depreciation and impairment losses	(483)	(183)
on property, plant and equipment	(429)	(172)
on software and other intangible assets, excluding goodwill	(7)	(11)
on right of use assets (leases)	(47)	n/a
Total	**(3,156)**	**(3,015)**

With regard to amortisation, depreciation and impairment losses on intangible and tangible assets, it must be noted that impairments of €315 million were recognised on the expected purchase price in the sale of the BARD Offshore 1 wind farm. The sale has now been completed.

Wages and salaries includes payments of €4 million (previous-year period: €3 million) made upon the termination of employment contracts. The expenses for similar payments under restructuring measures are recognised under restructuring costs in the income statement and explained in the Note "Restructuring costs".

Operating costs of related parties

The item "Operating costs" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	(613)	(709)
of which:		
UniCredit S.p.A.	(17)	(22)
sister companies	(596)	(687)
Joint ventures	—	—
Associates	—	—
Other participating interests	—	—
Total	**(613)**	**(709)**

Share-based payment compliant with IFRS 2
Share-based payments were granted primarily under the Group Incentive System in the reporting period. In addition, UniCredit has two further schemes under which shares or stock options are granted that are also accounted for in accordance with IFRS 2: the Long-term Incentive Programme, the Long-term Incentive Plan (LTI 2017–2019).

Group Incentive System
The Group Incentive System has governed variable compensation payable to selected staff since the 2010 financial year. This system is built around the principle that the variable compensation is granted partially in shares and scheduled for disbursement over a number of years.

Employees whose duties have a significant impact on the Bank's risk profile are beneficiaries of the Group Incentive System. Under the Group Incentive System, the bonus granted for the respective reporting period is split into a cash component and a share component. The cash component is accounted for in accordance with IAS 19, whereas the share component is compliant with IFRS 2.

The cash component is disbursed in tranches over a period of up to five years. Accordingly, this group of employees receives 20% to 30% of the bonus for 2019 in cash with the commitment at the beginning of 2020, and a further 5% to 20% will be disbursed after financial year-end 2020, 2021, 2022 and 2024.

At the beginning of 2020, the beneficiaries receive for the remaining bonus a commitment for an allocation of shares in UniCredit S.p.A. as part of the bonus for 2019, to be transferred to the beneficiaries after financial year-end 2020 to financial year-end 2024.

The deferred payment after year-end 2020, 2021, 2022 and 2024 and the transfer of shares after year-end 2021 to 2024 to the beneficiaries is subject to the provision that, as part of a malus arrangement, it is ensured that no loss has been recorded at the level of UniCredit or at the level of the individual beneficiary, or a significant reduction in the results achieved. This deferring of the allocation therefore also determines the length of the vesting period of the individual tranches.

The fair value of the granted shares is calculated using the average stock market price of UniCredit S.p.A. shares in the month prior to the resolution by the Board of Directors in March 2020 regarding the granting, adjusted for a discount for expected dividends during the vesting period.

In the reporting period, 2.6 million UniCredit S.p.A. shares were committed as a component of the bonus granted for 2018, with a fair value of €24.9 million. If a corporate action is implemented after the grant date, the number of shares granted will be adjusted accordingly. The shares granted in 2019 as part of the bonus for 2018 will be transferred to 2021, 2022, 2023 and 2024.

The following table shows the fair values per share at the time of granting:

	2019
Fair value of the shares to be transferred in 2021 (€ per share)	10.107
Fair value of the shares to be transferred in 2022 (€ per share)	9.458
Fair value of the shares to be transferred in 2023 (€ per share)	8.686
Fair value of the shares to be transferred in 2024 (€ per share)	7.778

The granted bonuses are recognised in the income statement on a pro rata basis over the respective vesting period.

Cash component bonuses for the 2019 financial year falling due for disbursement in 2020 are recognised in full as an expense. Where cash payments are made at a later date, such payments are subject to the condition that the eligible employees remain employed by UniCredit or partly subject to further performance targets. Accordingly, the vesting period for the promised bonus consists of several financial years (target achievement plus waiting period) and is to be deferred over this period compliant with IAS 19.153 in conjunction with IAS 19.68. Thus, deferred cash payments under the bonus promised for 2019 are recognised as expense in the respective period (starting with the 2019 financial year to the end of the financial year in which the waiting period for the respective tranche ends) on a pro rata basis.

UniCredit S.p.A. delivers shares to the employees for commitments made by HVB Group once the conditions for granting shares have been met. HVB Group reimburses to UniCredit S.p.A. the expenses accruing in this regard. The expense for the shares transferred corresponds to the fair value of the shares at the grant date.

Notes to the Income Statement (Continued)

Long-term Incentive Plan (LTI 2017–2019)
The Long-term Incentive Plan 2017–2019, introduced in 2017 constitutes a further component of the remuneration system in place at UniCredit for top management (Executive Vice Presidents and above) and key players at UniCredit Bank AG. This introduces a situation where a portion of the variable compensation of top management is not specified until after an assessment period of several years. The plan consists of a performance period of three years followed by a three-year retention period with an additional obligatory holding period. The grant is wholly based on UniCredit shares. The respective tranches are subject to malus terms and a claw back arrangement which makes it possible to reclaim each individual share tranche up to 4 years after vesting.

Altogether, 10,350 UniCredit S.p.A. shares with a fair value of €0.1 million were conditionally granted for the first time in the reporting period as a component of the LTI 2017–2019. If a capital measure is carried out after the date of grant, the number of shares granted will be adjusted accordingly.

The fair value of the conditionally granted shares is calculated using the average stock market price of UniCredit S.p.A. shares in the month prior to the resolution by the Board of Directors in January 2017 regarding the granting, adjusted for a discount for expected dividends during the vesting period.

The decision on the scope to which these shares are actually granted is made at the end of the performance period, i.e. after the end of the 2019 financial year. UniCredit Bank AG bears the costs of implementation of the Long-term Incentive Plan within HVB.

	2019
Fair value of the shares to be transferred in 2020 (€ per share)	13.253
Fair value of the shares to be transferred in 2021 (€ per share)	12.821
Fair value of the shares to be transferred in 2022 (€ per share)	12.391
Fair value of the shares to be transferred in 2023 (€ per share)	11.963

UniCredit S.p.A. delivers shares to the employees for commitments made by HVB Group once the conditions for granting shares have been met. HVB Group reimburses the expenses accruing in this regard to UniCredit S.p.A. The expense for the shares transferred corresponds to the fair value of the shares at the grant date.

Analysis of outstanding shares (Group Incentive System: LTI 2017–2019):

	2019		2018	
	TOTAL	AVERAGE MATURITY	TOTAL	AVERAGE MATURITY
Outstanding at start of period	**6,451,681**	**September 2020**	**6,546,345**	**December 2019**
Additions				
Newly granted shares	2,643,322	April 2022	1,893,842	March 2021
From corporate transfers	42,424	September 2021	27,089	August 2019
Conditionally granted shares	10,350	July 2021	76,722	July 2021
Reversals				
Forfeited shares	60,999	November 2021	218,837	September 2021
Transferred shares	1,608,422	May 2019	1,738,152	May 2018
From corporate transfers	283,117	May 2021	135,328	February 2020
Expired shares	60,101	August 2021	—	—
Total at end of period	**7,135,138**	**August 2021**	**6,451,681**	**September 2020**

In the 2019 financial year, prorated expenses of €28 million (previous-year period: €29 million) accrued for the share component arising from the bonuses promised for 2014 to 2019 in the form of share-based payments compliant with IFRS 2. These expenses are recognised under payroll costs. The provision set up totalled €119 million (previous-year period: €123 million).

Stock options as a part of share-based payment:
In the years prior to 2012, HVB also used stock options for UniCredit S.p.A. shares within the scope of UniCredit's programme relating to share-based payment, where the strike price was determined before the options were issued to the beneficiary. On account of the corporate actions carried out by UniCredit S.p.A. subsequent to the issue of the options (specifically capital consolidation), these were not exercised and have lapsed. Correspondingly, there are no provisions in place as at year-end 2019 – as was the case in previous years. This also means that there are no longer any effects on operating costs. The stock of 1 million options exercisable at end of 2018 lapsed at the end of 2019. No stock of options remains.

42 Credit impairment losses IFRS 9

(€ millions)

	2019	2018
Additions	(827)	(1,051)
Allowances for losses on loans and receivables at cost	(648)	(877)
Allowances for losses on loans and receivables at FVTOCI	—	—
Allowances for losses on guarantees and indemnities	(179)	(174)
Reversals	663	1,002
Allowances for losses on loans and receivables at cost	495	811
Allowances for losses on loans and receivables at FVTOCI	—	—
Allowances for losses on guarantees and indemnities	168	191
Gains/(losses) from non-substantial modification	1	—
Recoveries from write-offs of loans and receivables	48	43
Gains/(losses) on the disposal of impaired loans and receivables	—	(10)
Total	**(115)**	**(16)**

Credit impairment losses IFRS 9 attributable to related parties
The item "Credit impairment losses IFRS 9" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	—	—
of which:		
UniCredit S.p.A.	—	—
sister companies	—	—
Joint ventures	—	—
Associates	—	11
Other participating interests	—	—
Total	**—**	**11**

43 Provisions for risks and charges

In reporting year 2019, there was income of €313 million from the reversal of provisions for risks and charges after net additions of €919 million in the previous-year period. In April of 2019, the Bank reached a settlement with the US and New York authorities to conclude the proceedings for violations of US economic sanctions in the period from 2002 to 2012. The amounts payable according to the settlement are lower than the provisions set up for it, which means that the amount in excess was able to be reversed. The net additions to provisions for risks and charges in the first half of 2018 are largely due to the increase in provisions for this matter.

Notes to the Income Statement (Continued)

44 Restructuring costs
Restructuring costs of €363 million were incurred in the reporting period (previous-year period: €14 million).

There will be an adjustment to staffing levels in the framework of implementing the Team 23 four-year strategic plan. If this is not possible through natural fluctuation or further qualification of employees for new tasks, severance agreements will be concluded. For this purpose, a new restructuring provision of €324 million has been set aside and in return, the existing restructuring provisions of €109 million will be reversed.

HVB Group has transferred its IT activities and certain back-office activities to UniCredit Services S.C.p.A., a subsidiary of UniCredit S.p.A. To that extent, the service provider is a closely associated company. UniCredit Services S.C.p.A. generally bills HVB Group at own cost for services rendered. In the context of the reorientation of the Group through Team 23, restructuring is also planned in the business areas of UniCredit Services S.C.p.A., which provides services for HVB Group. HVB Group has therefore decided to bear costs of €133 million in these areas. This one-off payment will be offset by significant cost reductions in the future, as UniCredit Services S.C.p.A. will in future be able to provide services of equal value at lower cost. This does not place HVB Group at a disadvantage.

45 Net gains/losses on disposals of investments

(€ millions)

	2019	2018
Shares in affiliated companies	(28)	28
Disposal of companies accounted for using the equity method	16	—
Writedowns	(3)	(2)
Total	**(15)**	**26**

The income from the sale of shares in affiliated companies includes the losses on disposals of investments for the sale of the subsidiary Ocean Breeze Energy GmbH & Co. KG in the amount of €23 million and for the sale of shares in the subsidiary AGROB Immobilien AG in the amount of €8 million. In this regard, it should be noted that up to the point of the transfer of the shares to the purchaser both subsidiaries are recognised, with their income and expenses under the respective items on the income statement. For instance, among other things, unscheduled write-downs are recognised under "Operating costs" for the wind farm held by the subsidiary Ocean Breeze Energy GmbH & Co. KG, while those of AGROB Immobilien AG are recognised as at fair value through profit or loss and the valuation results arising therefrom are included in the item "Net other expenses/income" in the reporting year and in previous years.

The disposal of companies accounted for using the equity method contains the gain of €15 million on the sale of our associated company SwanCap Partners GmbH, Munich.

In the previous year, shares in affiliated companies included the gains of €28 million on the sale of our subsidiary Mobility Concept GmbH, Oberhaching.

46 Impairment on goodwill
In the reporting year, goodwill of €130 million was written off completely for the Commercial Banking business segment. The impairment test to be carried out at least once a year according to IAS 36 showed that the higher of the value in use or fair value less costs to sell is lower than the business segment's carrying amount to be tested (including the goodwill) so that the goodwill allocated to this business segment must be amortised. The decline in the value in use is essentially based on an adjustment of the expected interest scenario: the assumption is now that interest rates will remain negative until the end of the planning horizon. As such, the expected net interest has been adjusted downward. As only part of this decline in projected earnings can be compensated for through cost reductions in the Commercial Banking business segment, there is a consequent decline of value in use for the segment because the value in use corresponds to the discounted surplus cash flows.

In the previous year, goodwill of €288 million was written off for the CIB business segment. This was mainly due to the fact that the value in use for the business segment was lower compared with 2017. Mostly as a result of the increased capital requirements under Basel III and the related additions of allocated equity, the recoverable surplus of the cash flows of the business segment decreases, resulting in a lower value in use (present value of the recoverable surplus of the cash flows) for the business segment.

47 Income tax for the period

(€ millions)

	2019	2018
Current taxes	(451)	(29)
Deferred taxes	(100)	(224)
Total	**(551)**	**(253)**

The current tax expense for 2019 includes tax income totalling €54 million for previous years (previous-year period: €112 million).

The deferred tax expense in the reporting period contains income totalling €28 million arising from value adjustments of deferred tax assets on tax losses carried forward and temporary differences. The counteracting deferred tax expense of €128 million resulted overall from the origination and reversal of temporary differences and the utilisation of tax losses. The deferred tax expense of the previous year has increased by €99 million to € 253 million due to the retroactive adoption of IAS 40.33 in conjunction with IAS 18.19(b) for 2018 and arises from income from the value adjustment of deferred tax assets on tax losses carried forward and temporary differences as well as an expense arising from the occurrence and reversal of temporary differences and the utilisation of tax losses.

The differences between computed and recognised income tax are shown in the following reconciliation.

(€ millions)

	2019	2018
Profit before tax	1,361	736
Applicable tax rate	31.4%	31.4%
Computed income taxes	(427)	(231)
Tax effects		
arising from previous years and changes in tax rates	(7)	47
arising from foreign income	24	15
arising from non-taxable income	25	30
arising from different tax laws	1	(8)
arising from non-deductible expenses	(165)	(138)
arising from value adjustments and the non-recognition of deferred taxes	38	121
arising from amortisation of goodwill	(41)	(90)
arising from other differences	1	1
Recognised income taxes	**(551)**	**(253)**

The tax reconciliation 2018 was also adjusted as a result of the retroactive adoption of IAS 40.33 in conjunction with IAS 8.19(b) for 2018. Profit before tax has increased from €392 million to €736 million. As a result, the corresponding computed income tax increased from minus €123 million to minus €231 million. With the exception of the item "Arising from different tax laws" (reduction from minus €17 million to minus €8 million), no additional adjustments to the tax reconciliation were necessary.

As in the previous year, an applicable tax rate of 31.4% has been assumed in the tax reconciliation. This comprises the current rate of corporate income tax in Germany of 15.0%, the solidarity surcharge of 5.5% and an average trade tax rate of 15.6%. This reflects the fact that the consolidated profit is dominated by profits generated in Germany, meaning that it is subject to German corporate income tax and trade tax.

Notes to the Income Statement (Continued)

The effects arising from tax on foreign income are in particular a result of different tax rates applicable in other countries.

Non-taxable income includes effects of gains on the disposal of investments (see Note "Gains/losses on disposal of investments").

The item "Tax effects arising from different tax laws" comprises the municipal trade tax modifications applicable to domestic companies and other local peculiarities.

The deferred tax assets and liabilities are allocated to the following items:

(€ millions)

	2019	2018
Deferred tax assets		
Other financial instruments at FVTPL	255	255
Financial instruments at FVTOCI	11	3
Loans and receivables with banks (at cost) and customers (at cost) /		
Deposits from banks/customers	79	50
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (P&L)	282	286
Property, plant and equipment / intangible assets	103	79
Other assets / other liabilities	56	42
Provisions, pension fund and similar	850	736
Losses carried forward / tax credits	115	283
Other	3	3
Total deferred tax assets	**1,754**	**1,737**
Effect of offsetting	(673)	(588)
Recognised deferred tax assets	**1,081**	**1,149**
Deferred tax liabilities		
Other financial instruments at FVTPL	216	206
Financial instruments at FVTOCI	11	5
Loans and receivables with banks (at cost) and customers (at cost) /		
Deposits from banks/customers	18	17
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (P&L)	290	290
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (OCI)	9	11
Property, plant and equipment / intangible assets	566	240
Other assets / other liabilities	73	70
Other	4	33
Total deferred tax liabilities	**1,187**	**872**
Effect of offsetting	(673)	(588)
Recognised deferred tax liabilities	**514**	**284**

As a result of the retroactive adoption of IAS 40.33 in conjunction with IAS 8.19(b), the previous year figures for deferred tax assets (reduction by €37 million from €116 million to €79 million) and deferred tax liabilities (increase by €186 million from €54 million to €240 million) were adjusted for the corresponding item property, plant and equipment/intangible assets. This adjustment includes the effects of first time adoption from IAS 40.33 of €124 million, which were recognised directly in equity and which led to a reduction of deferred tax assets or an increase in deferred tax liabilities.

Deferred taxes are normally measured using the local tax rates of the respective tax jurisdiction. German corporations use the uniform corporate income tax rate that is not dependent on any dividend distribution of 15.8%, including the solidarity surcharge, and the municipal trade tax rate dependent on the applicable municipal trade tax multiplier. As last year, this resulted in an overall valuation rate for deferred taxes of 31.4% for HVB in Germany. The applicable local tax rates are applied analogously for other domestic and foreign units. Changes in tax rates have been taken into account, provided they had already been enacted or substantially enacted by the end of the reporting period.

All in all, deferred tax assets of €347 million (previous-year period: €550 million) were recorded directly in equity. On the one hand, these mainly arise from deferred tax assets of €759 million (previous-year period: €564 million) in connection with the accounting for pension commitments in accordance with IAS 19, which are included in the aforementioned item "Provisions, pension fund and similar" and have been offset against reserves. On the other hand, they are the result of deferred tax liabilities of €402 million in connection with the valuation of real estate in accordance with IAS 16.31 and are recognised in the aforementioned item "Property, plant and equipment/intangible assets". Further deferred taxes are listed separately in the aforementioned items "Financial instruments at FVTOCI" and "Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (OCI)".

Compliant with IAS 12, no deferred tax assets have been recognised for further corporate tax loss carryforwards, of HVB Group of €919 million (previous-year period: €935 million), most of which do not expire, and trade tax carryforwards of €1,095 (previous year period: €1,195 milllion), as well as for deductible temporary differences of €948 million (previous-year period: €1,007 million).

The deferred tax assets were calculated using plans of the individual business segments, which are based on segment-specific and general macroeconomic assumptions. The amounts were measured taking into account appropriate valuation discounts. The planning horizon remained unchanged at five years. Measurement was carried out taking into account possible restrictions of local regulations regarding timing and any rules on minimum taxation for tax losses carried forward. Estimation uncertainties are inherent in the assumptions used in any multi-year plan. Where changes are made to the multi-year plan over time, this may have an impact on the valuation of the volume of deferred tax assets already capitalised or to be capitalised.

48 Earnings per share

	2019	2018
Consolidated profit attributable to the shareholder (€ millions)	793	465
Average number of shares	802,383,672	802,383,672
Earnings per share (€) (undiluted and diluted)	0.99	0.58

Notes to the Balance Sheet

49 Cash and cash balances

(€ millions)

	2019	2018
Cash on hand	6,044	5,995
Balances with central banks	20,171	13,995
Total	**26,215**	**19,990**

50 Financial assets held for trading

(€ millions)

	2019	2018
Balance-sheet financial instruments	22,966	26,694
Fixed-income securities	7,958	9,187
Equity instruments	5,641	7,520
Other financial assets held for trading	9,367	9,987
Positive fair value from derivative financial instruments	46,887	42,263
Total	**69,853**	**68,957**

The financial assets held for trading include in particular securities held for trading purposes and positive fair values of derivatives other than hedging derivatives that are disclosed in hedge accounting (shown separately in the balance sheet). Provided they are held for trading purposes, other financial instruments such as receivables from repurchase transactions, promissory notes and registered bonds are additionally carried as other financial assets held for trading within financial assets held for trading.

The financial assets held for trading include €135 million (previous year: €140 million) in subordinated assets.

Financial assets held for trading of related parties

The item “Financial assets held for trading” includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	12,538	10,786
of which:		
UniCredit S.p.A.	8,541	7,534
sister companies[1]	3,997	3,252
Joint ventures	147	86
Associates	39	1,007
Other participating interests	5	4
Total	**12,729**	**11,883**

1 Mostly derivative transactions involving UniCredit Bank Austria AG.

51 Financial assets at FVTPL

(€ millions)

	2019	2018
Fixed-income securities	13,359	15,135
Equity instruments	283	242
Loans and promissory notes	1,757	1,243
Other	75	63
Total	**15,474**	**16,683**

Financial assets at FVTPL include an amount of €32 million in subordinated loans and receivables in the reporting year (previous year: €399 million).

In the reporting year the financial assets at FVTPL include loans and receivables past due in the amount of €1 million.

52 Financial assets at FVTOCI

(€ millions)

	2019	2018
Fixed-income securities	14,673	7,370
Total	**14,673**	**7,370**

Development of loss allowance

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**7,370**	**—**	**—**	**—**	**7,370**
Transfers to another stage due to					
deterioration in credit quality	—	—	—	—	—
Transfers to another stage due to					
improvement in credit quality	—	—	—	—	—
Changes due to modifications not leading					
to derecognition	—	—	—	—	—
Changes within the stage (net)[1]	7,303	—	—	—	7,303
Derecognition (due to incollectibility)	—	—	—	—	—
Other changes	—	—	—	—	—
Balance at 31/12/2019	**14,673**	**—**	**—**	**—**	**14,673**
Balance at 1/1/2018	**6,147**	**—**	**—**	**—**	**6,147**
Transfers to another stage due to					
deterioration in credit quality	—	—	—	—	—
Transfers to another stage due to					
improvement in credit quality	—	—	—	—	—
Changes due to modifications not leading					
to derecognition	—	—	—	—	—
Changes within the stage (net)[1]	1,223	—	—	—	1,223
Derecognition (due to incollectibility)	—	—	—	—	—
Other changes	—	—	—	—	—
Balance at 31/12/2018	**7,370**	**—**	**—**	**—**	**7,370**

1 Changes within the stage (net) include additions from purchases and disposals from sales and repayments.

Notes to the Balance Sheet (Continued)

Fixed-income securities and collateral, broken down by rating class (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
31/12/2019					
Not rated	403	—	—	—	403
Rating class 1–4	14,270	—	—	—	14,270
Rating class 5–8	—	—	—	—	—
Rating class 9–10	—	—	—	—	—
Fair value at 31/12/2019	**14,673**	**—**	**—**	**—**	**14,673**
Recognised impairment					
in the OCI for these instruments	—	—	—	—	—
31/12/2018					
Not rated	—	—	—	—	—
Rating class 1–4	7,370	—	—	—	7,370
Rating class 5–8	—	—	—	—	—
Rating class 9–10	—	—	—	—	—
Fair value at 31/12/2018	**7,370**	**—**	**—**	**—**	**7,370**
Recognised impairment					
in the OCI for these instruments	—	—	—	—	—

On account of the top rating of the securities holdings, the holdings or the change in impairment is lower than €0.5 million in each case which results in a rounded amount of €0 million.

No modifications to fixed-income securities were made in the reporting year, as also in the previous year.

No collateral was provided for assets held at FVTOCI in the reporting or previous year.

53 Loans and receivables with banks (at cost)

(€ millions)

	2019	2018
Current accounts	2,539	2,192
Cash collateral and pledged credit balances	8,203	6,847
Reverse repos	15,278	17,261
Securities	915	1,342
Other loans to banks	4,907	6,006
Non-performing loans and receivables	—	—
Total	**31,842**	**33,648**

As part of credit risk management notably with regard to the counterparty risk arising from derivatives, master netting arrangements are frequently concluded that, in the event of default by the counterparty, permit all derivatives with this counterparty to be netted and positive and negative fair values of the individual derivatives to be set off to create a net receivable. Such net receivables are normally secured by cash collateral to further reduce the credit risk. This involves the debtor of the net receivable transferring money to the creditor and pledging these cash balances. The amount of the cash collateral is adjusted at regular intervals to reflect the current amount of a potential net receivable, although a receivable arising from cash collateral provided can become a liability arising from cash collateral received and vice versa depending on the balance of the potential net receivable.

Other loans to banks consist mostly of term deposits and bonds.

"Loans and receivables with banks (at cost)" include €2 thousand in subordinated assets as at the reporting date and in the previous year.

Development of the gross carrying amounts (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**33,191**	**464**	**40**	**—**	**33,695**
Change in carrying amount within the stage					
(including additions from new business and disposals)	(1,362)	(446)	(39)	—	(1,847)
Transfers to another stage due to					
deterioration in credit quality	(34)	34	—	—	—
from Stage 1 to Stage 2	(34)	34	—	—	—
from Stage 2 to Stage 3	—	—	—	—	—
from Stage 1 to Stage 3	—	—	—	—	—
Transfers to another stage due to					
improvement in credit quality	14	(14)	—	—	—
from Stage 2 to Stage 1	14	(14)	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase reported directly in equity in gross carrying					
amounts for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modifications of assets					
not leading to derecognition	—	—	—	—	—
Foreign currency movements					
and other changes	—	—	—	—	—
Balance at 31/12/2019	**31,809**	**38**	**1**	**—**	**31,848**
Balance at 1/1/2018	**30,276**	**223**	**38**	**—**	**30,537**
Change in carrying amount within the stage					
(including additions from new business and disposals)	2,729	427	2	—	3,158
Transfers to another stage due to					
deterioration in credit quality	(18)	18	—	—	—
from Stage 1 to Stage 2	(18)	18	—	—	—
from Stage 2 to Stage 3	—	—	—	—	—
from Stage 1 to Stage 3	—	—	—	—	—
Transfers to another stage due to					
improvement in credit quality	204	(204)	—	—	—
from Stage 2 to Stage 1	204	(204)	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase reported directly in equity in gross carrying					
amounts for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modifications of assets					
not leading to derecognition	—	—	—	—	—
Foreign currency movements and other changes	—	—	—	—	—
Balance at 31/12/2018	**33,191**	**464**	**40**	**—**	**33,695**

Notes to the Balance Sheet (Continued)

Analysis of allowances

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**6**	**1**	**40**	**—**	**47**
Addition due to new business	6	—	—	—	6
Change in carrying amount within the same stage (netted)[1]	(2)	—	—	—	(2)
Increase in impairment reported directly in equity for					
interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets					
not leading to derecognition	—	—	—	—	—
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	(5)	(1)	—	—	(6)
Disposals (utilisation of impairments)	—	—	(40)	—	(40)
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in profit or loss	—	—	—	—	—
Foreign currency movements and other changes	—	—	1	—	1
Balance at 31/12/2019	**5**	**—**	**1**	**—**	**6**
Balance at 1/1/2018	**6**	**4**	**38**	**—**	**48**
Addition due to new business	5	—	—	—	5
Change in carrying amount within the same stage (netted)[1]	(1)	1	—	—	—
Increase in impairment reported directly in equity for					
interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets					
not leading to derecognition	—	—	—	—	—
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	(5)	(4)	—	—	(9)
Disposals (utilisation of impairments)	—	—	—	—	—
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in profit or loss	—	—	—	—	—
Foreign currency movements and other changes	1	—	2	—	3
Balance at 31/12/2018	**6**	**1**	**40**	**—**	**47**

1 Transfers between the individual stages are also shown here (disposal at the previous stage, addition at the new stage).

Breakdown by rating class (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	COLLATERAL	TOTAL
31/12/2019						
Not rated	1,133	—	—	—	—	1,133
Rating class 1–4	29,037	7	—	—	15,155	29,044
Rating class 5–8	1,639	31	—	—	301	1,670
Rating class 9–10	—	—	1	—	—	1
Gross carrying amount at 31/12/2019	**31,809**	**38**	**1**	**—**	**15,456**	**31,848**
Impairment	(5)	—	(1)	—	—	(6)
Net carrying amount at 31/12/2019	**31,804**	**38**	**—**	**—**	**15,456**	**31,842**
31/12/2018						
Not rated	1,361	—	—	—	11	1,361
Rating class 1–4	30,317	176	—	—	147	30,493
Rating class 5–8	1,513	288	—	—	110	1,801
Rating class 9–10	—	—	40	—	—	40
Gross carrying amount at 31/12/2018	**33,191**	**464**	**40**	**—**	**268**	**33,695**
Impairment	(6)	(1)	(40)	—	n/a	(47)
Net carrying amount at 31/12/2018	**33,185**	**463**	**—**	**—**	**268**	**33,648**

There were no assets written off in the reporting period that are subject to an enforcement measure.

Loans and receivables with related parties

The item “Loans and receivables with banks (at cost)” includes the following amounts attributable to related parties: (€ millions)

	2019	2018
Non-consolidated affiliated companies	2,336	3,892
of which due from:		
UniCredit S.p.A.	1,515	2,871
sister companies[1]	821	1,021
Joint ventures	36	112
Associates	8	16
Other participating interests	6	24
Total	**2,386**	**4,044**

1 Mainly due from UniCredit Bank Austria AG.

Notes to the Balance Sheet (Continued)

54 Loans and receivables with customers (at cost)

(€ millions)

	2018	2017
Current accounts	7,154	6,641
Cash collateral and pledged cash balances	2,770	2,652
Reverse repos	3,685	3,842
Mortgage loans	48,967	46,635
Finance leases	1,767	1,847
Securities	13,221	11,248
of which: asset-backed securities (ABS)	10,216	8,266
Other loans and receivables	60,853	59,477
Non-performing loans and receivables	1,215	1,364
Total	**139,632**	**133,706**

Other loans and receivables largely comprise miscellaneous other loans, instalment loans, term deposits and refinanced special credit facilities.

As part of credit risk management notably with regard to the counterparty risk arising from derivatives, master netting arrangements are frequently concluded that, in the event of default by the counterparty, permit all derivatives with this counterparty to be netted and positive and negative fair values of the individual derivatives to be set off to create a net receivable. Such net receivables are normally secured by cash collateral to further reduce the credit risk. This involves the debtor of the net receivable transferring money to the creditor and pledging these cash balances. The amount of the cash collateral is adjusted at regular intervals to reflect the current amount of a potential net receivable, although a receivable arising from cash collateral provided can become a liability arising from cash collateral received and vice versa depending on the balance of the potential net receivable.

Loans and receivables with customers (at cost) include an amount of €4,887 million (previous year: €4,282 million) funded under the fully-consolidated Arabella conduit programme. This essentially involves buying short-term accounts payable and medium-term receivables under lease agreements from customers and funding them by issuing commercial paper on the capital market. The securitised loans and receivables essentially reflect loans and receivables of European borrowers, with the majority of the loans and receivables relating to German borrowers.

In the reporting year, loans and receivables with customers (at cost) include €103 million (previous year: €34 million) in subordinated assets.

Development of gross carrying amounts (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**124,753**	**7,915**	**2,984**	**—**	**135,652**
Change in carrying amount within the stage					
(including additions from new business and disposals)	9,217	(2,173)	(1,313)	—	5,731
Transfers to another stage due to					
deterioration in credit quality	(8,318)	7,297	1,021	—	—
from Stage 1 to Stage 2	(7,444)	7,444	—	—	—
from Stage 2 to Stage 3	—	(147)	147	—	—
from Stage 1 to Stage 3	(874)	—	874	—	—
Transfers to another stage due to					
improvement in credit quality	2,081	(1,979)	(102)	—	—
from Stage 2 to Stage 1	2,031	(2,031)	—	—	—
from Stage 3 to Stage 2	—	52	(52)	—	—
from Stage 3 to Stage 1	50	—	(50)	—	—
Increase reported directly in equity in gross carrying amounts					
for interest claims not recognised in profit or loss	—	—	79	—	79
Changes due to modifications of assets					
not leading to derecognition	—	—	—	—	—
Foreign currency movements					
and other changes	—	—	—	—	—
Balance at 31/12/2019	**127,733**	**11,060**	**2,669**	**—**	**141,462**
Balance at 1/1/2018	**112,514**	**6,818**	**3,874**	**—**	**123,206**
Change in carrying amount within the stage					
(including additions from new business and disposals)	14,113	(458)	(1,286)	—	12,369
Transfers to another stage due to					
deterioration in credit quality	(4,215)	3,732	483	—	—
from Stage 1 to Stage 2	(3,873)	3,873	—	—	—
from Stage 2 to Stage 3	—	(141)	141	—	—
from Stage 1 to Stage 3	(342)	—	342	—	—
Transfer to another stage due to					
improvement in credit quality	2,341	(2,177)	(164)	—	—
from Stage 2 to Stage 1	2,293	(2,293)	—	—	—
from Stage 3 to Stage 2	—	116	(116)	—	—
from Stage 3 to Stage 1	48	—	(48)	—	—
Increase reported directly in equity in gross carrying amounts					
for interest claims not recognised in profit or loss	—	—	52	—	52
Changes due to modifications of assets					
not leading to derecognition	—	—	2	—	2
Foreign currency movements					
and other changes	—	—	23	—	23
Balance at 31/12/2018	**124,753**	**7,915**	**2,984**	**—**	**135,652**

Notes to the Balance Sheet (Continued)

Analysis of allowances

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**139**	**187**	**1,620**	**—**	**1,946**
Addition due to new business	72	—	—	—	72
Change in carrying amount within the same stage (netted)[1]	(31)	91	300	—	360
Increase in impairment reported directly in equity for interest					
claims not recognised in profit or loss	—	—	79	—	79
Changes due to modification of assets					
not leading to derecognition	—	—	1	—	1
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivables)	(40)	(40)	(271)	—	(351)
Disposals (utilisation of impairments)	—	—	(253)	—	(253)
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in profit or loss	—	—	(29)	—	(29)
Foreign currency movements					
and other changes	(1)	(1)	7	—	5
Balance at 31/12/2019	**139**	**237**	**1,454**	**—**	**1,830**
Balance at 1/1/2018	**140**	**181**	**1,953**	**—**	**2,274**
Addition due to new business	109	—	—	—	109
Change in carrying amount within the same stage (netted)[1]	(42)	56	361	1	376
Increase in impairment reported directly in equity for interest					
claims not recognised in profit or loss	—	—	52	—	52
Changes due to modification of assets					
not leading to derecognition	—	—	2	—	2
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivables)	(55)	(61)	(405)	—	(521)
Disposals (utilisation of impairments)	—	—	(271)	(1)	(272)
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in profit or loss	—	—	(46)	—	(46)
Foreign currency movements					
and other changes	(13)	11	(26)	—	(28)
Balance at 31/12/2018	**139**	**187**	**1,620**	**—**	**1,946**

1 Transfers between the individual stages are also shown here (disposal at the previous stage, addition at the new stage).

Breakdown by rating class (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	COLLATERAL	TOTAL
31/12/2019						
Not rated	11,384	15	4	—	750	11,403
Rating class 1–4	94,048	2,837	—	—	42,690	96,885
Rating class 5–8	22,301	8,208	3	—	16,680	30,512
Rating class 9–10	—	—	2,662	—	493	2,662
Gross carrying amount at 31/12/2019	**127,733**	**11,060**	**2,669**	**—**	**60,613**	**141,462**
Impairment	(139)	(237)	(1,454)	—	—	(1,830)
Net carrying amount at 31/12/2019	**127,594**	**10,823**	**1,215**	**—**	**60,613**	**139,632**
31/12/2018						
Not rated	7,597	16	4	—	438	7,617
Rating class 1–4	94,003	1,729	1	—	39,284	95,733
Rating class 5–8	23,153	6,170	23	—	15,580	29,346
Rating class 9–10	—	—	2,956	—	569	2,956
Gross carrying amount at 31/12/2018	**124,753**	**7,915**	**2,984**	**—**	**55,871**	**135,652**
Impairment	(139)	(187)	(1,620)	—	n/a	(1,946)
Net carrying amount at 31/12/2018	**124,614**	**7,728**	**1,364**	**—**	**55,871**	**133,706**

The amount outstanding from assets written off in the reporting period which are subject to an enforcement measure totals €325 million (previous year: €174 million).

Loans and receivables with related parties

The item "Loans and receivables with customers (at cost)" includes the following amounts attributable to related parties: (€ millions)

	2019	2018
Non-consolidated affiliated companies	4	6
of which:		
sister companies	2	3
subsidiaries	2	3
Joint ventures	11	15
Associates	45	115
Other participating interests	422	473
Total	**482**	**609**

Amounts receivable from customers under lease agreements (receivables under finance leases)

The amounts receivable under finance lease agreements contained in the item "Loans and receivables with customers (at cost)" are described in more detail in the Note "Information regarding lease operations".

Notes to the Balance Sheet (Continued)

55 Forbearance

The European Banking Authority (EBA) defines forborne exposures as debt contracts in respect of which forbearance measures have been extended. Forbearance measures consist of concessions towards a debtor facing or about to face difficulties in meeting its financial commitments that the lender would not have been prepared to grant under other circumstances. Possible measures range from deferrals and temporary moratoriums, longer periods allowed for repayment, reduced interest rates and rescheduling, and even partial debt forgiveness. It should be noted, however, that not every modification of a lending agreement is due to financial difficulties on the part of the borrower and represents forbearance.

Forborne exposures may be classified as performing or non-performing under the EBA definition. The non-performing portfolio encompasses exposures for which the counterparty is listed at Stage 3 and exposures that do not yet satisfy the EBA's strict criteria for returning to the performing portfolio. The following table shows the breakdown of the forborne exposure portfolio at the reporting date:

(€ millions)

	2019			2018		
	CARRYING AMOUNT BEFORE ALLOWANCES	ALLOWANCES	CARRYING AMOUNT	CARRYING AMOUNT BEFORE ALLOWANCES	ALLOWANCES	CARRYING AMOUNT
Performing exposures	414	(4)	410	530	(8)	522
Non-performing exposures	1,493	(831)	662	1,577	(882)	695
Total	**1,907**	**(835)**	**1,072**	**2,107**	**(890)**	**1,217**

An amount of €1,072 million is carried as forborne exposures under "Loans and receivables with customers (at cost)" (previous year: €1,217 million). No forborne exposures are contained in the "Loans and receivables with banks (at cost)", as was the case in the previous year. No securities with forbearance measures were held at the reporting date, as was the case in the previous year.

If allowances have not already been set up for forborne exposures, the loans involved are exposed to increased default risk as they have already become conspicuous. They are thus allocated to Stage 2. Such exposures are closely tracked by the restructuring units or subject to strict monitoring by the back-office units.

56 Hedging derivatives

(€ millions)

	2019	2018
Micro fair value hedge	2	7
Fair value hedge portfolio[1]	262	269
Total	**264**	**276**

1 The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the fair value hedge portfolio.

57 Investments in associates and joint ventures accounted for using the equity method

(€ millions)

	2019	2018
Associates accounted for using the equity method	10	23
of which: goodwill	—	—
Joint ventures accounted for using the equity method	—	—
Total	**10**	**23**

For materiality reasons, two joint ventures and two associates were not accounted for using the equity method in the consolidated financial statements.

Change in portfolio of investments in associates accounted for using the equity method

(€ millions)

	ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD	
	2019	2018
Carrying amounts at 1/1	**23**	**34**
Additions	1	2
Purchases[1]	—	—
Write-ups	—	—
Changes from currency translation	—	1
Other additions[2]	1	1
Disposals	(14)	(13)
Sales	(9)	—
Impairments	(3)	(2)
Changes from currency translation	(2)	—
Non-current assets or disposal groups held for sale	—	(9)
Other disposals[2]	—	(2)
Carrying amounts at 31/12	**10**	**23**

1 Also including capital increases.
2 Also including changes in the group of companies included in consolidation.

None of the companies included in the consolidated financial statements using the equity method is individually significant for the consolidated financial statements of HVB Group. The following table shows in aggregate form the main items in the income statements of the companies accounted for using the equity method:

(€ millions)

	2019	2018
Net interest	(2)	(5)
Net gains/(losses) on financial assets and liabilities at fair value	—	(6)
Net other expenses/income	85	104
Operating costs	(75)	(102)
Profit/(loss) before tax	**8**	**(9)**
Income tax	(2)	(1)
Consolidated profit/(loss)	**6**	**(10)**
Other comprehensive income	**—**	**—**
Total comprehensive income	**6**	**(10)**

There were no changes in volume arising from other comprehensive income and other equity items at companies accounted for using the equity method. There was no prorated loss during the reporting period or the previous year from companies accounted for using the equity method. Furthermore, there were no prorated cumulative losses in the reporting period or the previous year from companies accounted for using the equity method.

There are no material commitments arising from contingent liabilities of associates.

Notes to the Balance Sheet (Continued)

58 Property, plant and equipment

(€ millions)

	2019	2018
Land and buildings	1,915	922
Plant and office equipment	307	329
Right-of-use assets (leases)	285	n/a
of which: land and buildings	273	n/a
Other property, plant and equipment	—	1,238
Total	**2,507**	**2,489**

Other property, plant and equipment essentially includes the BARD Offshore 1 wind farm owned by the subsidiary Ocean Breeze Energy GmbH & Co. KG.

This item also includes grants of €53 million provided by the European Union in previous years that are classified as government grants in accordance with IAS 20. Compliant with IAS 20.24, these grants have been deducted from the initial cost of the other property, plant and equipment on the assets side of the balance sheet. The cash funds were granted on condition that specific expenses could be demonstrated by Ocean Breeze Energy GmbH & Co. KG. The company has provided the necessary evidence.

The quantity of land and buildings has been reduced due to the reclassification at the half-year of certain properties ("Am Tucherpark" site) as "Non-current assets or disposal groups held for sale". As a result of the change in valuation according to the revaluation model in line with IAS 16 and the associated revaluation, undisclosed reserves have been increased and the carrying amount adjusted to the fair value as of 31 December 2019. Whereas for the reporting year the land and buildings were valued at amortised cost (including possible unscheduled write-downs or write-ups), the revaluation method was adopted prospectively with effect from 31 December 2019. The effect of the revaluation recognised in development of property, plant and equipment includes both capital gains in the amount of €1,253 million recognised in other comprehensive income and the impairment losses of €36 million posted at fair value through profit and loss. Whereas, in the context of measurement at cost, the recoverable amount to be written down in the event of an impairment is based on the property itself (land or building), the revaluation model breaks down carrying amounts into land and buildings. The result was that in some exceptional cases, there were write-downs on land or buildings due to the revaluation, while there was a corresponding write-up on the buildings or land for the same property.

The BARD Offshore 1 wind farm (including other assets) belonging to the Ocean Breeze Energy GmbH & Co. KG subsidiary, which was recognised under other property, plant and equipment, was reclassified to the item "Non-current assets or disposal groups held for sale" with effect from 30 June 2019. As a result of the sale of the Ocean Breeze Energy GmbH & Co. KG subsidiary at the end of 2019, these assets were derecognised.

Development of property, plant and equipment (€ millions)

	LAND AND BUILDINGS	PLANT AND OFFICE EQUIPMENT	RIGHT-OF-USE ASSETS (LEASES)[1]	TOTAL INTERNALLY USED PROPERTY, PLANT AND EQUIPMENT	OTHER PROPERTY, PLANT AND EQUIPMENT	TOTAL PROPERTY, PLANT AND EQUIPMENT[2]
Acquisition costs at 1/1/2019	**2,051**	**890**	**341**	**3,282**	**1,735**	**5,017**
Write-downs and write-ups from previous years	(1,129)	(561)	(18)	(1,708)	(497)	(2,205)
Carrying amounts at 1/1/2019	**922**	**329**	**323**	**1,574**	**1,238**	**2,812**
Additions				—		
Acquisition/production costs	24	30	32	86	3	89
Write-ups	8	—	—	8	—	8
Changes from currency translation	—	—	—	—	—	—
Other additions[3]	6	3	6	15	—	15
Disposals						
Sales	(1)	(6)	—	(7)	—	(7)
Amortisation and write-downs	(27)	(45)	(47)	(119)	(58)	(177)
Impairments	—	(4)	(6)	(10)	(259)	(269)
Changes from currency translation	—	—	(1)	(1)	—	(1)
Non-current assets or disposal groups held for sale	(214)	—	(16)	(230)	(924)	(1,154)
Other disposals[3]	(20)	—	(6)	(26)	—	(26)
Carrying amount at 31/12/2019						
(measurement at amortised cost)	**698**	**307**	**285**	**1,290**	**—**	**1,290**
Effects from remeasurement compliant with IAS 16	1,217	—	—	1,217	—	1,217
Carrying amounts at 31/12/2019	**1,915**	**307**	**285**	**2,507**	**—**	**2,507**
Write-downs and write-ups from previous years plus the						
reporting year, adjusted for remeasurement effects	(331)	554	67	290	—	290
Acquisition costs at 31/12/2019	**1,584**	**861**	**352**	**2,797**	**—**	**2,797**
Acquisition costs at 1/1/2018	**2,213**	**991**	**n/a**	**3,204**	**1,699**	**4,903**
Write-downs and write-ups from previous years	(1,227)	(627)	n/a	(1,854)	(386)	(2,240)
Carrying amounts at 1/1/2018	**986**	**364**	**n/a**	**1,350**	**1,313**	**2,663**
Additions						
Acquisition/production costs	29	88	n/a	117	36	153
Write-ups	24	—	n/a	24	—	24
Changes from currency translation	—	—	n/a	—	—	—
Other additions[3]	—	4	n/a	4	—	4
Disposals				—		—
Sales	—	(4)	n/a	(4)	—	(4)
Amortisation and write-downs	(33)	(53)	n/a	(86)	(111)	(197)
Impairments	(17)	(4)	n/a	(21)	—	(21)
Changes from currency translation	—	—	n/a	—	—	—
Non-current assets or disposal groups held for sale	(66)	—	n/a	(66)	—	(66)
Other disposals[3]	(1)	(66)	n/a	(67)	—	(67)
Carrying amounts at 31/12/2018	**922**	**329**	**n/a**	**1,251**	**1,238**	**2,489**
Write-downs and write-ups from previous years						
plus the reporting year	1,129	561	n/a	1,690	497	2,187
Acquisition costs at 31/12/2018	**2,051**	**890**	**n/a**	**2,941**	**1,735**	**4,676**

1 The acquisition costs of the right-of-use assets correspond to the lease liabilities. Please refer to the explanations on “First-time adoption of IFRS 16 Leases” in the section “Accounting and valuation methods” for more information.
2 Including leased assets. More information about leases is contained in Note “Information regarding lease operations”.
3 Including changes in the group of companies included in consolidation.

Notes to the Balance Sheet (Continued)

59 Investment properties

Investment properties are measured at fair value. As each property is unique and the fair value is determined by expert opinions that take into account the special features of the property being valued, all fair values for investment properties reported in this balance sheet item are allocated to Level 3.

The net carrying amount of right-of-use assets from lease agreements classified as investment properties under investment properties is €61 million at the reporting date (previous year: €56 million).

Development of investment properties (€ millions)

	2019	2018
Carrying amounts at 1/1	**563**	**1,052**
Additions		
Acquisition/production costs	—	—
Valuation profit	109	458
Subsequent expenses	—	—
Changes from currency translation	—	—
Other additions[1]	16	1
Disposals		
Sales	(13)	(2)
Valuation loss	(39)	(9)
Changes from currency translation	—	—
Non-current assets or disposal groups held for sale	(94)	(937)
Other disposals[1]	(189)	—
Carrying amounts at 31/12	**353**	**563**

1 Also including changes in the group of companies included in consolidation.

60 Intangible assets

(€ millions)

	2019	2018
Goodwill	—	130
Other intangible assets	15	19
Internally generated intangible assets	9	12
Other intangible assets	6	7
Total	**15**	**149**

Development of intangible assets

(€ millions)

	GOODWILL FROM AFFILIATED COMPANIES		INTERNALLY GENERATED INTANGIBLE ASSETS		OTHER INTANGIBLE ASSETS	
	2019	2018	2019	2018	2019	2018
Acquisition costs at 1/1	**1,042**	**1,042**	**387**	**386**	**183**	**183**
Write-downs and write-ups from previous years	(912)	(624)	(375)	(369)	(176)	(173)
Carrying amounts at 1/1	**130**	**418**	**12**	**17**	**7**	**10**
Additions						
Acquisition/production costs	—	—	2	1	2	2
Write-ups	—	—	—	—	—	—
Changes from currency translation	—	—	—	—	—	—
Other additions	—	—	—	—	—	—
Disposals						
Sales	—	—	—	—	—	—
Amortisation and write-downs	—	—	(5)	(6)	(3)	(5)
Impairments	(130)	(288)	—	—	—	—
Changes from currency translation	—	—	—	—	—	—
Non-current assets or disposal groups held for sale	—	—	—	—	—	—
Other disposals[1]	—	—	—	—	—	—
Carrying amounts at 31/12	**—**	**130**	**9**	**12**	**6**	**7**
Write-downs and write-ups from previous years plus year under review	1,042	912	380	375	172	176
Acquisition costs at 31/12	**1,042**	**1,042**	**389**	**387**	**178**	**183**

1 Also including changes in the group of companies included in consolidation.

HVB no longer generates any software internally. Software is provided to HVB by the UniCredit-wide service provider UniCredit Services S.C.p.A.

Notes to the Balance Sheet (Continued)

61 Non-current assets or disposal groups held for sale

(€ millions)

	2019	2018
Cash and cash balances	—	—
Financial assets at FVTPL	—	—
Financial assets at FVTOCI	—	—
Loans and receivables with banks (at cost)	—	—
Loans and receivables with customers (at cost)	—	—
Investments in associates and joint ventures accounted for using the equity method	—	9
Property, plant and equipment	215	66
Investment properties	229	1,100
Tax assets	—	—
Other assets	—	—
Total	**444**	**1,175**

With regard to the previous-year figures, a reclassification of €66 million from investment properties to property, plant and equipment was made in the table. This relates to two properties that were originally let to third parties but are now partly used by the Bank so that they no longer meet the criteria for classification as investment property. Non-strategic real estate held for sale is reported under investment properties.

As at 30 June 2019, property, plant and equipment totalling €1,151 million was classified as non-current assets or disposal groups held for sale. This related to the planned disposal of the subsidiary Ocean Breeze Energy GmbH & Co. KG, Bremen, which operates the BARD Offshore 1 wind farm, and other land and buildings. Furthermore, the carrying amount of an associate accounted for using equity method, the disposal of which was completed in the second half of the year, has been reclassified according to IFRS 5.

In the reporting year, all assets classified as "Non-current assets or disposal groups held for sale" were generally disposed of, except for the buildings reclassified at half-year 2019 at the "Am Tucherpark" site as well as three smaller properties. Apart from a small property, which is targeted for sale in the third quarter of 2020, the properties shown in this balance sheet item were sold at the beginning of 2020.

In the reporting year, write-downs of €317 million were recognised on assets classified as non-current assets held for sale or disposal groups for the first time in the reporting period. The write-downs related almost exclusively to the BARD Offshore 1 wind farm, which was written down to the expected proceeds from the disposal. No write-downs were necessary in the previous year.

Development of investment properties, classified as non-current assets and disposal groups held for sale

(€ millions)

	2019	2018
Carrying amounts at 1/1	**1,100**	**244**
Additions		
Acquisition/production costs	—	—
Valuation gains	295	30
Subsequent expenses	—	—
Changes from currency translation	—	—
Other additions[1]	93	937
Disposals		
Sales	(1,259)	(111)
Valuation losses	—	—
Changes from currency translation	—	—
Non-current assets or disposal groups held for sale	—	—
Other disposals[1]	—	—
Carrying amounts at 31/12	**229**	**1,100**

1 Also including changes in the group of companies included in consolidation

Fair value level hierarchy

Assets or liabilities whose valuation is derived from directly observable (prices) or indirectly observable (derived from prices) input data (valuation parameters) are generally shown in Level 2. No price can be observed on an active market for the assets or liabilities concerned themselves. As real estate represents a unique item, no trading is conducted in the same property. Nor is there an observable price available on an active market. However, offers submitted within the scope of a selling process constitute observable input data for a fair value calculation, as the real estate may be sold at this price on the basis of binding or reliable non-binding offers.

Level 3 fundamentally relates to assets or liabilities, whose fair value is not calculated exclusively on the basis of observable market data (non-observable input data). External valuation reports are based on generally recognised valuation procedures that refer to parameters for the property that are determined by external assessors (such as the current market rent assumed for the property). The respective fair values therefore feature valuation parameters that are based on model assumptions.

The following table shows the allocation of the investment properties measured at fair value to the respective fair value level hierarchy: (€ millions)

	FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Investment properties, classified as non-current assets				
or disposal groups held for sale	229	415	—	685

Development of investment properties allocated to Level 3: (€ millions)

	2019	2018
Carrying amount at 1/1	**685**	**244**
Additions to the portfolio (classified as Level 3)	—	552
Additions due to reclassification from Level 2 to Level 3	—	—
Disposals from the portfolio (classified as Level 3)	—	—
Disposals due to reclassification from Level 3 to Level 2	(685)	(111)
Carrying amount at 31/12	**—**	**685**

Reclassification from Level 3 to Level 2 concerns properties for which the fair value is not determined on the basis of external valuation reports but on the basis of binding or reliable non-binding offers received in the course of the selling process.

There were no reclassifications from Level 2 to Level 3.

Notes to the Balance Sheet (Continued)

62 Other assets

Other assets include prepaid expenses of €124 million (previous year: €131 million).

This item also includes real estate of €388 million (previous year: €306 million) which is purchased by the WealthCap group belonging to HVB in order to either transfer it to funds and place the fund units with investors or sell it directly to institutional investors. These assets are recognised at cost. There are no reasons for a write-down to lower disposal proceeds.

63 Own securitisation

The Bank has securitised its own loan receivables for the purpose of obtaining favourable funding terms on the capital market and generating securities for use as collateral in repurchase agreements.

This involves structuring the cash flows of the underlying loan portfolio, meaning that at least two hierarchical positions (tranches) are formed when dividing up the risks and cash flows. In the case of traditional securitisations (true sale), receivables are sold to a special purpose entity which in turn issues securities.

In the case of the true sale transactions Rosenkavalier 2008 (€3.1 billion), Rosenkavalier 2015 (€3.5 billion) and Geldilux 2015 (€2.1 billion) HVB retained all of the tranches issued by the special purpose entity. The senior positions (or senior tranches) of securities generated in this way can, if required, be used as collateral for repurchase agreements with the European Central Bank (ECB). The underlying receivables continue to be recognised by HVB and the special purpose entities set up for this purpose are fully consolidated in accordance with IFRS 10. The risk-weighted assets have not been reduced.

64 Deposits from banks

(€ millions)

	2019	2018
Deposits from central banks	17,562	16,886
Deposits from banks	52,759	46,057
Current accounts	3,095	2,691
Cash collateral and pledged credit balances	8,074	9,289
Repos	21,786	16,484
Term deposits	6,713	4,772
Other liabilities	13,091	12,821
Total	**70,321**	**62,943**

As part of credit risk management notably with regard to the counterparty risk arising from derivatives, netting arrangements are frequently concluded that, in the event of default by the counterparty, permit all derivatives with this counterparty to be netted and positive and negative fair values of the individual derivatives to be set off to create a net receivable. Such net receivables are normally secured by cash collateral to further reduce the credit risk. This involves the debtor of the net receivable transferring money to the creditor and pledging these cash balances. The amount of the cash collateral is adjusted at regular intervals to reflect the current amount of a potential net receivable, although a receivable arising from cash collateral provided can become a liability arising from cash collateral received and vice versa depending on the balance of the potential net receivable.

Amounts owed to related parties

The item "Deposits from banks" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	5,114	6,103
of which:		
UniCredit S.p.A.	2,757	2,626
sister companies[1]	2,357	3,477
Joint ventures	—	19
Associates	29	79
Other participating interests	20	23
Total	**5,163**	**6,224**

1 Largest single items relate to UniCredit Bank Austria AG.

Notes to the Balance Sheet (Continued)

65 Deposits from customers

(€ millions)

	2019	2018
Current accounts	79,414	76,334
Cash collateral and pledged credit balances	5,824	3,948
Savings deposits	13,634	13,659
Repos	2,841	6,196
Term deposits	20,731	18,075
Promissory notes	1,382	1,638
Lease liabilities	467	n/a
Other liabilities	1,101	1,188
Total	**125,394**	**121,038**

Lease liabilities contain liabilities from leases previously classified as operating leases in accordance with IAS 17 and which are recognised for the first time in the course of the implementation of IFRS 16. These are shown here together with existing liabilities from finance leases. Liabilities from new leases entered into in 2019 are also included.

As part of credit risk management notably with regard to the counterparty risk arising from derivatives, netting arrangements are frequently concluded that, in the event of default by the counterparty, permit all the derivatives with this counterparty to be netted and positive and negative fair values of the individual derivatives to be set off to create a net receivable. Such net receivables are normally secured by cash collateral to further reduce the credit risk. This involves the debtor of the net receivable transferring money to the creditor and pledging these cash balances. The amount of the cash collateral is adjusted at regular intervals to reflect the current amount of a potential net receivable, although a receivable arising from cash collateral provided can become a liability arising from cash collateral received and vice versa depending on the balance of the potential net receivable.

Amounts owed to related parties

The item "Deposits from customers" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	325	241
of which:		
sister companies	271	236
subsidiaries	54	5
Joint ventures	3	4
Associates	—	1
Other participating interests	294	320
Total	**622**	**566**

66 Debt securities in issue

(€ millions)

	2019	2018
Bonds	25,770	21,746
of which:		
registered Mortgage Pfandbriefe	4,529	4,766
registered Public Pfandbriefe	2,258	2,590
Mortgage Pfandbriefe	12,125	8,216
Public Pfandbriefe	778	85
registered bonds	4,120	3,146
Other securities	2,486	2,614
Total	**28,256**	**24,360**

Debt securities in issue, payable to related parties

The item "Debt securities in issue" includes the following amounts attributable to related parties:

(€ millions)

	2019	2018
Non-consolidated affiliated companies	1,000	1,000
of which:		
UniCredit S.p.A.	1,000	1,000
sister companies	—	—
Joint ventures	—	—
Associates	—	—
Other participating interests	—	—
Total	**1,000**	**1,000**

67 Financial liabilities held for trading

(€ millions)

	2019	2018
Negative fair values arising from derivative financial instruments	41,201	37,224
Other financial liabilities held for trading	5,464	10,881
Total	**46,665**	**48,105**

The negative fair values arising from derivative financial instruments are carried as financial liabilities held for trading purposes. Also included under other financial liabilities held for trading purposes are warrants, certificates and bonds issued by our trading department as well as delivery obligations arising from short sales of securities held for trading purposes.

68 Financial liabilities at FVTPL

The item contains exclusively own structured issues of €5,936 million (previous year: €5,152 million).

The difference between the carrying amount and the contractual amount payable amounts to €198 million (previous year: €179 million).

69 Hedging derivatives

(€ millions)

	2019	2018
Micro fair value hedge	357	96
Fair value hedge portfolio[1]	456	502
Total	**813**	**598**

1 The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the fair value hedge portfolio.

Notes to the Balance Sheet (Continued)

70 Hedge adjustment of hedged items in the fair value hedge portfolio

The hedge adjustment of interest rate hedged receivables and liabilities in the fair value hedge portfolio total €1,636 million net (previous year: €1,210 million). The fair value of the netted fair value hedge portfolio derivatives represents a net comparable amount resulting from a move in the opposite direction.

71 Other liabilities

Other liabilities totalling €1,857 million (previous year: €1,649 million) essentially encompass deferred income and accruals compliant with IAS 37. Accruals include, notably, commitments arising from accounts payable with invoices outstanding, as well as short-term liabilities to employees.

72 Provisions

(€ millions)

	2019	2018
Provisions for pensions and similar obligations	1,339	801
Allowances for losses on financial guarantees and irrevocable credit commitments	225	214
Restructuring provisions	378	256
Other provisions	801	2,182
Payroll provisions	356	383
Provisions related to tax disputes (without income taxes)	38	28
Provisions for rental guarantees and dismantling obligations	95	154
Other provisions	312	1,617
Total	**2,743**	**3,453**

The effects arising from changes in the discount rate and compounding led to an increase of €2 million (previous year: €3 million) in provisions recognised in the income statement in the reporting period. The effect arising from changes in the discount rate used for pension provisions is recognised in OCI.

Provisions for pensions and similar obligations

HVB Group grants its employees post-employment benefits that are structured as defined benefit plans or defined contribution plans.

In the case of defined benefit plans, the Bank undertakes to pay a defined future pension. The financial resources required to do so in the future can be accrued within the company (internal financing) or by payment of specific amounts to external pension funds (external financing).

In the case of defined contribution plans, the Bank undertakes to pay defined contributions to external pension funds which will later make the pension payments. Apart from paying the periodic contributions, the company has de facto no further obligations.

Defined benefit plans

Characteristics of the plans

The provisions for pensions and similar obligations include the direct commitments to HVB Group employees under company pension plans. These defined benefit plans are based in part on final salaries and in part on building-block schemes involving dynamic adjustment of vested rights. Fund-linked plans with a guaranteed minimum rate of interest of 2.75% have been granted in Germany since 2003.

The obligations financed by Pensionskasse der HypoVereinsbank VVaG (HVB Pensionskasse) are included in the disclosures regarding pension obligations (the total includes the obligations of HVB Unterstützungskasse e.V. reinsured by HVB Pensionskasse). The standard HVB Group valuation parameters are used when calculating these obligations. Any plan surplus is subject to the rules governing the asset ceiling, as the assets belong to the members of HVB Pensionskasse.

HVB Group set up plan assets in the form of contractual trust arrangements (CTA). This involved transferring the assets required to fund its pension obligations to legally independent trustees, including HVB Trust e.V., which manage the assets in line with the applicable trustee contracts.

There are no legal or regulatory minimum funding requirements in Germany.

HVB Group reorganised its company plans for pensioners (direct commitments) in 2009. HVB Trust Pensionsfonds AG (pension fund) was set up in this process. Both the pension obligations to pensioners who in October 2009 had already received pension benefits from the Bank and the assets required to cover these obligations were transferred to the pension fund. In December 2016, pension commitments and obligations of the Bank were again transferred to the pension fund for further beneficiaries who in October 2016 had already received pension benefits and the corresponding plan assets to cover the beneficiaries' claims. The pensioners' pension claims are not affected by the transfer; HVB continues to guarantee the pension. The pension fund is a legally independent institution regulated by the German Federal Financial Supervisory Authority (BaFin).

HVB Group is exposed to various risks in connection with its defined benefit plans. Potential pension risks exist with regard to both the benefit obligations (liabilities side) and the plan assets allocated to cover the beneficiaries' claims (assets side). The defined benefit obligations are exposed to actuarial risks such as interest rate risk, longevity risk, salary- and pension-adjustment risk and inflation risk. In the case of fund-linked pension obligations, there is the risk that it will prove impossible in the long run to generate the guaranteed interest rate of 2.75% from the funds allocated to the pension commitments, given persistently low interest rates. With regard to the capital investment, the assets are primarily exposed to market risk such as price risks in securities holdings or changes in the value of real estate investments.

The major pension risk is thus expressed as a deterioration in the funded status as a result of unfavourable developments of defined benefit obligations and/or plan assets, since the sponsoring companies are required to act to service the beneficiaries' claims in the event of any plan deficits. No unusual, company-specific or plan-specific risks or material risk concentrations that could affect the Group's pension plans are currently identifiable.

Reconciliations

The amounts arising under defined benefit plans for post-employment benefits recognised in the consolidated balance sheet can be derived as follows:

(€ millions)

	2019	2018
Present value of funded pension obligations	5,641	4,859
Fair value of plan assets	(4,314)	(4,073)
Funded status	**1,327**	**786**
Present value of unfunded pension obligations	12	15
Net liability (net asset) of defined benefit plans	**1,339**	**801**
Asset ceiling	—	—
Capitalised excess cover of plan assets	—	—
Recognised pension provisions	**1,339**	**801**

Notes to the Balance Sheet (Continued)

The following tables show the development of the present value of the total (funded and unfunded) pension obligations, the fair value of the plan assets and the net defined benefit liability (net assets) from defined benefit plans resulting from the offsetting of these totals. The tables also show the changes in the effects of the asset ceiling during the reporting period and the reconciliations from the opening to the closing balance of the capitalised excess cover of plan assets and the recognised provisions for pensions and similar obligations:

(€ millions)

	PRESENT VALUE OF PENSION COMMITMENTS	FAIR VALUE OF PLAN ASSETS	NET LIABILITY (NET ASSET) OF DEFINED BENEFIT PLANS	ASSET CEILING	CAPITALISED EXCESS COVER OF PLAN ASSETS	RECOGNISED PENSION PROVISIONS
Balance at 1/1/2019	**4,874**	**(4,073)**	**801**	**—**	**—**	**801**
Service cost component						
Current service cost	62	—	62	—	—	62
Past service cost	—	—	—	—	—	—
Gains/(losses) on settlement	—	—	—	—	—	—
Net interest component						
Interest expense/(income)	102	(86)	16	—	—	16
Service costs and net interest of defined benefit plans recognised in profit or loss for the period	**164**	**(86)**	**78**	**—**	**—**	**78**
Remeasurement component						
Gains/(losses) on plan assets excluding amounts included in net interest on the net defined benefit liability (asset)	—	(101)	(101)	—	—	(101)
Actuarial gains/(losses) – demographic assumptions	—	—	—	—	—	—
Actuarial gains/(losses) – financial assumptions	734	—	734	—	—	734
Actuarial gains/(losses) – experience adjustments	(9)	—	(9)	—	—	(9)
Changes due to asset ceiling excluding amounts included in net interest on the net defined benefit liability (asset)	—	—	—	—	—	—
Remeasurement component of defined benefit plans recognised in OCI	**725**	**(101)**	**624**	**—**	**—**	**624**
Other changes						
Excess cover of plan assets	—	—	—	—	—	—
Exchange differences	5	(7)	(2)	—	—	(2)
Contributions to the plan:						
Employer	—	(156)	(156)	—	—	(156)
Plan participants	8	—	8	—	—	8
Pension payments	(148)	132	(16)	—	—	(16)
Business combinations, disposals and other	25	(23)	2	—	—	2
Balance at 31/12/2019	**5,653**	**(4,314)**	**1,339**	**—**	**—**	**1,339**

(€ millions)

	PRESENT VALUE OF PENSION COMMITMENTS	FAIR VALUE OF PLAN ASSETS	NET LIABILITY (NET ASSET) OF DEFINED BENEFIT PLANS	ASSET CEILING	CAPITALISED EXCESS COVER OF PLAN ASSETS	RECOGNISED PENSION PROVISIONS
Balance at 1/1/2018	**4,824**	**(4,090)**	**734**	**—**	**—**	**734**
Service cost component						
Current service cost	65	—	65	—	—	65
Past service cost	3	—	3	—	—	3
Gains/(losses) on settlement	—	—	—	—	—	—
Net interest component						
Interest expense/(income)	103	(87)	16	—	—	16
Service costs and net interest						
of defined benefit plans recognised in						
profit or loss for the period	**171**	**(87)**	**84**	**—**	**—**	**84**
Remeasurement component						
Gains/(losses) on plan assets excluding						
amounts included in net interest on the net						
defined benefit liability (asset)	—	82	82	—	—	82
Actuarial gains/(losses) –						
demographic assumptions	(48)	—	(48)	—	—	(48)
Actuarial gains/(losses) –						
financial assumptions	93	—	93	—	—	93
Actuarial gains/(losses) –						
experience adjustments	(26)	—	(26)	—	—	(26)
Changes due to asset ceiling excluding						
amounts included in net interest on the net						
defined benefit liability (asset)	—	—	—	—	—	—
Remeasurement component of defined						
benefit plans recognised in OCI	**19**	**82**	**101**	**—**	**—**	**101**
Other changes						
Excess cover of plan assets	—	—	—	—	—	—
Exchange differences	(1)	1	—	—	—	—
Contributions to the plan:						
Employer	—	(112)	(112)	—	—	(112)
Plan participants	7	—	7	—	—	7
Pension payments	(146)	133	(13)	—	—	(13)
Business combinations, disposals and other	—	—	—	—	—	—
Balance at 31/12/2018	**4,874**	**(4,073)**	**801**	**—**	**—**	**801**

At the end of the reporting period, 33% (previous year: 32%) of the present value of the defined benefit obligations of €5,653 million (previous year: €4,874 million) was attributable to active employees, 25% (previous year: 23%) to former employees with vested benefit entitlements and 42% (previous year: 45%) to pensioners and surviving dependants.

Notes to the Balance Sheet (Continued)

Actuarial assumptions
The main actuarial assumptions used to determine the present value of the defined benefit obligation are listed below. The summarised disclosure for several plans takes the form of weighted average factors:

(in %)

	2019	2018
Actuarial interest rate	1.20	2.10
Rate of increase in pension commitments	1.50	1.70
Rate of increase in future compensation and over career	2.00	2.00

The mortality rate underlying the actuarial calculation of the present value of the defined benefit obligation is based on the modified Heubeck 2018 G tables (generation tables) that allow for the probability of mortality to fall to 95% (previous year: 95%) for women and 80% (previous year: 80%) for men.

HVB Group similarly reduces the probability of disability based on these guidance tables to 80% (previous year: 80%) for women and men equally. Since any changes in the actuarial assumptions regarding disability fundamentally only have a minor impact on the present value of the defined benefit obligation, HVB Group does not calculate any sensitivities for this valuation parameter.

In addition, the present value of the defined benefit obligation is influenced by assumptions regarding future inflation rates. Inflation effects are normally taken into account in the assumptions listed above.

Sensitivity analyses
The sensitivity analyses discussed below are intended to show how the present value of the defined benefit obligation would change given a change to an actuarial assumption in isolation with the other assumptions remaining unchanged compared with the original calculation. Possible correlation effects between the individual assumptions are not taken into account accordingly. The sensitivity analyses are based on the changes to the actuarial assumptions expected by HVB Group at the reporting date for the subsequent reporting period.

An increase or decrease in the significant actuarial assumptions in the amount of the percentage points shown in the table would have had the following impact on the present value of the defined benefit obligation at the reporting date:

	CHANGES OF THE ACTUARIAL ASSUMPTIONS	IMPACT ON THE PRESENT VALUE OF PENSION COMMITMENTS		
		PRESENT VALUE OF LIABILITY	ABSOLUTE CHANGES	RELATIVE CHANGES
		€ millions	€ millions	in %
Sensitivities at 31/12/2019				
	Basic value of the calculation of sensitivity	5,653		
Actuarial interest rate	Increase of 25 basis points	5,403	(250)	(4.4)
	Decrease of 25 basis points	5,922	269	4.8
Rate of increase in pension commitments	Increase of 25 basis points	5,824	171	3.0
	Decrease of 25 basis points	5,491	(162)	(2.9)
Rate of increase in future compensation/career trend	Increase of 25 basis points	5,658	5	0.1
	Decrease of 25 basis points	5,648	(5)	(0.1)
Sensitivities at 31/12/2018				
	Basic value of the calculation of sensitivity	4,874		
Actuarial interest rate	Increase of 25 basis points	4,672	(202)	(4.1)
	Decrease of 25 basis points	5,090	216	4.4
Rate of increase in pension commitments	Increase of 25 basis points	5,012	138	2.8
	Decrease of 25 basis points	4,742	(132)	(2.7)
Rate of increase in future compensation/career trend	Increase of 25 basis points	4,879	5	0.1
	Decrease of 25 basis points	4,869	(5)	(0.1)

The observable decline in mortality rates is associated with an increase in life expectancy depending on the individual age of each beneficiary. In order to determine the sensitivity of the mortality or longevity, the lifetime for all beneficiaries was increased by one year. The present value of the defined benefit obligation at 31 December 2019 would rise by €205 million (3.6%) to €5,858 million (previous year: by €163 million (3.3%) to €5,037 million) as a result of this change. HVB Group considers an opposite trend, that is an increase in mortality or a decrease in life expectancy, to be unlikely and has therefore not calculated a sensitivity for this case in the reporting period (or in the previous year).

When determining the sensitivities of the defined benefit obligation for the significant actuarial assumptions, the same method has been applied (projected unit credit method) as has been used to calculate the pension provisions recognised in the consolidated balance sheet. Increases and decreases in the various valuation assumptions do not entail the same absolute amount in their impact when the defined benefit obligation is calculated, due mainly to the compound interest effect when determining the present value of the future benefit. If more than one of the assumptions are changed simultaneously, the combined effect does not necessarily correspond to the sum total of the individual effects. Furthermore, the sensitivities only reflect a change in the present value of the defined benefit obligation for the actual extent of the change in the assumptions (such as 0.25%). If the assumptions change to a different extent, this does not necessarily have a straight-line impact on the present value of the defined benefit obligation. Since the sensitivity analyses are based on the average duration of the expected pension obligation, and consequently the expected disbursement dates are not taken into account, they only result in indicative information or trends.

Notes to the Balance Sheet (Continued)

Asset liability management

The plan assets are managed by a trustee with a view to ensuring that the present and future pension obligations are settled by applying an adequate investment strategy, thus minimising the risk of the trustors or sponsoring companies having to provide additional capital.

Under the CTA, the capital investment decisions are taken by an institutionalised body, the Investment Committee, which defines the investment strategy and policies for the plan assets. The concept calls for the assets to be invested in line with the structure of the pension obligations in particular and an appropriate return to be generated taking into account the associated risks. In order to optimise the risk/return ratio, the Investment Committee sets strategic allocation ranges and investment limits for the asset classes in the plan assets, which can be exploited flexibly within the agreed risk budget. The bodies and processes required by law have been set up as appropriate for HVB Pensionskasse and the pension fund.

In order to allow for an integral view on plan assets and defined benefit obligations (asset liability management), the pension risks are monitored regularly with the aid of a specially developed risk model and included in the Bank's risk calculation. Since HVB Group employs various methods involving legally independent entities to implement the company pension plans, risk management concepts including stress tests and analysis of risk-taking capacity are also applied in specific instances.

Alongside the actuarial risks mentioned above, the risks associated with the defined benefit obligations relate primarily to financial risks in connection with the plan assets. The capital investment risk in the funding of the pension obligations encompasses notably potential liquidity, credit, concentration, market and real estate risks.

Liquidity risk can result from non-existent or limited marketability of the capital investments, which may cause losses to be realised when the assets are sold to settle payment obligations. HVB is not currently exposed to this risk as the expected incoming payments are sufficient to meet the payment obligations. In addition, an appropriate proportion of the capital investments is invested in assets classified as liquid (cash and cash equivalents/term deposits). Liquidity projections are prepared at regular intervals with a view to continue avoiding this risk.

Credit risk stems from anything from a deterioration in the solvency of individual debtors through to insolvency. This risk is mitigated by deliberately spreading the capital investments and complying with specific investment policies regarding the creditworthiness of issuers. The relevant ratings are monitored constantly.

Concentration risk arises from excessive investment in an individual asset class, individual industry, individual security or individual property. This risk is countered by means of broad diversification in line with investment policies, ongoing review of the capital investment policy and specific parameters for the asset managers. Among other things, targeted investment in mixed investment funds is used to reduce concentration risk by diversifying the composition of the fund assets.

Market risk has its roots in the risk of declining fair values caused by negative changes in market prices, equity prices and changes in interest rates. Here, too, compliance with the parameters specified for the composition and diversity of the capital investments is ensured and risk-limiting investment policies are defined for the asset managers.

Real estate risk exists with both directly held real estate and special-purpose real estate funds. It results from factors like possible unpaid rents, loss of property value, high maintenance costs and declining location attractiveness. To minimise these risks, the proportion that may be invested in real estate is constrained by a limit and the greatest possible diversification is targeted. In addition, no short-term rental contracts are concluded for directly owned real estate.

Disaggregation of plan assets

The following table shows a disaggregation of the plan assets used to fund the defined benefit obligations by asset class:

(€ millions)

	2019	2018
Participating interests	68	61
Debt securities	270	124
Properties	220	215
Mixed investment funds	3,132	3,034
Property funds	518	427
Cash and cash equivalents/term deposits	100	76
Other assets	6	136
Total	**4,314**	**4,073**

Quoted market prices in an active market were observed for most of the fixed-income securities held directly and almost all the types of asset held in the mixed investment fund. As a general rule, the fixed-income securities have an investment grade rating.

In terms of amount, the investment in mixed investment funds represents the lion's share of the asset allocation for the plan assets. The deliberate investment in various asset classes and the general restriction to traditional investment instruments serve to ensure a risk-mitigating minimum diversification and also reflect a conservative underlying strategy. The high proportion of bonds with a medium- to long-term benchmark (such as government and corporate bonds, and Pfandbriefe) held in the fund implies low volatility with the intention of balancing the development in the value of the long-term pension commitments that follows general interest rates.

The following table shows a detailed breakdown of the mixed investment fund:

(in %)

	2019	2018
Equities	8.3	11.1
German equities	1.5	1.3
European equities	6.3	6.2
Other equities	0.5	3.6
Government bonds	33.8	32.8
Pfandbriefe	17.2	16.6
Corporate bonds	26.8	28.3
German corporate bonds	4.7	5.8
European corporate bonds	16.4	15.5
Other corporate bonds	5.7	7.0
Fund certificates	7.3	4.3
Cash and cash equivalents/term deposits	6.6	6.9
Total	**100.0**	**100.0**

Notes to the Balance Sheet (Continued)

The plan assets comprised own financial instruments of the Group, property occupied by and other assets used by HVB Group companies at the reporting date:

(€ millions)

	2019	2018
Participating interests	—	—
Debt securities	9	15
Properties	—	—
Mixed investment funds	244	178
Property funds	—	—
Cash and cash equivalents/term deposits	100	46
Other assets	—	—
Total	**353**	**239**

Future cash flows

There are financing agreements at HVB Group that contain measures to fund defined benefit plans. The minimum funding requirements included in the agreements may have an impact on future contribution payments. In the case of HVB Trust Pensionsfonds AG, HVB Group is liable for calls for additional capital should the assets fall below the minimum cover provision. For HVB Pensionskasse, the Bank is required to make an additional contribution if the permanent financing of the obligations is no longer ensured. No such requirement for calls for additional capital exists for the CTA.

HVB Group intends to make contributions of €27 million (previous year: €27 million) to defined benefit plans in the 2020 financial year.

The weighted average duration of HVB Group's defined benefit obligations at the reporting date amounted to 18.8 years (previous year: 17.6 years).

Multi-employer plans

HVB Group is a member of Versorgungskasse des Bankgewerbes e.V. (BVV), which also includes other financial institutions in Germany in its membership. BVV provides company pension benefits for eligible employees of the sponsoring companies. The BVV tariffs allow for fixed pension payments with profit participation. On account of the employer's statutory subsidiary liability applicable in Germany (Section 1 (1) 3 of the German Occupational Pensions Act (Betriebsrentengesetz – BetrAVG)), HVB Group classifies the BVV plan as a multi-employer defined benefit plan.

Since the available information is not sufficient to allow this plan to be accounted for as a defined benefit plan by allocating to the individual member companies the assets and the pension obligations relating to active and former employees, HVB Group accounts for the plan as if it were a defined contribution plan.

In the event of a plan deficit, the Group may be exposed to investment risk and actuarial risk. In addition, a need for adjustment might arise from compensating the beneficiaries for inflation. HVB Group does not currently expect that the statutory subsidiary liability will be used.

HVB Group expects to book employer contributions of €21 million for this pension plan in the 2020 financial year (previous year: €22 million). Due to the current interest rate environment, BVV reduced the payment for the future pension rights in 2016. To exempt the Bank's employees from this reduction in payment, the Bank, as the employer, pays an additional contribution so that employees do not suffer any disadvantage in their future pension rights. This additional contribution amounts to €6 million in the 2020 financial year (previous year: €6 million).

Defined contribution plans

HVB Group companies pay fixed amounts for each period to independent pension organisations for the defined contribution pension commitments. The contributions for the defined contribution plans recognised as current expense under payroll costs totalled €24 million during the reporting period (previous year: €25 million).

The employer contributions to the statutory pension scheme and the alternative professional pension schemes, which qualify as defined contribution state plans, are similarly included in payroll costs. Such contributions amounted to €83 million in the reporting period (previous year: €83 million).

Allowances for losses on financial guarantees and irrevocable credit commitments, restructuring provisions and other provisions (€ millions)

	ALLOWANCES FOR LOSSES ON FINANCIAL GUARANTEES AND IRREVOCABLE CREDIT COMMITMENTS		RESTRUCTURING PROVISIONS1[1]		OTHER PROVISIONS	
	2019	2018	2019	2018	2019	2018
Balance at 1/1	**214**	**180**	**256**	**410**	**2,182**	**1,277**
Changes after initial application of IFRS 9	n/a	20	n/a	n/a	n/a	n/a
Balance restated at 1/1	**214**	**200**	**256**	**410**	**2,182**	**1,277**
Changes in consolidated group	—	—	—	—	(42)	—
Changes arising from foreign currency translation	—	—	—	—	25	30
Transfers to provisions	273	160	324	75	148	1,042
Reversals	(262)	(146)	(129)	(83)	(419)	(70)
Reclassifications	—	—	—	(92)	—	27
Amounts used	—	—	(28)	(54)	(1,120)	(124)
Non-current assets or disposal groups held for sale	—	—	—	—	—	—
Other changes	—	—	(45)	—	27	—
Balance at 31/12	**225**	**214**	**378**	**256**	**801**	**2,182**

1 The transfers and reversals are included in the income statement in the item "Restructuring costs" together with other restructuring costs accruing during the reporting period.

Analysis of allowances

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	TOTAL
Balance at 1/1/2019	**49**	**25**	**140**	**214**
Addition due to new business	28	—	—	28
Changes within the same stage (net balance)[1]	(13)	2	109	98
Change of model	—	—	—	—
Reversal on account of derecognition of the financial obligation	(17)	(5)	(94)	(116)
Utilisation of existing provisions	—	—	—	—
Foreign currency movements and other changes	—	—	1	1
Balance at 31/12/2019	**47**	**22**	**156**	**225**
Balance at 1/1/2018	**48**	**25**	**127**	**200**
Addition due to new business	28	—	—	28
Changes within the same stage (net balance)[1]	(10)	11	167	168
Change of model	—	—	—	—
Reversal on account of derecognition of the financial obligation	(17)	(11)	(154)	(182)
Utilisation of existing provisions	—	—	—	—
Foreign currency movements and other changes	—	—	—	—
Balance at 31/12/2018	**49**	**25**	**140**	**214**

1 Transfers between the individual stages are shown here (disposal at the previous stage, addition at the new stage).

Notes to the Balance Sheet (Continued)

Restructuring provisions
The restructuring provisions essentially relate to measures taken by HVB Group as part of its Team 23 strategic plan. The implementation of the four-year Team 23 strategic plan will lead to an adjustment in the personnel capacity. Where this cannot be achieved through natural fluctuation or further qualification of employees for new roles, severance agreements will be concluded. In essence, this involved setting aside new restructuring provisions of €324 million, which were offset by the reversal of existing restructuring provisions in the amount of €109 million.

Other provisions
The payroll provisions carried under other provisions encompass long-term obligations to employees such as provisions for service anniversary awards, early retirement or partial retirement. In addition, payroll provisions cover the parts of the bonus that are disbursed on a deferred basis, or transferred in cases where the bonus is granted in the form of shares, with the waiting period exceeding one year. The disbursement of these bonuses is additionally dependent upon the achievement of pre-defined targets. The bonus commitments for the 2014, 2015, 2016, 2017, 2018 and 2019 financial years to be disbursed as of 2020 are included here accordingly. The bonus provisions included here have been taken to the income statement in both the reporting period and the previous financial years. It is considered highly probable that the bonus will be disbursed. For details of the bonus plan, please refer to the Note "Operating costs".

The decline in provisions for rental guarantees and dismantling obligations from €154 million in the previous year to €95 million in the reporting year arose largely from the sale of the subsidiary Ocean Breeze Energy GmbH & Co. KG, as a provision had been set aside in this company for the purpose of dismantling the BARD Offshore 1 wind farm when it reaches the end of its useful life.

The other provisions of €312 million (previous year: €1,617 million) include provisions of €217 million (previous year: €1,535 million) for legal risks, litigation fees and damage payments. The sharp decline in the item "Other provisions" is mainly attributable to the conclusion of the proceedings for violations of US economic sanctions. In April 2019, the Bank reached a settlement with the US and New York authorities to conclude the proceedings for violations of US economic sanctions in the period from 2002 to 2012. The amounts paid under the settlement are lower than the provisions that had been set aside for this purpose in previous years, so that the excess portion could be reversed.

The amount of the respective provisions reflects the best estimate of the amount required to settle the obligation at the reporting date. Nevertheless, the amounts involved are subject to uncertainties in the estimates made. Besides the assumptions regarding periods, the cost estimates are validated regularly for rental guarantees in particular.

With the exception of the provisions for rental guarantees and dismantling obligations, most of the other provisions are normally expected to be utilised during the following financial year.

73 Shareholders' equity
The shareholders' equity of HVB Group at 31 December 2019 consisted of the following:

Subscribed capital
At 31 December 2019, the subscribed capital of HVB totalled €2,407 million (previous year: €2,407 million) and consisted of 802,383,672 no par shares of common bearer stock (previous year: 802,383,672 no par shares).

The proportionate amount of share capital attributable to the share amounts to €3.00 per no par share. The shares are fully paid in.

Additional paid-in capital
The additional paid-in capital results from premiums generated on the issuance of shares; the total at 31 December 2019 amounted to €9,791 million (previous year: €9,791 million).

Other reserves
Other reserves of €3,396 million (previous year: €5,481 million) mainly contain retained earnings. The decrease is essentially based on the balance from the reclassification of €2,495 million to consolidated profit, the actuarial losses of €428 million on defined benefit plans recognised under other reserves and the initial transfer of €852 million to the revaluation surplus for owner-occupied real estate.

Within the framework of the prospective adoption of the revaluation method according to IAS 16, the difference between the fair value of owner-occupied real estate and the previous carrying amount at amortised cost was allocated to the revaluation surplus for owner-occupied real estate through other comprehensive income in the consolidated statement of total comprehensive income, with deferred taxes deducted.

Change in valuation of financial instruments
At €28 million, the hedge reserve is unchanged over the previous year.

The FVTOCI reserve of €15 million (previous year: €4 million) includes the difference between the amortised cost and fair value of the securities allocated to this category. In the reporting year, the sum of €11 million was transferred through other comprehensive income to the consolidated statement of total comprehensive income.

74 Subordinated capital
The following table shows the breakdown of subordinated capital included in the balance-sheet items
"Deposits from banks", "Deposits from customers" and "Debt securities in issue":

(€ millions)

	2019	2018
Subordinated liabilities	410	493
Hybrid capital instruments	54	52
Total	**464**	**545**

In this context, subordinated liabilities and hybrid capital instruments have been classified as Tier 2 capital for banking supervisory purposes in accordance with the provisions of Articles 62 (1a), 63 to 65, 66 (1a) and 67 CRR. The hybrid capital instruments are allocated to Tier 2 capital in accordance with Articles 87 and 88 CRR.

The following table shows the breakdown of subordinated capital by balance sheet item:

(€ millions)

	2019	2018
Deposits from customers	—	—
Deposits from banks	313	313
Debt securities in issue	151	232
Total	**464**	**545**

We have incurred interest expenses of €11 million (previous year: €16 million) in connection with this subordinated capital. Subordinated capital includes pro rata interest of €1 million (previous year: €4 million).

Subordinated liabilities
The borrowers cannot be obliged to make early repayments in the case of subordinated liabilities. In the event of insolvency or liquidation, subordinated liabilities can only be repaid after the claims of all primary creditors have been settled.

There were subordinated liabilities of €313 million payable to related parties in the reporting period (previous year: €313 million).

Hybrid capital instruments
Hybrid capital instruments may include, in part, issues placed by specially created subsidiaries in the form of capital contributions from silent partners.

Our hybrid capital instruments satisfy the requirements for classification as Tier 2 capital as defined in Article 63 CRR. At the reporting date, no hybrid capital of HVB Group was included in our regulatory capital base.

Notes to the Cash Flow Statement

75 Notes to the items in the cash flow statement

The cash flow statement shows the cash flows for the reporting period, divided into the areas "operating activities", "investing activities" and "financing activities". Operating activities are defined broadly enough to allow the same breakdown as for operating profit.

The cash and cash equivalents shown correspond to the "Cash and cash balances" item in the balance sheet, comprising both cash on hand and deposits with central banks repayable on demand.

The "Change in other non-cash positions" item comprises the changes in the valuation of financial instruments, net additions to deferred taxes, changes in provisions, changes in prorated and deferred interest, the reversal of premiums and discounts, changes arising from measurement using the equity method and minority interests in net income.

All proceeds and payments from transactions relating to equity and subordinated capital are allocated to cash flow from financing activities. The portfolios of subordinated and hybrid capital included in the cash flow from financing activities as financing liabilities have decreased by a net €130 million in the reporting period (previous year: €45 million).

Gains of €1,140 million were generated on the disposal of shares in fully consolidated companies in the 2019 financial year, of which €1,101 million was in cash.

There were no significant acquisitions of subsidiaries or associates in the 2019 and 2018 financial years.

The following table shows the assets and liabilities of the fully consolidated companies sold: (€ millions)

	2019		2018	
	ACQUIRED	SOLD	ACQUIRED	SOLD
Assets				
Cash and cash balances	—	—	—	—
Financial assets held for trading	—	—	—	—
Financial assets at FVTPL	—	—	—	—
Financial assets at FVTOCI	—	—	—	—
Loans and receivables with banks (at cost)	—	—	—	—
Loans and receivables with customers (at cost)	—	—	—	—
Hedging derivatives	—	—	—	—
Hedge adjustment of hedged items in the fair value hedge portfolio	—	—	—	—
Investments in associates accounted for using the equity method				
and joint ventures accounted for using the equity method	—	—	—	—
Property, plant and equipment	—	—	—	—
Investment properties	—	—	—	—
Intangible assets	—	—	—	—
of which: goodwill	—	—	—	—
Tax assets	—	—	—	—
Non-current assets or disposal groups held for sale	—	2,540	—	457
Other assets	—	—	—	—
Liabilities				
Deposits from banks	—	—	—	—
Deposits from customers	—	—	—	—
Debt securities in issue	—	—	—	—
Financial liabilities held for trading	—	—	—	—
Financial liabilities at FVTPL	—	—	—	—
Hedging derivatives	—	—	—	—
Hedge adjustment of hedged items in the fair value hedge portfolio	—	—	—	—
Tax liabilities	—	—	—	—
Liabilities of disposal groups held for sale	—	2,458	—	442
Other liabilities	—	—	—	—
Provisions	—	—	—	—

Other Information

76 Events after the reporting period
At the beginning of December 2019, HVB sold to Commerz Real the HVB-owned property Am Tucherpark, comprising an office building complex and a hotel. The transfer of the property occurred on 15 January 2020 (closing). This will result in the recognition of a significant profit in financial year 2020.

77 Information regarding lease operations
HVB Group has adopted the new leasing standard IFRS 16 for the first time in the current financial year in accordance with the transitional provisions based on the modified retrospective approach and has therefore not adjusted the comparative information for the previous year (see Note “First-time adoption of new IFRS accounting standards”). As a result, the previous-year figures are still reported in accordance with the accounting and valuation methods based on the leasing standard IAS 17, including the corresponding interpretations, that applied prior to 1 January 2019. For a detailed presentation of the accounting and valuation methods with regard to the leases of HVB Group as lessee and lessor, please refer to the Note “Lease operations”.

Information regarding the current financial year (IFRS 16)
HVB Group as lessee
As of 1 January 2019, the lessee’s previous classification of lease agreements into operating leases and finance leases was abolished with IFRS 16 and a uniform lessee accounting system was introduced in its place. According to this approach the lessee always recognises right-of-use assets and lease liabilities for all lease agreements in its balance sheet. Only short-term leases and leases where the underlying asset is of low value are excluded.

The rental and lease agreements entered into by HVB Group as lessee relate to real estate (land and buildings) on the one hand and movables (operating and office equipment including vehicles) on the other hand. The lease agreements for real estate are generally concluded for a non-cancellable basic term of ten years and usually include extension options with periods of between three and five years. These agreements also contain price adjustment clauses in the form of stepped rents or index clauses; termination or purchase options are not usually agreed. The extension options are used to give HVB Group the maximum operational flexibility in relation to the assets used by the Bank. Most of these contractual options can only be exercised by HVB Group as lessee and not by the respective lessor. The lease agreements for movables have been concluded at customary market terms for lease periods of between three and nine years. No variable lease payments were agreed for any of the lease agreements concluded by HVB Group as lessee. The Bank’s obligations under lease agreements are secured by the ownership rights of the respective lessor to the leased assets. Leased objects may therefore not be used as security for borrowing.

Amounts recognised in the consolidated balance sheet
In the consolidated balance sheet the following items were recognised in connection with lease agreements where HVB Group is lessee.

The following table shows the carrying amount of the right-of-use assets reported in property, plant and equipment at the end of the reporting period by class of underlying asset:

(€ millions)

	2019
Right-of-use assets (property, plant and equipment)	
Leased land and buildings	273
Leased plant and office equipment	12
Carrying amount 31/12	**285**

Additions to the right-of-use assets recognised in property, plant and equipment amounted to €35 million during the financial year.

Other Information (Continued)

The carrying amount of the lease liabilities reported in the items "Deposits from customers" and "Deposits from banks" at the end of the report period is as follows:

(€ millions)

	2019
Lease liabilities	487
Carrying amount 31/12	**487**

The following table contains a maturity analysis for lessee's lease liabilities and shows the undiscounted lease payments to be made after the reporting date:

(€ millions)

	2019
up to 1 year	63
from 1 year to 2 years	58
from 2 years to 3 years	55
from 3 years to 4 years	53
from 4 years to 5 years	50
from 5 years and over	242
Total	**521**

HVB Group sees no significant liquidity risk with regard to lease liabilities. The lease liabilities are monitored by the Bank's Treasury unit.

Amounts recognised in the consolidated income statement
The consolidated income statement contains the following amounts in connection with leases in which HVB Group is lessee.

The following tables shows the depreciation charge on the right-of-use assets contained in property, plant and equipment for the reporting period by class of underlying assets. The write-downs are recognised under "Amortisation, depreciation and impairment losses on intangible and tangible assets" within operating costs:

(€ millions)

	2019
Depreciation expense from right-of-use assets (property, plant and equipment)	
Leased land and buildings	41
Leased plant and office equipment	12
Total	**53**

The effect recognised in interest expense from the interest on lease liabilities for the reporting year is as follows:

(€ millions)

	2019
Interest expense from lease liabilities	6

The following table shows other expenses and income in connection with lease agreements with lessees that were recognised in the consolidated income statement during the financial year. Expenses in connection with short-term lease agreements and lease agreements that are based on low-value assets, are recognised in the "Other administrative expenses" item, whereas income from subleasing the right-of-use assets is shown as other operating income in property, plant and equipment:

(€ millions)

	2019
Expense from short-term leases	10
Expense from leases for low-value assets (excl. expense from short-term leases	
based on an asset of low value)	—
Income from subleases of right-of-use assets (property, plant and equipment)	3

Right-of-use assets that correspond to the definition of an investment property and are reported as investment properties were not included in the above figures for carrying amount, additions, depreciation amount or for income from the subleasing of right-of-use assets. Disclosures on such right-of-use assets can be found in the Note "Investment Properties".

In 2019, cash outflows from leases amounted to €72 million.

In the reporting period, HVB Group carried out a sale and leaseback transaction as seller/lessee for two owner-occupied properties (property, plant and equipment) which are previously classified as "Non-current assets or disposal groups held for sale" in accordance with IFRS 5. The assets were first transferred to the buyer/lessor (sale) in accordance with the criteria for sales as set out in IFRS 15 and then partially leased back (leaseback) from them. In the process, HVB Group has recognised the right of use associated with the leasing back of the real estate with that portion of the former carrying amount that relates to the right of use retained by the Group. Right-of-use assets totalling €6 million were recognised for this purpose in the consolidated balance sheet.

In the reporting year, HVB Group acted as seller/lessee for another sale-and-leaseback transaction. For reasons of portfolio and location optimisation, the Bank sold the "Am Tucherpark" site in Munich to the buyer/lessor Commerz Real, and leased part of the property back from it again. When the purchase agreement was signed in early December, a lease agreement was concluded for the transfer of use of the administrative buildings used by the Bank. The lease agreement will become effective when the property is transferred to the buyer (as of reporting date not yet effected). As a result, no right-of-use assets and lease liabilities have been recognised in the consolidated balance sheet as at 31 December 2019. The future cash outflows to which HVB Group is exposed in connection with this agreement amount to €109 million in total (indexed rental payments of approximately €24 million yearly) and are spread over the agreed basic term of 54 months. As lessee, HVB Group has the right to extend the lease agreement once for a period between 12 and 36 months; no option exists for an early termination of the agreement.

HVB Group as lessor
According to IFRS 16, the lessor is still required to classify leases either as operating leases or finance leases.

Other Information (Continued)

Operating leases

In the reporting year, HVB Group acted as lessor in operating leases. These lease agreements mainly encompass real estate (land and buildings) and movable assets such as plant and office equipment, motor vehicles and industrial machinery. The lease agreements for real estate have terms of between three and five years. These agreements are based on customary market terms and include extension options and price adjustment clauses in the form of stepped rents or index clauses; termination options are not agreed. If the lessee exercises its right to extend the lease agreement, market review clauses are used. By contrast, leases for the lessee do not usually include any option to purchase the leased property at the end of the lease period. Unguaranteed residual values do not represent a significant risk for HVB Group, as these relate to properties that have exhibited a steadily increasing trend in market values over many years. The Bank sees no indication of any future change in this trend. The lease agreements for movable assets are generally concluded for terms of between four and ten years and include an additional purchase option; they do not include extension or price adjustment clauses. No variable leasing payments were agreed by HVB Group as lessor in the concluded operating lease agreements.

The following table shows the lease income from lessor operating leases in the consolidated income statement during the financial year:

(€ millions)

	2019
Income from operating leases	146

The following table contains a maturity analysis of undiscounted payments from operating leases that the lessor will receive in the future:

(€ millions)

	2019
up to 1 year	84
from 1 year to 2 years	32
from 2 years to 3 years	31
from 3 years to 4 years	24
from 4 years to 5 years	20
from 5 years and over	91
Total	**282**

At the end of the reporting period, the carrying amount of the assets included in property, plant and equipment which are the subject of an operating lease amounts to €112 million.

Finance leases

In the reporting year HVB Group leased mobile assets as a lessor under finance leases. These mainly included plant and office equipment, aircraft, motor vehicles and industrial machinery. As a general rule, the lease agreements stipulate lease periods of between four and ten years and possibly a pre-emptive right in favour of the lessor; they do not contain any extension or price adjustment clauses. The residual risk for these leased assets is insignificant because there is a secondary market. No variable lease payments were agreed by HVB Group as lessor in the finance leases concluded.

The following table shows the amounts recognised in the consolidated income statement for finance leases held by the lessor during the financial year:

(€ millions)

	2019
Gains/(losses) on the disposal of finance leases	—
Finance income from the net investment in the lease (interest income from finance lease receivables)	23

The following table contains a maturity analysis of the lessor's existing loans and receivables with customers and banks (at cost) from the lease operations (receivables under finance leases) and shows the undiscounted lease payments to be received after the reporting date. The subsequent reconciliation to the net investment in the lease makes the unguaranteed residual value and the still unrealised finance income transparent in relation to the receivables from leases:

(€ millions)

	2019
up to 1 year	682
from 1 year to 2 years	439
from 2 years to 3 years	319
from 3 years to 4 years	193
from 4 years to 5 years	111
from 5 years and over	151
Total amount of undiscounted lease payments to be received	**1,895**
+ Unguaranteed residual value	—
= Gross investment in the lease	1,895
– Unrealised finance income	– 79
= Net investment in the lease (finance lease receivables)	**1,816**

The overall amount of discounted lease payments encompasses the payments to be made by the lessee to the lessor in the finance lease including any residual value guarantees.

Unguaranteed residual value is that part of the residual value of the underlying asset whose realisation is not secured by the lessor.

Gross investment in the lease is the sum of the lease payments and the unguaranteed residual value.

Unrealised finance income is the difference between the lessor's gross investment in the lease and its present value (net investment). It corresponds to the return implicit in the lease between the reporting date and the end of the lease.

The net investment in the lease (receivables under finance leases) is therefore determined by discounting the gross investment with the interest rate on which the lease is based.

Other Information (Continued)

For receivables under finance leases in the item ("Loans and receivables from customers (at cost)", the development of the gross carrying amounts, the breakdown by rating classes, and analysis of allowances is shown below (see also Note "Loans and receivables from customers (at cost)"):

Development of gross carrying amounts

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**1,216**	**642**	**41**	**—**	**1,899**
Change in balance within the stage					
(including additions from new business and disposals)	46	(108)	(21)	—	(83)
Transfer to another stage due to					
deterioration in credit quality	(206)	189	17	—	—
from stage 1 to stage 2	(197)	197	—	—	—
from stage 2 to stage 3	—	(8)	8	—	—
from stage 1 to stage 3	(9)	—	9	—	—
Transfer to another stage due to					
improvement in credit quality	71	(69)	(2)	—	—
from stage 2 to stage 1	70	(70)	—	—	—
from stage 3 to stage 2	—	1	(1)	—	—
from stage 3 to stage 1	1	—	(1)	—	—
Increase reported directly in equity in					
gross carrying amounts for interest claims not					
recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets,					
not leading to derecognition	—	—	—	—	—
Foreign currency movements and other changes	—	—	—	—	—
Balance at 31/12/2019	**1,127**	**654**	**35**	**—**	**1,816**

Development of impairments

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2019	**4**	**6**	**15**	**—**	**25**
Addition due to new business	2	2	1	—	5
Change in balance within the same stage (netted)[1]	(1)	—	(1)	—	(2)
Increase in impairment reported directly in equity for					
interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets,					
not leading to derecognition	—	—	—	—	—
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	—	—	—	—	—
Disposals (utilisation of impairments)	—	—	(1)	—	(1)
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in					
profit or loss	—	—	—	—	—
Foreign currency movements and other changes	—	—	—	—	—
Balance at 31/12/2019	**5**	**8**	**14**	**—**	**27**

1 Transfers between the individual stages are shown here (disposal at the previous stage, addition at the new stage).

Breakdown by rating class (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	COLLATERAL	TOTAL
31/12/2019						**—**
Not rated	—	—	—	—	—	—
Rating class 1–4	1,060	541	—	—	1,009	1,601
Rating class 5–8	67	113	—	—	104	180
Rating class 9–10	—	—	35	—	14	35
Gross carrying amount at 31/12/2019	**1,127**	**654**	**35**	**—**	**1,127**	**1,816**
Impairment	(5)	(8)	(14)	—	—	(27)
Net carrying amount at 31/12/2019	**1,122**	**646**	**21**	**—**	**1,127**	**1,789**

Disclosures regarding the previous year (IAS 17)

HVB Group as lessee

Until 31 December 2018, leases were classified by the lessee as either operating or finance leases in accordance with IAS 17.

Operating leases

Until the end of 2018, HVB Group acted as lessee in connection with operating leases. The current commitments related primarily to rental and lease agreements for real estate (land and buildings) and moveable assets, mainly comprising plant and equipment, including motor vehicles. The lease agreements for real estate generally contained extension options and price adjustment clauses in the form of stepped rents or index clauses; options to purchase were agreed in some cases. The lease agreements for movable assets were concluded at customary market terms for lease periods of between three and nine years. All of the operating leases entered into by HVB Group as lessor contained no agreements on conditional lease payments (contingent rental payments).

In 2018, the commitments arising from operating leases under lease and sublease agreements resulted for the lessee in minimum lease payments of €58 million being recognised as expense in the consolidated income statement.

At the reporting date, the following cumulative minimum lease payments from non-cancellable operating leases were expected for future financial years, which were due as follows: (€ millions)

	2018
up to 1 year	55
from 1 year to 5 years	131
from 5 years and over	65
Total	**251**

Other Information (Continued)

HVB Group had concluded sublease agreements for real estate at customary market terms, some of which include rent adjustment clauses and extension options. Payments of €7 million received from subleases were recognised as income in the consolidated income statement in 2018.

In 2018, the aggregate future minimum lease payments arising from non-cancellable subleases expected to be received in the subsequent financial years amounted to €19 million.

Finance leases
The finance leases entered into by HVB Group as lessee up until 31 December 2018 related to real estate (land and buildings). The lease agreements generally contained an option to purchase and price adjustment clauses. All lease agreements have been concluded on the basis of fixed repayments and no agreements have been made for conditional lease payments (contingent rental payments). The Group's commitments under finance lease agreements are secured by the ownership rights of the respective lessor to the leased assets.

The following table shows the reconciliation from the aggregate future minimum lease payments at the reporting date to their present value. This gave rise to deposits from customers from lease operations (liabilities from finance leases) as follows:

(€ millions)

	2018
Future minimum lease payments	187
– Finance charge (interest included in minimum lease payments)	(14)
= Present value of future minimum lease payments	**173**

The difference between the future minimum lease payments and their present value represents unamortised interest expense.

The following table shows the remaining maturity of the future minimum lease payments and their present value at the reporting date:

(€ millions)

	2018	
	FUTURE MINIMUM LEASE PAYMENTS	PRESENT VALUE OF FUTURE MINIMUM LEASE PAYMENTS
up to 1 year	13	13
from 1 year to 5 years	55	50
from 5 years and over	119	110
Total	**187**	**173**

In 2018, the aggregate future minimum lease payments arising from non-cancellable subleases expected to be received in the subsequent financial years amounted to €26 million.

HVB Group as lessor
According to IAS 17, lessors had to classify leases either as operating leases or finance leases.

Operating leases
Until the end of 2018, HVB Group acted as lessor in operating leases. The relevant lease agreements notably encompassed real estate (land and buildings) and movable assets, such as plant and office equipment, motor vehicles and industrial machinery. The lease agreements for real estate were based on customary market terms and contained extension options and price adjustment clauses in the form of stepped rents or index clauses; options to purchase were generally not agreed. The lease agreements for movable assets were generally concluded with lease periods of between four and ten years and included an additional option to purchase; they did not contain any extension or price adjustment clauses. All of the operating leases received by HVB Group as lessor contained no agreements on conditional lease payments (contingent rental payments).

The following table shows the minimum lease payments to be received by the lessor in the future from non-cancellable operating leases at reporting date:

(€ millions)

	2018
up to 1 year	64
from 1 year to 5 years	123
from 5 years and over	101
Total	**288**

Finance leases

Until the end of 2018, HVB Group leased mobile assets as lessor under finance leases. These notably included plant and office equipment, aircraft, motor vehicles and industrial machinery. As a general rule, the lease agreements stipulated period of between four and ten years and possibly a pre-emptive right in favour of the lessor; they did not contain any extension or adjustment clauses. No conditional lease payments (contingent rental payments) were agreed for the finance leases concluded by HVB Group as lessor.

The following table shows the reconciliation from the future minimum lease payments to the gross and net investment in the lease and to the present value of the future minimum lease payments at the reporting date. The breakdown of the amounts receivable from customers (at cost) from the lease operations (receivables under finance leases) for the lessor is as follows:

(€ millions)

	2018
Future minimum lease payments	1,955
+ Unguaranteed residual value	—
= Gross investment	**1,955**
– Unrealised finance income	(81)
= Net investment	**1,874**
– Present value of unguaranteed residual value	—
= Present value of future minimum lease payments	**1,874**

The future minimum lease payments reflect the total lease payments to be made by the lessee under the lease agreement plus the guaranteed residual value.

The unguaranteed residual value is that portion of the residual value of the leased asset which is not guaranteed to be realised by the lessor.

For the lessor, the gross investment in the lease is the aggregate of the minimum lease payments and any unguaranteed residual value accruing to the lessor.

Unrealised finance income is the difference between the lessor's gross investment under the lease and its present value (net investment). It corresponds to the return implicit in the lease between the reporting date and the end of the lease.

The present value of the future minimum lease payments is calculated as the net investment in the lease less the present value of the unguaranteed residual value.

Other Information (Continued)

The gross investment in the lease and the present value of future minimum lease payments were due as follows: (€ millions)

	2018	
	GROSS INVESTMENT	PRESENT VALUE OF FUTURE MINIMUM LEASE PAYMENTS
up to 1 year	722	692
from 1 year to 5 years	1,071	1,026
from 5 years and over	162	156
Total	**1,955**	**1,874**

At year-end 2018, the cumulative write-downs on uncollectable outstanding minimum lease payments in amounts receivable from customers (at cost) under finance leases amounted to €13 million.

For the receivables under finance leases included in the item "Loans and receivables with customers (at cost)", the development of gross carrying amounts, the breakdown by rating class and the development of impairments are presented below (see also Note "Loans and receivable with customers (at cost)"):

Development of gross carrying amounts (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2018	**1,695**	**—**	**39**	**—**	**1,734**
Change in balance within the stage (including					
additions from new business and disposals)	(105)	285	(15)	—	165
Transfer to another stage due to					
deterioration in credit quality	(375)	356	19	—	—
from stage 1 to stage 2	(356)	356	—	—	—
from stage 2 to stage 3	—	—	—	—	—
from stage 1 to stage 3	(19)	—	19	—	—
Transfer to another stage due to					
improvement in credit quality	1	1	(2)	—	—
from stage 2 to stage 1	—	—	—	—	—
from stage 3 to stage 2	—	1	(1)	—	—
from stage 3 to stage 1	1	—	(1)	—	—
Increase reported directly in equity in					
gross carrying amounts for interest claims not					
recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets,					
not leading to derecognition	—	—	—	—	—
Foreign currency movements and other changes	—	—	—	—	—
Balance at 31/12/2018	**1,216**	**642**	**41**	**—**	**1,899**

Development of impairments (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2018	**10**	**—**	**12**	**—**	**22**
Addition due to new business	2	—	—	—	2
Change in balance within the same stage (netted)[1]	(5)	6	1	—	2
Increase in impairment reported directly in equity					
for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets,					
not leading to derecognition	—	—	—	—	—
Change of model	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	—	—	—	—	—
Disposals (utilisation of impairments)	—	—	—	—	—
Reversal of the discounted amount and receipt of					
interest claims previously not recognised in profit or loss	—	—	—	—	—
Foreign currency movements and other changes	(3)	—	2	—	(1)
Balance at 31/12/2018	**4**	**6**	**15**	**—**	**25**

1 Transfers between the individual stages are also disclosed here (disposal in the current stage, addition in the new stage).

Breakdown by rating class (€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	COLLATERAL	TOTAL
1/1/2018						
Not rated	—	—	—	—	—	—
Rating class 1–4	1,487	—	—	—	853	1,487
Rating class 5–8	208	—	—	—	118	208
Rating class 9–10	—	—	39	—	17	39
Gross carrying amount at 1/1/2018	**1,695**	**—**	**39**		**988**	**1,734**
Impairment	(10)	—	(12)	—	—	(22)
Carrying amount at 1/1/2018	**1,685**	**—**	**27**	**—**	**988**	**1,712**
31/12/2018						
Not rated	—	—	—	—	—	—
Rating class 1–4	1,145	504	—	—	1,016	1,649
Rating class 5–8	71	138	—	—	128	209
Rating class 9–10	—	—	41	—	16	41
Gross carrying amount at 31/12/2018	**1,216**	**642**	**41**		**1,160**	**1,899**
Impairment	(4)	(6)	(15)	—	—	(25)
Carrying amount at 31/12/2018	**1,212**	**636**	**26**	**—**	**1,160**	**1,874**

Other Information (Continued)

78 Fair value hierarchy

The development of financial instruments measured at fair value and recognised at fair value in the balance sheet is described below, notably with regard to the fair value hierarchy.

This fair value hierarchy is divided into the following levels:

Level 1 contains financial instruments measured using prices of identical assets or liabilities listed on active markets. These prices are incorporated unchanged. We have assigned mostly listed equity instruments, bonds and exchange-traded derivatives to this category.

Assets and liabilities whose valuation is derived from directly observable (prices) or indirectly observable (derived from prices) input data (valuation parameters) are shown in Level 2. No price can be observed on an active market for the assets and liabilities concerned themselves. As a result of this, we notably show the fair values of interest rate and credit derivatives in this level together with the fair values of ABS bonds, provided a liquid market exists for the asset class in question.

Financial assets or liabilities of €652 million (previous year: €180 million) were transferred between Level 1 and Level 2. At the same time, financial assets or liabilities of €2,317 million (previous year: €2,253 million) were transferred between Level 2 and Level 1. Most of the transfers relate to securities, resulting from an increase or decrease in the actual trading taking place in the securities concerned and the associated change in the bid-offer spreads.

The following table shows transfers between Level 1 and Level 2 for financial instruments where fair value is determined on a recurring basis:

(€ millions)

		TO LEVEL 1	TO LEVEL 2
Financial assets held for trading			
	Transfer from Level 1	—	156
	Transfer from Level 2	114	—
Financial assets at FVTPL			
	Transfer from Level 1	—	496
	Transfer from Level 2	2,116	—
Financial assets at FVTOCI			
	Transfer from Level 1	—	—
	Transfer from Level 2	85	—
Financial liabilities held for trading			
	Transfer from Level 1	—	—
	Transfer from Level 2	2	—
Financial liabilities at FVTPL			
	Transfer from Level 1	—	—
	Transfer from Level 2	—	—

1 January is considered the transfer date for instruments transferred between the levels in the reporting period (1 January to 31 December).

Level 3 relates to assets or liabilities for which the fair value cannot be calculated exclusively on the basis of observable market data (non-observable input data). The amounts involved are stated in Level 2 if the impact of the non-observable input data on the determination of fair value is insignificant. Thus, the respective fair values also incorporate valuation parameters based on model assumptions. This includes derivatives and structured products that contain at least one “exotic” component, such as foreign currency or interest rate derivatives on illiquid currencies, derivatives without standard market terms, structured products with an illiquid underlying as reference and ABS bonds of an asset class for which no liquid market exists.

If the value of a financial instrument is based on non-observable valuation parameters, the value of these parameters may be selected from a range of possible appropriate alternatives at the reporting date. Appropriate values, which are calibrated according to the principle of prudent evaluation, are determined for these non-observable parameters and applied for valuation purposes, when the annual financial statements are prepared. In addition, individual parameters that cannot be incorporated separately as standalone valuation parameters are taken into account by applying a model reserve.

The following measurement methods are applied for each product type, broken down by the individual classes of financial instrument. The measurements of financial instruments in fair value Level 3 depend upon the following significant parameters that cannot be observed on the market:

PRODUCT TYPE	MEASUREMENT METHOD	SIGNIFICANT NON-OBSERVABLE PARAMETERS	RANGE
Fixed-income securities and other debt instruments	Market approach	Price	0.7bps–76.5bps
Equities	Market approach	Price	0%–37%
Asset-backed securities (ABS)	DCF method	Credit spread curves	10bps–416bps
		Residual value	0%–28%
		Default rate	0%–1.3%
		Prepayment rate	0%–9%
Commodity-/Equity derivatives	Option price model	Commodity price volatility/Equity volatility	2%–11%
		Correlation between commodity/Equities	2%–20%
	DCF method	Dividend yields	0%–20%
Interest rate derivatives	DCF method	Swap interest rate	0.32bps–37.6bps
		Inflation swap interest rate	2.9bps–6.3bps
	Option price model	Inflation volatility	0% -2%
		Interest rate volatility	2%–35%
		Correlation between interest rates	0%–20%
Credit derivatives	Hazard rate model	Credit spread curves	1.3bps–329.3bps
		Residual value	0%–5%
Currency derivatives	DCF method	Yield curves	0.32bps–37.6bps
	Option price model	FX volatility	0%–7%

The impact of changing possible appropriate alternative parameter values on the fair value of the financial instruments classified as Level 3 is shown in the sensitivity analysis presented below. The level of variation of the unobservable parameters reflects the prevailing market conditions regarding the valuation of sensitivities. For portfolios at fair value through profit or loss, the positive and negative fair value changes would amount to a plus or minus of €37 million respectively at the reporting date (previous year: a plus or minus of €49 million respectively).

The following table shows the significant sensitivity effects, broken down by the individual classes of financial instrument for the various product types:

(€ millions)

	2019		2018	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
Fixed-income securities and other debt instruments	—	—	—	—
Equities	—	—	—	—
Asset-backed securities	—	—	—	—
Commodity-/Equity derivatives	27	(27)	39	(39)
Interest rate derivatives	—	—	—	—
Credit derivatives	10	(10)	10	(10)
Currency derivatives	—	—	—	—
Total	**37**	**(37)**	**49**	**(49)**

Other Information (Continued)

The parameters and ranges of the non-observable parameters were revised in the reporting year. This resulted in adjustments being made to the sensitivity impact. To facilitate comparability with the previous year, the figures stated for the previous year were also calculated accordingly.

For fixed-income securities and other debt instruments as well as asset-backed securities, the credit spread curves were varied as part of the sensitivity analyses in line with the ratings. For equities, the spot price is varied using a relative value.

The following non-observable parameters were varied (stress test) for the sensitivity analysis for equity derivatives included in Level 3: spot prices for hedge funds, implicit volatility, dividends, implicit correlations and the assumptions regarding the interpolation between individual parameters observable on the market, such as volatilities. For interest rate products, interest rates, interest rate correlations and implicit volatilities were varied as part of the sensitivity analysis. For credit derivatives, rating-dependent shifts in the risk premium curves for credit risk were assumed together with changes in implicit correlations and increases in default rates. Foreign currency derivatives were varied in terms of the implicit volatility.

Where trades are executed for which the transaction price deviates from the fair value at the trade date and non-observable parameters are employed to a considerable extent in valuation models, the financial instrument concerned is recognised at the trade price. This difference between the transaction price and the fair value of the valuation model is defined as the trade date gain/loss. Corresponding gains and losses determined at the trade date are deferred and recognised in the income statement over the term of the transaction. As soon as a reference price can be determined for the transaction on an active market, or the significant input parameters are based on observable market data, the deferred trade date gain is taken directly to the income statement in net trading income.

The following table shows a year-on-year comparison of changes in trade date gains and losses that were deferred on account of the application of significant non-observable parameters for financial instruments recognised at fair value:

(€ millions)

	2019	2018
Balance at 1/1	**18**	**15**
New transactions during the period	6	11
Write-downs	6	4
Expired transactions	—	—
Retroactive change in observability	4	4
Exchange rate changes	—	—
Balance at 31/12	**14**	**18**

The following table shows the assignment of the financial assets and financial liabilities recognised in the balance sheet at fair value to the respective levels of the fair value hierarchy:

(€ millions)

	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1)		FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Financial assets recognised						
in the balance sheet at fair value						
Financial assets held for trading	16,184	18,614	52,443	48,382	1,226	1,961
of which: derivatives	2,470	2,244	43,949	38,759	468	1,260
Financial assets at FVTPL	7,746	7,003	6,783	8,805	945	875
Financial assets at FVTOCI	11,830	6,994	2,843	376	—	—
Hedging derivatives	—	—	264	276	—	—
Financial liabilities recognised						
in the balance sheet at fair value						
Financial liabilities held for trading	4,397	8,707	41,429	38,148	839	1,250
of which: derivatives	2,794	2,234	37,900	34,050	507	940
Financial liabilities at FVTPL	—	—	5,604	4,949	332	203
Hedging derivatives	—	1	813	597	—	—

The following table shows the development of the financial assets that are assigned to Level 3 as part of the fair value hierarchy: (€ millions)

	FINANCIAL ASSETS HELD FOR TRADING	FINANCIAL ASSETS AT FVTPL	FINANCIAL ASSETS AT FVTOCI	HEDGING DERIVATIVES
Balance at 1/1/2019	**1,961**	**875**	**—**	**—**
Additions				
Acquisitions	373	537	—	—
Realised gains[1]	53	81	—	—
Transfer from other levels	21	13	—	—
Other additions[2]	27	35	—	—
Disposals				
Sale	(914)	(16)	—	—
Repayment	—	(539)	—	—
Realised losses[1]	(71)	(30)	—	—
Transfer to other levels	(207)	(7)	—	—
Other disposals	(17)	(4)	—	—
Balance at 31/12/2019	**1,226**	**945**	**—**	**—**
Balance at 1/1/2018	**1,101**	**714**	**—**	**—**
Additions				
Acquisitions	1,260	62	—	—
Realised gains[1]	115	58	—	—
Transfer from other levels	6	7	—	—
Other additions[2]	30	205	—	—
Disposals				
Sale	(458)	(38)	—	—
Repayment	—	—	—	—
Realised losses[1]	(14)	(24)	—	—
Transfer to other levels	(64)	(2)	—	—
Other disposals	(15)	(107)	—	—
Balance at 31/12/2018	**1,961**	**875**	**—**	**—**

1 In the income statement and shareholders' equity.
2 Also including changes in the group of companies included in consolidation.

Additions from acquisitions are mainly due to the purchase of individual illiquid equity derivatives of financial assets held for trading as well as new syndicated lending business in relation to financial assets. The disposals are a result of short-term foreign currency transactions in specific currencies that have not yet been classified as observable. Due to better observability of the liquidity of these currencies, these are now classified as Level 2. The expired transactions are thus shown as a disposal, while existing transactions are reported as transfer to other levels.

Other Information (Continued)

The following table shows the change in the financial liabilities assigned to Level 3 under the fair value hierarchy: (€ millions)

	FINANCIAL LIABILITIES HELD FOR TRADING		FINANCIAL LIABILITIES AT FVTPL		HEDGING DERIVATIVES	
	2019	2018	2019	2018	2019	2018
Balance at 1/1	**1,250**	**1,722**	**203**	**—**	**—**	**—**
Reclassification of financial liabilities held for						
trading to financial liabilities at FVTPL	—	(551)	—	551	—	—
Balance at 1/1 (after reclassification)	**1,250**	**1,171**	**203**	**551**	**—**	**—**
Additions						
Sale	315	700	—	—	—	—
Issues	179	149	208	106	—	—
Realised losses[1]	102	128	4	6	—	—
Transfer from other levels	46	16	97	1	—	—
Other additions[2]	9	6	4	10	—	—
Disposals						
Buy-back	(642)	(555)	(9)	(16)	—	—
Repayment	(24)	(5)	(40)	(210)	—	—
Realised gains[1]	(42)	(174)	(6)	(20)	—	—
Transfer to other levels	(343)	(159)	(127)	(218)	—	—
Other disposals	(11)	(27)	(2)	(7)	—	—
Balance at 31/12	**839**	**1,250**	**332**	**203**	**—**	**—**

1 In the income statement and shareholders' equity.
2 Also including changes in the group of companies included in consolidation.

Most of the disposals result from short-term foreign currency transactions in specific currencies that have not yet been classified as observable. Due to better observability of the liquidity of these currencies, these are now classified as Level 2. The expired transactions are thus shown as a disposal, while existing transactions are reported as transfer to other levels. The remaining transfers to other levels relating to liabilities held for trading as well as financial liabilities are primarily attributable to the improved liquidity of the instruments underlying certain structured issues.

79 Fair values of financial instruments compliant with IFRS 7

The fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It is assumed in this context that the transaction takes place on the principal market for the instrument or the most advantageous market to which the Bank has access.

The method used to determine the fair values for loans was developed further in the first half of 2018. While the method for determining the fair values of performing loans is based on the previous fair value model which was supplemented by additional factors, a separate model was implemented for determining the fair values of non-performing loans.

The calculation of the fair value for performing loans is explained to begin with. The fair value of loans is calculated as the sum total of the discounted, risk-adjusted anticipated cash flows discounted on the basis of the swap curve (based on Libor). Cash flows are determined on the basis of the conditions of the loan agreement (interest and redemption), whereby rights of termination are taken into account for the first time. In this context, the anticipated, risk-adjusted cash flows are based on the survival probability and the loss given default. The survival probability is determined on the basis of the risk-neutral probability of default, while the proceeds upon realisation are determined on the basis of the internal loss given default parameters. In turn, the risk-neutral probability of default is determined on the basis of the internally calculated one-year default rate (real-world probability of default), the market risk premium and the correlation between the respective loan and the general market risk. The market risk premium represents a factor used to cover the difference between the real-world probability of default and the market's return expectations for the risk assumed. The loan portfolio is divided into five sectors (sovereign loans, loans to banks, corporate loans, syndicated loans and retail loans) in order to take account of the specific features of each sector. The sector for syndicated loans is taken into account in 2018 for the first time. For each of these sectors with exception of retail loans, first of all the market risk premium is determined on the basis of a portfolio of specific, liquid CDS prices for the respective sector. Only for retail loans is the market risk premium derived from the market risk premiums for the other sectors due to the lack of a CDS market (except for syndicated loans). Furthermore, the fair value calculated by the model is calibrated in 2018 for the first time in order to take account of the difference between this value and the fair value upon addition. This is in line with the assumption based on IFRS 13.58 according to which the transaction price reflects the fair value.

The proceeds upon realisation estimated by the Bank are taken as a basis to determine the fair value of non-performing loans. These already take account of the expected credit default. The maturities of the expected proceeds upon realisation are determined using model assumptions. These cash flows are discounted at a market interest rate in order to establish the fair value.

The fair value calculation for loans and receivables is built around the risk-neutral credit spread, which takes account of all relevant factors on the market. Further parameters besides the risk-neutral credit spread and the risk-free return on investment are not included. Provided the markets are liquid and no relevant market disruptions are evident, as is currently the case, the arbitrage between the markets on which credit risks are traded leads to a narrowing of the credit spreads. Accordingly, the CDS market is defined as the relevant exit market for loans and receivables. Otherwise, the parameters used to determine the real-world probability of default (PD) and loss given default (LGD) are determined on the basis of internal procedures.

In the reporting year, the method for determining the level for loans was refined. Levels are now allocated based on a sensitivity analysis for which a range is determined, when calculating the respective fair value, for the internal parameters within which the internal parameters may fluctuate based on realistic assumptions. In order to calculate the sensitivity, the internal parameter is now replaced with the value with the highest deviation in the estimated range, and based on that figure the fair value is recalculated. As long as the deviation of the fair value determined using this method is not significant compared with the originally determined fair value, the financial instrument is allocated to Level 2; otherwise, it is allocated to Level 3.

Investments in joint ventures and associates are accounted for using the equity method, provided they are not of minor significance. Investments in non-consolidated companies and listed companies not accounted for using the equity method are normally carried at their fair value.

Quoted market prices are used for securities and derivatives traded on an exchange as well as for listed debt instruments. These instruments are allocated to Level 1. The fair value of the remaining securities is calculated as the net present value of anticipated future cash flows. The methods used to determine the fair value levels as described in the Note "Fair value hierarchy" are employed for this purpose.

The fair values of single-currency and cross-currency swaps and interest rate futures are calculated on the basis of discounted, anticipated future cash flows. In doing so, we apply the market rates applicable for the remaining maturity of the financial instruments. The fair value of forward exchange transactions is computed on the basis of current forward rates. Options are valued using price quotations or generally accepted models used to calculate the price of options. The common Black & Scholes model and the Bachelier model are used to value simple European options. In the case of more complex instruments, the interest is simulated using term-structure models with the current interest rate structure as well as caps and swaption volatilities as parameters relevant for valuation. The disbursement structure of the equities or indexes for the complex instruments is valued using either Black & Scholes or a stochastic volatility model with equity prices, volatilities, correlations and dividend expectations as parameters. The methods used to determine the fair value levels described in the Note "Fair value hierarchy" are employed for this purpose.

Other Information (Continued)

Please refer to the Note “Fair value hierarchy” for a description of the methods used to determine the fair value levels for unlisted derivatives.

The anticipated future cash flows of the liabilities (deposits from banks and customers, and debt securities in issue, provided these are not listed) are discounted to the present value using current interest rates taking into account internally determined funding premiums. The funding premiums correspond to the parameters that the Bank uses when setting the prices for its own issues. These funding premiums represent internally determined parameters that are essential for the determination of the fair value; the other liabilities are allocated to Level 3 accordingly.

The fair values are calculated using the market information available at the reporting date as well as specific company valuation methods.

(€ billions)

	CARRYING AMOUNT		FAIR VALUE	
ASSETS	**2019**	**2018**	**2019**	**2018**
Cash and cash balances	26.2	20.0	26.2	20.0
Financial assets held for trading	69.9	69.0	69.9	69.0
Financial assets at FVTPL	15.5	16.7	15.5	16.7
Financial assets at FVTOCI	14.7	7.4	14.7	7.4
Loans and receivables with banks (at cost)	31.8	33.6	31.5	33.8
Loans and receivables with customers (at cost)	139.6	133.7	143.5	136.7
of which: finance leases	1.8	1.8	1.8	1.8
Hedging derivatives	0.3	0.3	0.3	0.3
Total	**298.0**	**280.7**	**301.6**	**283.9**

(€ billions)

	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1)		FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
ASSETS	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Financial assets not carried at fair value						
in the balance sheet						
Cash and cash balances	—	—	26.2	20.0	—	—
Loans and receivables with banks (at cost)	0.4	0.5	29.6	26.9	1.5	6.4
Loans and receivables with customers (at cost)	1.4	4.3	73.1	18.5	69.0	113.9
of which: finance leases	—	—	—	—	1.8	1.8

(€ billions)

LIABILITIES	CARRYING AMOUNT 2019	CARRYING AMOUNT 2018	FAIR VALUE 2019	FAIR VALUE 2018
Deposits from banks	70.3	62.9	70.2	62.8
Deposits from customers	125.4	121.0	125.6	121.2
Debt securities in issue	28.3	24.4	30.7	26.3
Financial liabilities held for trading	46.7	48.1	46.7	48.1
Financial liabilities at FVTPL	5.9	5.2	5.9	5.2
Hedging derivatives	0.8	0.6	0.8	0.6
Total	**277.4**	**262.2**	**279.9**	**264.2**

(€ billions)

LIABILITIES	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1) 2019	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1) 2018	FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2) 2019	FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2) 2018	FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3) 2019	FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3) 2018
Financial liabilities not carried at fair value						
in the balance sheet						
Deposits from banks	0.1	0.1	55.9	43.0	14.2	19.7
Deposits from customers	—	0.1	121.8	86.0	3.8	35.1
Debt securities in issue	9.5	5.9	6.5	5.9	14.7	14.5

The difference in HVB Group between the fair values and carrying amounts totals €3.6 billion (previous year: €3.2 billion) for assets and €2.5 billion (previous year: €2.0 billion) for liabilities. The balance of these amounts is €1.1 billion (previous year: €1.2 billion). When comparing carrying amounts and fair values for the hedged items, it should be noted that part of the undisclosed reserves/charges has already been included in the hedge adjustment amount.

80 Disclosures regarding the offsetting of financial assets and liabilities

The following two tables separately show the recognised financial assets and financial liabilities that have already been netted in the balance sheet in accordance with IAS 32.42 together with the financial instruments that are subject to a legally enforceable master netting arrangement or similar arrangement but that do not satisfy the criteria for offsetting in the balance sheet.

Financial assets that are netted in the balance sheet or subject to a legally enforceable master netting arrangement or similar arrangement:

(€ millions)

	FINANCIAL ASSETS (GROSS)	FINANCIAL LIABILITIES NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED FINANCIAL ASSETS (NET)	AMOUNTS NOT RECOGNISED: EFFECTS OF MASTER NETTING ARRANGE-MENTS	AMOUNTS NOT RECOGNISED: FINANCIAL INSTRUMENTS AS COLLATERAL	AMOUNTS NOT RECOGNISED: CASH COLLATERAL	NET AMOUNT
Derivatives[1]	76,042	(28,891)	47,151	(27,661)	(114)	(10,232)	9,144
Reverse repos[2]	24,725	(3,875)	20,850	—	(20,386)	—	464
Loans and receivables[3]	90,065	(3,639)	86,426	—	—	—	86,426
Total at 31/12/2019	**190,832**	**(36,405)**	**154,427**	**(27,661)**	**(20,500)**	**(10,232)**	**96,034**
Derivatives[1]	58,738	(16,199)	42,539	(24,834)	(353)	(8,880)	8,472
Reverse repos[2]	26,455	(2,687)	23,768	—	(21,962)	—	1,806
Loans and receivables[3]	87,397	(3,582)	83,815	—	—	—	83,815
Total at 31/12/2018	**172,590**	**(22,468)**	**150,122**	**(24,834)**	**(22,315)**	**(8,880)**	**94,093**

1 Derivatives are included in the balance sheet items “Financial assets held for trading” and “Hedging derivatives”.
2 Reverse repos are covered in the Notes “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)”. They are also included in “Financial assets held for trading” with an amount of €1,888 million (previous year: €2,665 million).
3 Only relates to current accounts, cash collateral or pledged credit balances and other loans and receivables (including cumulative variation margins), as covered in the Notes “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)”.

Other Information (Continued)

Financial liabilities that are netted in the balance sheet or subject to a legally enforceable master netting arrangement or similar arrangement:

(€ millions)

	FINANCIAL LIABILITIES (GROSS)	FINANCIAL ASSETS NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED LIABILITIES (NET)	AMOUNTS NOT RECOGNISED			NET AMOUNT
				EFFECTS OF MASTER NETTING ARRANGE-MENTS	FINANCIAL INSTRUMENTS AS COLLATERAL	CASH COLLATERAL	
Derivatives[1]	72,693	(30,679)	42,014	(27,661)	(527)	(10,140)	3,686
Reverse repos[2]	29,986	(3,875)	26,111	—	(26,111)	—	—
Liabilities[3]	112,449	(1,850)	110,599	—	—	—	110,599
Total at 31/12/2019	**215,128**	**(36,404)**	**178,724**	**(27,661)**	**(26,638)**	**(10,140)**	**114,285**
Derivatives[1]	55,953	(18,131)	37,822	(24,834)	(492)	(8,713)	3,783
Reverse repos[2]	27,435	(2,687)	24,748	—	(23,199)	—	1,549
Liabilities[3]	107,921	(1,650)	106,271	—	—	—	106,271
Total at 31/12/2018	**191,309**	**(22,468)**	**168,841**	**(24,834)**	**(23,691)**	**(8,713)**	**111,603**

1 Derivatives are included in the balance sheet items "Financial liabilities held for trading" and "Hedging derivatives".
2 Repos are covered in the Notes "Deposits from banks" and "Deposits from customers". They are also included in financial liabilities held for trading with an amount of €540 million (previous year: €1,401 million).
3 Only relates to current accounts, cash collateral or pledged credit balances and other liabilities (including cumulative variation margins), as covered in the Notes "Deposits from banks" and "Deposits from customers".

Compliant with IAS 32.42, financial assets and liabilities with the same counterparty are to be offset and recognised in the balance sheet at the net amount if such offsetting of the amounts recognised at the present date is legally enforceable and the intention is to settle on a net basis during the normal course of business or to realise the asset and settle the liability simultaneously. The tables show a reconciliation from the gross amounts prior to netting and the set-off amounts to the net amounts after offsetting for these set-offs in the balance sheet. At HVB Group, the set-offs in the balance sheet relate to transactions with central counterparties (CCPs), being OTC derivatives (set-off of the balancing positive and negative fair values at currency level) and the receivables and liabilities arising from reverse repos and repos concluded with the same central counterparty. At the same time, nettable receivables and liabilities repayable on demand with the same counterparties in the banking business are also offset in the balance sheet. In addition, cumulative changes in the fair value of listed future-styled derivatives are netted with the cumulative variation margin payments.

The column "Effects of master netting arrangements" shows the financial instruments that are subject to a legally enforceable master netting arrangement or similar arrangement, but which are not netted in the balance sheet as they do not satisfy the IAS 32.42 offsetting requirements as described above. At HVB Group, this includes OTC derivatives and repo transactions with individual counterparties with which legally enforceable master netting arrangements have been concluded allowing netting in the event of default.

In addition, collateral in the form of financial instruments and cash collateral pledged or received in this context is presented in the tables. Furthermore, the securities lending transactions shown off the balance sheet without the cash collateral are not included in the above netting tables.

81 Undiscounted cash flow

Compliant with IFRS 7.39, we are disclosing the remaining terms for non-derivative and derivative financial liabilities and for credit commitments and financial guarantees. The breakdown of remaining terms is based on the contractual due dates. These are crucial for determining the timing of payments. Consequently, we have divided the contractually agreed, undiscounted payments into maturity buckets. The undiscounted cash flows shown here are not comparable with the carrying amounts, as the latter are based on discounted cash flows.

At the same time, we have broken down the financial assets by remaining term in this context compliant with IFRS 7.39. These are financial assets that generate cash flows used to settle financial liabilities.

In the following tables, we have divided the derivative and non-derivative financial assets and liabilities into maturity buckets. All financial liabilities have been allocated to the respective maturity bucket. The derivatives on financial assets held for trading and financial liabilities held for trading have been allocated to the shortest maturity bucket with their fair value. This reflects the fact that the derivatives are subject to an intention to sell in the short term and hence the maturity of the contractual undiscounted cash flows does not adequately represent the timing of payments that is actually expected. The remaining financial instruments classified as financial assets held for trading and financial liabilities held for trading have been allocated to the earliest possible maturity bucket with their cash flows. Hedging derivatives used under hedge accounting have been allocated to the applicable maturity bucket with their contractually agreed, undiscounted cash flows.

Credit commitments and financial guarantees have been allocated with the maximum amount to the shortest maturity bucket (repayable on demand) in which they can be utilised at the earliest. The credit commitments amount to €52,866 million (previous year: €49,405 million). This assumption defined in IFRS 7 is unrealistic for credit commitments not utilised and contingent liabilities for financial guarantees in particular, as the complete utilisation of all open credit commitments and financial guarantees on the next day cannot be expected. The same holds true for the presentation of the fair values of trading derivatives.

Breakdown of financial assets by maturity bucket: **(€ millions)**

	2019						
	REPAYABLE ON DEMAND	UP TO 1 MONTH	1 MONTH TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	UNDATED
Financial assets held for trading	285	5,612	1,037	2,542	3,994	2,900	5,033
Derivatives on financial assets held for trading	46,887	—	—	—	—	—	—
Financial assets at FVTPL	1	178	228	2,020	10,497	2,760	803
Financial assets at FVTOCI	—	415	7	232	10,785	3,392	—
Loans and receivables with banks (at cost)	12,171	3,826	7,472	6,312	5,522	6,764	16,118
Loans and receivables with customers (at cost)	16,732	10,496	7,072	12,213	53,740	64,741	161
of which: finance leases	25	52	139	462	1,047	150	3
Hedging derivatives	—	377	754	3,394	3,609	1,974	—

(€ millions)

	2018						
	REPAYABLE ON DEMAND	UP TO 1 MONTH	1 MONTH TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	UNDATED
Financial assets held for trading	1,284	4,407	794	3,615	7,181	4,056	10,914
Derivatives on financial assets held for trading	42,263	—	—	—	—	—	—
Financial assets at FVTPL	137	469	778	3,182	9,857	2,705	697
Financial assets at FVTOCI	—	1,911	4	441	3,037	2,087	26
Loans and receivables with banks (at cost)	10,086	3,667	10,857	7,428	4,465	6,801	855
Loans and receivables with customers (at cost)	16,140	10,445	7,320	14,862	54,578	66,386	119
of which: finance leases	23	37	142	479	1,178	123	—
Hedging derivatives	—	404	808	3,632	3,817	1,509	—

Other Information (Continued)

Breakdown of non-derivative and derivative financial liabilities by maturity bucket:

(€ millions)

	2019						
	REPAYABLE ON DEMAND	UP TO 1 MONTH	1 MONTH TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	UNDATED
Deposits from banks	13,619	21,511	9,653	11,699	12,640	7,175	7
Deposits from customers	91,382	10,052	15,907	9,614	4,726	1,425	—
Debt securities in issue	20	231	296	3,133	13,465	21,639	—
Financial liabilities held for trading	62	601	3,163	422	1,519	1,434	2,091
Financial liabilities at FVTPL	—	21	86	398	1,304	204	2,987
Derivatives on financial liabilities held for trading	41,201	—	—	—	—	—	—
Hedging derivatives	—	390	780	3,508	2,335	626	—
Credit commitments and financial guarantees	77,743	—	—	—	—	—	—

(€ millions)

	2018						
	REPAYABLE ON DEMAND	UP TO 1 MONTH	1 MONTH TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	UNDATED
Deposits from banks	14,537	10,846	13,005	5,332	17,603	7,329	15
Deposits from customers	85,550	10,744	16,715	6,960	8,044	1,766	—
Debt securities in issue	265	3,746	1,431	2,487	13,289	19,054	32
Financial liabilities held for trading	123	2,729	2,340	465	3,110	3,469	2,778
Financial liabilities at FVTPL	—	45	28	182	1,446	703	2,813
Derivatives on financial liabilities held for trading	37,224	—	—	—	—	—	—
Hedging derivatives	—	420	840	3,782	3,029	652	—
Credit commitments and financial guarantees	75,823	—	—	—	—	—	—

82 Regulatory disclosure requirements (Disclosure Report)

HVB has been classified as a significant subsidiary of UniCredit S.p.A. within the meaning of Article 13 (1) of the Capital Requirements Regulation (CRR), making it subject to the scope of the CRR (Article 13 (1) and Part 8 CRR) and certain extended regulatory disclosure requirements in accordance with Section 26a KWG (disclosure under Pillar III).

HVB discloses this information on a standalone basis in the form of a separate disclosure report. This report is produced on an annual basis as at 31 December and at each quarter-end during the year and published on the Bank's website under About us > Investor Relations > Reports. The publication for the reporting date of 31 December is scheduled for shortly after the publication of the Annual Report. The interim reports should be published shortly after submission of the regulatory COREP report to the supervisory authorities responsible.

The disclosure of the remuneration policy and practices for those categories of staff whose professional activities have a material impact on the Bank's risk profile (known as "risk takers") required by Article 450 CRR in conjunction with Section 16 (1) of the German Regulation on the Requirements for the Remuneration Systems of Institutions under Regulatory Law (Institutsvergütungsverordnung) takes the form of a separate report for HVB. This is drawn up once a year as at 31 December and published on the Bank's website under About us > Investor Relations > Corporate Governance in the second quarter of the following year.

83 Key capital ratios (based on IFRS)

HVB Group manages its economic and supervisory capital as part of its value-oriented overall bank management strategy. The yield expectations are calculated in accordance with the allocated capital principle that UniCredit employs across its entire organisation. Under the principle of dual control, both regulatory capital in the sense of committed core capital and internal capital are allocated to the business segments. Both resources are expected to yield an appropriate return, which is derived from the expectations of the capital market. Please refer to the section of the Risk Report entitled "Implementation of overall bank management" for further details on the management of regulatory capital adequacy requirements and economic capital adequacy.

The supervisory ratios are discussed below.

The legal basis is provided by the EU Regulation on Prudential Requirements for Credit Institutions and Investment Firms (CRR), which came into force on 1 January 2014. The supervisory total capital ratio prescribed in the CRR II represents the capital ratio determined in accordance with Part 2 CRR II to the total amount of the risk-weighted assets for default risk, market risk and operational risk (corresponds to the risk-weighted asset equivalent of these risk positions). Under Article 92 CRR II, the Tier 1 capital ratio calculated as the ratio of Tier 1 capital to total risk-weighted assets determined as described above must be at least 6.0%.

Own funds underlying the calculation of the total capital ratio in accordance with CRR II consists of Tier 1 and Tier 2 capital. Under Article 92 CRR II, the total capital ratio calculated as the ratio of own funds to total risk-weighted assets must be at least 8.0%. HVB Group uses internal models in particular to measure market risk positions.

The following table shows own funds based on the approved consolidated financial statements and risk-weighted assets together with the risk equivalents for market risk positions and operational risk at the reporting date:

Own funds[1]

(€ millions)

	2019	2018
Tier 1 – Total Tier 1 capital for solvency purposes	**14,987**	**16,454**
Shares of common stock	2,407	2,407
Additional paid-in capital, retained earnings, minority interest, own shares	14,176	16,370
Hybrid capital instruments (silent partnership certificates) without prorated interest	—	—
Other	(1,165)	(1,599)
Capital deductions	(431)	(724)
Tier 2 – Total Tier 2 capital for solvency purposes	**504**	**530**
Unrealised reserves in land and buildings and in securities	—	—
Offsetting reserves for general banking risks	—	—
Cumulative shares of preferred stock	—	—
Participating certificates outstanding	—	—
Subordinated liabilities	326	356
Value adjustment excess for A-IRB positions	178	174
Other	—	—
Capital deductions	—	—
Total own funds	**15,491**	**16,984**

1 Group of consolidated companies and principles of consolidation in accordance with banking supervisory regulations.

Own funds of HVB Group in accordance with Part 2 CRR II amounted to €15,491 million at the reporting date (previous year: €16,984 million). As in the previous year, we have not included in Tier 2 capital any unrealised reserves in accordance with Section 10 (2b) 1 No. 6 and 7 KWG in the version applicable until 31 December 2013.

Own funds are determined on the basis of IFRS figures determined in accordance with CRR II/CRD V using the consolidated accounting method.

Other Information (Continued)

The following table shows the reconciliation from the equity items shown in the balance sheet prepared in accordance with IFRS:

(€ millions)

	COMMON EQUITY TIER 1 CAPITAL	ADDITIONAL TIER 1 CAPITAL	TIER 2 CAPITAL	TOTAL OWN FUNDS
Shown in IFRS balance sheet				
Shareholders' equity	18,915	—	—	18,915
Reconciliation to the own funds compliant with the Capital Requirements Regulation				
Cumulative shares of preferred stock	—	—	—	—
Ineligible profit components	(3,288)	—	—	(3,288)
Ineligible minority interests under banking supervisory regulations	10	—	—	10
Diverging consolidation perimeters	(220)	—	—	(220)
Deduction of intangible assets	(15)	—	—	(15)
Hybrid capital recognised under banking supervisory regulations	—	—	—	—
Eligible portion of subordinated liabilities	—	—	326	326
Value adjustment excess (+) or shortfall (–) for A-IRB positions	—	—	178	178
Adjustments to CET1 due to prudential filters	(204)	—	—	(204)
Deductible deferred tax assets	(81)	—	—	(81)
Capital deductions which can alternatively be subject to a 1,250% risk weight	(1)	—	—	(1)
Transitional adjustments	—	—	—	—
Other effects	(129)	—	—	(129)
Own funds compliant with the Capital Requirements Regulation (CRR II)	**14,987**	**—**	**504**	**15,491**

(€ millions)

	2019 CRR II	2018 CRR
Risk-weighted assets from		
on-balance-sheet counterparty risk positions	45,151	44,785
off-balance-sheet counterparty risk positions	14,717	13,294
other counterparty risk positions[1]	1,533	1,287
derivative counterparty risk positions	4,194	4,237
other risk exposure amounts[2]	516	529
Total credit risk-weighted assets	**66,111**	**64,132**
Risk-weighted asset equivalent for market risk positions	**10,172**	**9,214**
Risk-weighted asset equivalent for operational risk	**9,172**	**9,246**
Total risk-weighted assets	**85,455**	**82,592**

1 Primarily including repos and securities lending transactions.
2 Upon the introduction of the "Defaulted Assets Model", a lower RWA limit was imposed on UCB AG for default losses in the retail/corporate portfolio. If the calculated risk-weighted assets are below the lower RWA limit for the default losses in the retail/corporate portfolio, the difference is shown in this item.

At the respective reporting dates, the key capital ratios (based on the approved consolidated financial statements) were as follows:

(in %)

	2019 CRR II	2018 CRR
Tier 1 capital ratio		
[Tier 1 capital/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	17.5	19.9
CET1 capital ratio		
[Common Equity Tier 1 capital/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	17.5	19.9
Total capital ratio		
[own funds/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	18.1	20.6

84 Securities sale and repurchase and securities lending transactions by balance sheet item

(€ millions)

	2019		2018	
	CARRYING AMOUNT	OF WHICH: TRANSFERRED AS COLLATERAL	CARRYING AMOUNT	OF WHICH: TRANSFERRED AS COLLATERAL
Financial assets held for trading	69,853	1,718	68,957	2,114
Financial assets at FVTPL	15,474	1,662	16,683	760
Financial assets at FVTOCI	14,673	1,515	7,370	1,931
Loans and receivables with banks (at cost)	31,842	—	33,648	1,132
Loans and receivables with customers (at cost)	139,632	1,025	133,706	50
Total	**271,474**	**5,920**	**260,364**	**5,987**

85 Contingent liabilities and other commitments

(€ millions)

	2019	2018
Contingent liabilities[1]	25,707	26,204
Guarantees and indemnities	25,707	26,204
Other commitments	51,835	49,438
Irrevocable credit commitments	51,811	49,405
Other commitments	24	33[2]
Total	**77,542**	**75,642**

1 Contingent liabilities are offset by contingent assets of the same amount.
2 Not included in other commitments are the future payment commitments arising from non-cancellable operating leases

Financial guarantees and irrevocable credit commitments are shown at their nominal amount (maximum outflow) less provisions set up for this purpose. Neither contingent liabilities nor other commitments contain any significant items. The financial guarantees and indemnities listed here essentially reflect guarantees and indemnities that the Bank has granted on behalf of customers. Consequently, the Bank has a right of recourse against the customer (contracting party) should the guarantee or indemnity in question be used. An appropriate provision is set up where such a customer's creditworthiness is doubtful. This takes account of the loss suffered by the Bank, as the recourse claim against the contracting party is not considered fully realisable on account of the party's doubtful creditworthiness.

It is hard to anticipate the date at which the contingent liabilities and other commitments mentioned here will result in an outflow of funds. Credit commitments frequently serve as liquidity reserve for the beneficiary in particular, meaning that the amounts are not necessarily utilised at all and hence an outflow of funds is not certain. In terms of financial guarantees, it is important to note that these are conditional payment commitments, meaning that the condition must be met before utilisation becomes possible (such as default on the guaranteed credit in the case of a credit guarantee or non-compliant delivery in the case of a delivery guarantee). Here, too, it is hard to assess whether and when this will be the case, as financial guarantees in particular are only ever utilised in exceptional circumstances entailing an outflow of funds.

Securities lending transactions are not recognised, as economic ownership remains with the lender. The Bank only becomes the legal owner of the borrowed securities which are returned to the lender, when the lending transaction falls due. Obligations of €14,449 million (previous year: €11,421 million) to return securities arising from securities lending transactions are thus offset by borrowed securities of the same amount, which are not carried as assets on the assets side of the balance sheet.

Other Information (Continued)

HVB has made use of the option to provide some of the annual contribution to the bank restructuring fund in the form of fully secured payment claims (irrevocable payment commitments) in accordance with Section 12 of the German Bank Restructuring Fund Act (Restrukturierungsfondsgesetz – RStruktFG). The cash collateral provided in this regard amounted to €82 million at the reporting date (previous year: €64 million).

HVB has made use of the option to provide up to 30% of the annual contribution to the deposit guarantee scheme of German banks (Entschädigungseinrichtung deutscher Banken) in the form of fully secured payment claims (irrevocable payment commitments) in accordance with Section 19 of the German Regulation on Financing the Deposit Guarantee Scheme (Entschädigungseinrichtungs-Finanzierungsverordnung – EntschFinV). The financial security provided in this regard amounted to €30 million at the reporting date (previous year: €22 million).

Legal risks can give rise to losses for HVB, the occurrence of which is greater than improbable but less than probable, and for which no provisions have been set aside. Such legal risks may result from negative developments in civil-law proceedings and the tendency for rulings to be made in favour of consumers or customers. The assessment of the risk of loss may prove to be too low or too high, depending on the outcome of the proceedings. HVB assumes that it will not be necessary to utilise the vast majority of the contingent liabilities arising from legal risks, meaning that the amounts are not representative of actual future losses. Such contingent liabilities arising from significant legal risks for which an estimate is possible amounted to € 91 million at year-end 2019 after €63 million at year-end 2018.

As part of real estate financing and development operations, we have assumed rental obligations and pre-emptive obligations or issued rental guarantees to make fund constructions more marketable – in particular for lease funds and (closed-end) KG real estate funds. Identifiable risks arising from such guarantees have been incorporated by setting up provisions.

Commitments for uncalled payments on shares not fully paid up amounted to €24 million at the reporting date (previous year: €29 million), and similar obligations for shares in cooperatives totalled €1 thousand (previous year: €1 thousand). We were not liable for any defaults on such calls under Section 22 (3) and 24 of the German Private Limited Companies Act (Gesetz betreffend die Gesellschaften mit beschränkter Haftung – GmbHG).

At the reporting date, we had unlimited personal liability arising from ownership of shares in 60 partnerships (previous year: 57).

With a Statement of Responsibility dated 21 December 1993, HVB issued an undertaking to the State of Baden-Wuerttemberg (Ministry of Finance) to assume a liquidity provision obligation in the event of the sale, liquidation or bankruptcy of HVB Projekt GmbH.

UniCredit Bank AG assumes liability as a member of the deposit guarantee funds in Germany within the scope of the valid provisions.

Euro-denominated government bonds issued by EU countries

On 31 January 2019, UniCredit S.p.A. and HVB received a Statement of Objections from the European Commission referring to the investigation by the European Commission of a suspected violation of antitrust rules in relation to European government bonds. The subject matter of the investigation extends to certain periods from 2007 to 2012 and includes alleged activities by HVB in a part of this period. The Statement of Objections does not prejudge the outcome of the proceeding; should the Commission conclude that there is sufficient evidence of an infringement, a decision prohibiting the conduct and imposing a fine could be adopted, with any fine subject to a statutory maximum of 10% of company's annual worldwide turnover.

HVB had access to the entirety of the European Commission's file on the investigation from 15 February 2019 onwards. As a result of the assessment of the files, the Bank regards it no longer remote but possible, even though not likely, that a cash outflow might be required to fulfil a potential fine arising from the outcome of the investigation. On the basis of the current information, it is not possible to reliably estimate the amount of any potential fine at the present date.

UniCredit S.p.A. and HVB responded to the raised objections on 29 April 2019 and participated at a hearing of the European Commission from 22 to 24 October 2019. Proceedings are ongoing. There is no legal deadline for the Commission to complete antitrust inquiries.

On 11 June 2019, HVB and UniCredit Capital Markets LLC were named, among other financial institutions, as defendants in a putative class action already pending in the United States District Court for the Southern District of New York. The third amended class action complaint, filed December 3, 2019, alleges a conspiracy among dealers of Euro-denominated bonds issued by European central banks to fix and manipulate the prices of those bonds, among other things by widening the bid-ask spreads they quoted to customers. The putative class consists of those who purchased or sold Euro-denominated bonds issued by European central banks in the US between 2007 and 2012. The third amended class action complaint does not include a quantification of damages claimed. The proceedings are in their inception. Motions to dismiss – a procedural device contemplated by the United States Federal Rules of Civil Procedure which provides defendants with an opportunity to challenge the legal sufficiency of a complaint and present arguments that the complaint should be dismissed – will likely be fully briefed before the end of the second quarter of 2020 and will likely include the argument that the complaint fails to state a claim.

Contingent liabilities payable to related parties (€ millions)

	2019	2018
Non-consolidated affiliated companies	1,848	1,526
of which:		
UniCredit S.p.A.	1,037	745
sister companies	811	781
subsidiaries	—	—
Joint ventures	26	46
Associates	—	—
Other participating interests	33	132
Total	**1,907**	**1,704**

86 Contingent assets from income taxes
At year-end 2019, there were contingent assets from income taxes in the two-digit million range for which an inflow of economic benefits is likely but which cannot yet be considered almost certain.

87 Statement of Responsibility
HVB ensures that, to the extent of its shareholding, the company set forth below is in a position to meet its contractual obligations except in the event of political risks:

Financial companies
UniCredit Leasing GmbH, Hamburg

HVB's commitment arising from the above Statement of Responsibility declines to the extent as HVB's shareholding decreases in the future with regard to those contractual obligations of the company that arose only after HVB's shareholding decreased. In case HVB is no longer a shareholder in the company listed above, our commitment arising from the above Statement of Responsibility with regard to such liabilities of the company that arose only after our shareholding ceased ends on the date on which our shareholding ceased.

HVB no longer provides a Statement of Responsibility for companies for which a Statement of Responsibility had been provided in earlier annual reports but which no longer appear in the above list. Liabilities of these companies arising before the reduction or cessation of the shareholding are only covered by such Statements of Responsibility that were provided before the reduction or cessation of the shareholding in each case.

Other Information (Continued)

88 Disclosures regarding structured entities
A structured entity as defined in IFRS 12 is an enterprise (or an economically separate entity) that has been designed so that voting rights or similar rights are not the dominant factor in deciding who controls the entity. Structured entities are frequently characterised by restricted activities, a narrow, well-defined objective, insufficient equity or financing in tranches.

Structured entities may be consolidated or not consolidated, depending on whether HVB Group has control over the entity or not. Transactions involving structured entities can be divided into the following categories using the business model applied by HVB Group:

– ABS vehicles
– Repackaging vehicles
– Funding vehicles for customers
– Some investment funds
– Other structured entities

Financial instruments with unconsolidated structured entities
Financial instruments with unconsolidated structured entities encompass all contractual relationships from which HVB Group obtains variable earnings and exposure to loss from the structured entities, but without gaining control over the structured entity. These might be equity and debt instruments, derivatives, liquidity facilities or guarantees.

ABS vehicles
HVB Group invests in ABS vehicles and uses ABS vehicles for its own securitisations. These vehicles buy loans or receivables and refinance themselves by issuing securities on the money or capital market. The securities are backed by the assets purchased. HVB Group can also provide finance for these vehicles in the form of liquidity facilities.

ABS vehicles used for own securitisations are fully consolidated in the consolidated financial statements and are not included in the unconsolidated structured entities shown here. This means that only such ABS vehicles in which HVB Group solely has an interest as an investor are classified as unconsolidated structured entities.

	2019	2018
Number of unconsolidated ABS vehicles (investor positions only)	230	244

Repackaging vehicles
Repackaging vehicles are used to offer customers specific securities and derivatives solutions. These vehicles buy assets (such as securities, loans and receivables, and derivatives) and restructure the cash flows from these assets by incorporating other instruments or securities. The vehicles refinance themselves by issuing custom-packaged securities or derivatives that meet the customer's demands. The funding is normally secured by the acquired assets.

	2019	2018
Number of unconsolidated repackaging vehicles	1	2
Aggregate total assets of unconsolidated repackaging vehicles (€ millions)	7	22
Nominal value of the securities issued by unconsolidated repackaging vehicles (€ millions)	7	22

Funding vehicles for customers
Customers use these vehicles as a source of funding. These funding vehicles buy current receivables or lease receivables from customers and refinance themselves mostly by issuing securities on the capital and money market (mostly commercial paper conduits). HVB Group can also provide financing for these vehicles in the form of liquidity facilities or other lending products. The majority of the vehicles listed below were set up by the customer or by HVB Group on behalf of the customer. These vehicles are not consolidated as HVB Group is not exposed to a majority of the variable income from the vehicles and has no possibility of influencing them.

	2019	2018
Number of unconsolidated funding vehicles for customers	40	33
Aggregate total assets of unconsolidated funding vehicles for customers (€ millions)	8,595	5,922
Nominal value of the securities issued by unconsolidated funding vehicles		
for customers (€ millions)	8,591	5,922

Some investment funds
Investment funds are classified as structured entities if they are not controlled by means of voting or similar rights. Investment funds invest in a range of assets and can also finance themselves with debt within the framework of their investment policies alongside the moneys provided by investors. Investment funds serve to achieve specifically defined investment goals.

HVB Group offers its customers investment funds under own and third party management and also itself invests in investment funds. We are also mandated by customers to keep shares in investment funds in securities accounts for third party account. Furthermore, HVB Group holds shares in investment funds in its own portfolio. These are mostly held in the held-for-trading portfolio and to a much smaller extent also in the portfolio at FVTPL. In addition, we offer typical banking services to investment funds, including derivative and financing solutions and deposit-taking operations.

The European-Office-Fonds investment fund controlled by HVB Group is fully consolidated in the consolidated financial statements and is not one of the unconsolidated structured entities shown here. The number and aggregated net asset value of investment funds show funds to which HVB Group has an exposure. Regarding the statement of the number of unconsolidated investment funds classified as structured entities, we have separately reported every special purpose entity to which HVB Group has an exposure.

	2019	2018
Number of unconsolidated investment funds classified as structured entities	687	733
of which: managed by HVB Group	36	45
Aggregate net asset value (including minority interests) of the investment funds classified as		
structured entities (€ millions)	444,073	556,171
of which: managed by HVB Group	1,940	1,765

With regard to the aggregate net asset value, it should be noted that our risk is only calculated in terms of the participating interest held, loans extended or derivatives issued as a proportion of the aggregate fund volume. A risk analysis is provided in the table under “Risks in connection with unconsolidated structured entities” below.

Other Information (Continued)

Other structured entities

This category covers structured entities that cannot be assigned to any of the other categories. For the most part, HVB Group mainly performs lending activities under this category with structured entities set up by customers or by HVB Group on behalf of customers.

These entities are mostly leasing vehicles that have only insufficient equity and are controlled economically by the lessee. Some of the leasing vehicles were financed through syndicated loans.

	2019	2018
Number of other structured entities	16	20
Aggregate total assets (€ millions)	3,101	1,829

Risks in connection with unconsolidated structured entities

The following tables show the carrying amounts of the assets and liabilities together with the off-balance-sheet risk positions of HVB Group in connection with unconsolidated structured entities:

(€ millions)

	2019				
	ABS VEHICLES (INVESTOR POSITIONS)	REPACKAGING VEHICLES	FUNDING VEHICLES FOR CUSTOMERS	SOME INVESTMENT FUNDS	OTHER STRUCTURED ENTITIES
Assets	**9,116**	**—**	**6,048**	**4,594**	**1,170**
Financial assets held for trading	657	—	—	2,904	—
Financial assets at FVTPL	34	—	—	35	2
Financial assets at FVTOCI	—	—	—	—	—
Loans and receivables with banks (at cost)	—	—	—	—	—
Loans and receivables with customers (at cost)	8,425	—	6,048	1,655	1,168
Hedging derivatives	—	—	—	—	—
Others assets	—	—	—	—	—
Liabilities	**2,156**	**—**	**71**	**3,848**	**108**
Deposits from banks	—	—	—	—	—
Deposits from customers	2,142	—	69	2,610	93
Debt securities in issue	—	—	—	1,027	—
Financial liabilities held for trading	13	—	—	211	—
Financial liabilities at FVTPL	—	—	—	—	—
Hedging derivatives	—	—	—	—	—
Other liabilities	1	—	—	—	—
Provisions	—	—	2	—	15
Off-balance-sheet positions	**51**	**—**	**1,557**	**64**	**45**
Irrevocable credit commitments and other commitments	51	—	1,557	64	1
Guarantees	—	—	—	—	44
Maximum exposure to loss	**9,167**	**—**	**7,605**	**4,658**	**1,215**

(€ millions)

	2018				
	ABS VEHICLES (INVESTOR POSITIONS)	REPACKAGING VEHICLES	FUNDING VEHICLES FOR CUSTOMERS	SOME INVESTMENT FUNDS	OTHER STRUCTURED ENTITIES
Assets	**7,193**	**2**	**5,915**	**3,300**	**21**
Financial assets held for trading	707	2	—	2,035	—
Financial assets at FVTPL	33	—	—	32	2
Financial assets at FVTOCI	—	—	—	—	—
Loans and receivables with banks (at cost)	—	—	—	—	—
Loans and receivables with customers (at cost)	6,453	—	5,915	1,233	19
Hedging derivatives	—	—	—	—	—
Others assets	—	—	—	—	—
Liabilities	**12**	**—**	**39**	**2,202**	**66**
Deposits from banks	—	—	—	—	—
Deposits from customers	—	—	38	1,958	51
Debt securities in issue	—	—	—	2	—
Financial liabilities held for trading	12	—	—	242	—
Financial liabilities at FVTPL	—	—	—	—	—
Hedging derivatives	—	—	—	—	—
Other liabilities	—	—	—	—	—
Provisions	—	—	1	—	15
Off-balance-sheet positions	**38**	**—**	**1,153**	**128**	**16**
Irrevocable credit commitments and other commitments	38	—	1,153	121	8
Guarantees	—	—	—	7	8
Maximum exposure to loss	**7,231**	**2**	**7,068**	**3,428**	**37**

The maximum exposure to loss from unconsolidated structured entities arises from the assets and off-balance-sheet risk positions relating to structured entities. This view does not, however, reflect the economic risk, as security received and hedging instruments are not included.

No financial or other support (“implicit support”) was provided to unconsolidated structured entities during the reporting period without having a contractual obligation to do so. Neither are there any concrete plans to provide support to unconsolidated structured entities in future.

Sponsored unconsolidated structured entities
Structured entities are classified as sponsored by HVB Group, if HVB Group was materially involved in setting up the entities. HVB Group has sponsored structured entities without having a participating interest in these entities through financial instruments. Thus, HVB Group is not exposed to the economic risks arising from these structured entities.

We only generate income from structured entities without participating interests to a limited extent through financial instruments. Fee and commission income of €12 million (previous year: €11 million) from charges and management fees was generated during the reporting period on investment funds managed by the Bank, of which €9 million (previous year: €7 million) was passed on to third parties in trailer fees.

Other Information (Continued)

Consolidated structured entities

The biggest consolidated structured entity is the multi-seller conduit programme Arabella. Securities with a nominal value of €4,881 million (previous year: €4,312 million) were outstanding at 31 December 2019. The total assets of the multi-seller conduit Arabella Finance DAC at the reporting date amounted to €4,891 million (previous year: €4,317 million).

Contractual arrangements that oblige HVB Group to provide financial assistance to consolidated structured entities exist notably in the form of liquidity facilities. These may be drawn by the vehicles to bridge maturity mismatches between the assets acquired and the securities issued.

Financial or other support was provided to consolidated structured entities without a contractual obligation to do so ("implicit support"):

- Where the market conditions prevented the securities issued by the consolidated multi-seller conduit Arabella Finance DAC being placed, HVB has acquired such issues. Without the purchases of the securities, HVB would have been required to provide liquidity facilities in the same amount to individual Elektra Purchase companies. At the reporting date, HVB held securities issued by Arabella Finance DAC with a nominal value of €2,395 million (previous year: €1,698 million) in its portfolio.
- Future support arrangements are planned as follows: HVB will continue to decide on a case-by-case basis whether to buy temporarily non-placeable securities issued by the consolidated multi-seller conduit Arabella Finance DAC or utilise the liquidity lines. Accordingly, the volume of securities to be acquired depends on the funding required, the prevailing market conditions and the above decision in each case.
- Both contractual financial and other support provided to consolidated structured entities without a contractual obligation to do so are not material for the consolidated financial statements, as these represent intra-group transactions.

89 Trust business

(€ millions)

	2019	2018
Trust assets	**5,091**	**4,416**
Loans and receivables with banks	—	—
Loans and receivables with customers	4	4
Equity securities and other variable-yield securities	—	—
Debt securities and other fixed-income securities	—	—
Participating interests	—	—
Property, plant and equipment	—	—
Other assets	—	—
Fund shares held in trust	5,087	4,412
Remaining trust assets	—	—
Trust liabilities	**5,091**	**4,416**
Deposits from banks	4	4
Deposits from customers	5,087	4,412
Debt certificates including bonds	—	—
Other liabilities	—	—

90 Transfer of financial assets

Transferred financial assets are derecognised in accordance with the derecognition criteria set forth in IFRS 9 when substantially all the risks and rewards incident to ownership of the asset are transferred.

HVB Group has no continuing involvement in transferred and derecognised financial assets for which substantially the risks and rewards are neither retained nor transferred.

Transferred, non-derecognised financial assets

However, HVB Group conducts business transactions under which it transfers previously recognised financial assets in accordance with IFRS 9, but substantially retains all the risks and rewards associated with these assets, meaning that such assets are not derecognised. The recognised asset is simultaneously offset by an associated liability for the consideration received, which corresponds to recognition as a secured loan. HVB Group may not use these transferred, non-derecognised assets for other purposes.

Transactions of this type conducted by the Group relate primarily to genuine securities repurchase agreements (repos) and securities lending transactions.

The securities (transferred) under repo transactions (cash sale) continue to be carried and measured in the consolidated balance sheet, as the Group as seller retains all the credit, share price, interest rate and currency risks associated with the assets and their results. The payment received by the buyer for whom the transferred security acts as collateral is recognised as a repo liability payable to banks or customers, depending on the counterparty. Upon delivery of the securities, the unrestricted power of disposal passes to the buyer.

Where the corporate group acts as a lender of securities in securities lending transactions, the securities lent to the counterparty continue to be carried in the consolidated balance sheet of the lender.

The transactions are conducted under the customary market terms for securities lending and repurchasing agreements, under which the counterparty holds a contractual or customary right to sell on or pledge on the securities received.

At the same time, these transaction types also encompass such examples as the true sale securitisation transactions Rosenkavalier 2008, Rosenkavalier 2015 and Geldilux 2015 (see the Note “Own securitisation”) carried out by HVB Group, under which non-derecognised securitised customer receivables indirectly serve as security for repurchase agreements with the ECB.

The following Note “Assets assigned or pledged as security for own liabilities” contains details of repo transactions, securities lending transactions and other transactions under which the financial assets transferred as security for own liabilities are not derecognised.

Other Information (Continued)

91 Assets assigned or pledged as security for own liabilities

Examples of own liabilities of HVB Group for which we provide collateral are special credit facilities provided by KfW and similar institutions, which we have passed on as loans in compliance with their conditions. In addition, collateral has been provided for borrowings under repurchase agreements on international money markets, for open market transactions with central banks and for securities lending transactions. As a seller under repurchase agreements, HVB Group has entered into sales and repurchase transactions for securities with a carrying amount of €39.5 billion (previous year: €37.3 billion) or transferred them to a collateral pool with the European Central Bank or GC Pooling. It is not always necessary for liabilities to exist in the latter instance. These securities continue to be shown under our assets, and the consideration received in return is stated under liabilities.

The following table shows the breakdown of assets that we provide as collateral for own liabilities: (€ millions)

	2019	2018
Financial assets held for trading	8,623	10,300
Financial assets at FVTPL	7,423	6,241
Financial assets at FVTOCI	9,951	4,936
Loans and receivables with banks (at cost)	—	977
Loans and receivables with customers (at cost)	11,280	10,971
Property, plant and equipment	—	—
Non-recognised received securities pledged on:		
Pledged securities from non-capitalised securities lending transactions	10,991	9,266
Received collateral pledged	14,548	15,127
Total	**62,816**	**57,818**

The collateral pledged from "Loans and receivables with customers (at cost)" relates to special credit facilities provided by KfW and similar institutions.

The assets pledged by HVB Group as security relate to the following liabilities: (€ millions)

	2019	2018
Deposits from banks	46,141	38,416
Deposits from customers	2,936	6,337
Debt securities in issue	—	—
Financial liabilities held for trading	6,034	5,039
Financial liabilities at FVTPL	—	—
Contingent liabilities	—	—
Obligations to return non-expensed, borrowed securities	7,705	8,026
Total	**62,816**	**57,818**

Compliant with IFRS 7.14, we are disclosing the carrying amount of the financial assets which we provide as security. In addition, figures are disclosed showing the extent to which the security provided may be pledged or sold on by the security-taker.

(€ millions)

	2019	2018
Aggregate carrying amount of assets pledged as security	62,816	57,818
of which: may be pledged/sold on	35,957	33,694

92 Collateral received that HVB Group may pledge or sell on

As part of repurchase agreements and collateral agreements for OTC derivatives, HVB Group has received security that it may pledge or sell on at any time at customary market terms without the security provider having to be in arrears. The fair value of this security is €23.7 billion (previous year: €27.6 billion).

HVB Group has actually pledged or sold on €14.5 billion (previous year: €15.1 billion) of this total, for which there is an obligation to return collateral received of the same type, volume and quality.

The transactions that make it possible to use this collateral were conducted under the customary market terms for repurchase agreements and securities lending transactions.

93 Information on relationships with related parties

Besides the relationships with consolidated, affiliated companies, there are a number of transactions involving UniCredit S.p.A. and other affiliated but not consolidated UniCredit companies as a result of the integration of HVB into the UniCredit group of companies. The quantitative information in this regard can be found in the notes to the balance sheet and the income statement.

HVB has been assigned the role of centre of competence for the markets and investment banking activities of the entire UniCredit corporate group. Among other things, HVB acts as counterparty for derivative transactions conducted by UniCredit companies in this role. For the most part, this involves hedge derivatives that are externalised on the market via HVB. The section of the Risk Report in the Group Management Report entitled "Credit risk" under "Risk types in detail" contains further information regarding the exposure to UniCredit and its subsidiaries.

Like other affiliated companies, HVB has outsourced IT activities to UniCredit Services S.C.p.A., Milan, a company that is affiliated with the Bank. The goal is to exploit synergies and enable the Bank to offer fast, high-quality IT services by means of a service level agreement. HVB incurred expenses of €543 million for these services in the reporting year (previous-year period: €546 million). This was offset by income of €28 million (previous-year period: €32 million) from services rendered and internal charges. Moreover, software products worth €1 million (previous-year period: €1 million) were purchased from UniCredit Services S.C.p.A.

Furthermore, HVB has transferred certain back office activities to UniCredit Services S.C.p.A. In this context, UniCredit Services S.C.p.A. provides settlement services for HVB and other affiliated companies in line with a standard business and operating model. HVB incurred expenses of €173 million for these services in the reporting year (previous-year period: €114 million).

Transactions involving related parties are generally conducted on an arm's length basis.

Subsequent to the filing of the squeeze-out resolution in the Commercial Register on 15 September 2008, HVB is not listed any more. Consequently, the compensation paid to the members of the Management Board is not shown on an individualised basis.

Other Information (Continued)

Emoluments paid to members of the Management Board and Supervisory Board

(€ thousands)

	2019						
	SHORT-TERM COMPONENTS		LONG-TERM INCENTIVES				
	FIXED SALARY	SHORT-TERM PERFORMANCE-RELATED CASH REMUNERATION	LONG-TERM PERFORMANCE-RELATED CASH REMUNERATION	SHARE-BASED REMUNERATION	POST-EMPLOYMENT BENEFITS	TERMINATION BENEFITS	TOTAL
Members of the Management Board of UniCredit Bank AG	4,336	924	101	109	1,243	—	6,713
Members of the Supervisory Board of UniCredit Bank AG for Supervisory Board activities	800	—	—	—	—	—	800
Members of the Supervisory Board of UniCredit Bank AG for activities as employee representatives	459	35	—	—	30	—	524
Former members of the Management Board of UniCredit Bank AG and their surviving dependants	626	190	235	1,740	11,688	1,228	15,707

(€ thousands)

	2018						
	SHORT-TERM COMPONENTS		LONG-TERM INCENTIVES				
	FIXED SALARY	SHORT-TERM PERFORMANCE-RELATED CASH REMUNERATION	LONG-TERM PERFORMANCE-RELATED CASH REMUNERATION	SHARE-BASED REMUNERATION	POST-EMPLOYMENT BENEFITS	TERMINATION BENEFITS	TOTAL
Members of the Management Board of UniCredit Bank AG	4,377	267	85	318	1,071	—	6,118
Members of the Supervisory Board of UniCredit Bank AG for Supervisory Board activities	787	—	—	—	—	—	787
Members of the Supervisory Board of UniCredit Bank AG for activities as employee representatives	468	37	—	—	41	—	546
Former members of the Management Board of UniCredit Bank AG and their surviving dependants	723	404	219	2,165	8,740	—	12,251

It is the task of the Bank's full Supervisory Board to decide on the total remuneration paid to the individual members of the Management Board and to review the structure of the remuneration systems for the Management Board. The full Supervisory Board receives assistance in this regard from the Remuneration Control Committee, which submits appropriate proposals to the full Supervisory Board. Appropriateness and sustainability are key criteria for the form and structure of the remuneration paid to the members of the Management Board. The structure of remuneration is derived from the service agreements with the members of the Management Board. It has two components: a fixed salary and a variable element. The variable remuneration is normally granted in deferred tranches over several years in the form of cash and in shares, with disbursement dependent upon defined corporate targets being achieved in the subsequent years.

Pension commitments for seven members of the Management Board are shown in the table alongside the direct emoluments. Five members of the Management Board took part in the employer-financed, fund-linked pension scheme for executives (known as AgfA) in 2019. The Bank will provide/has provided 35% of the fixed salary contributions (reporting period: €980 thousand, previous-year period: €978 thousand).

Non-monetary compensation and other fringe benefits are granted to members of the Management Board to the usual extent. The amounts involved are included in the totals for fixed remuneration shown.

Compensation paid to members of the Management Board for positions on supervisory boards of any UniCredit group companies is surrendered to HVB.

Provisions for pensions totalling €20 thousand were recognised in the reporting year (previous-year period: reversal of €9 thousand) with regard to the commitments (for death benefits) made to the members of the Management Board.

The provisions for pensions compliant with IFRS for former and retired members of the Management Board of HVB and their surviving dependants (including the pension commitments transferred to HVB Trust Pensionsfonds AG) amounted to €148,034 thousand (previous-year period: €137,561 thousand).

The compensation paid to retired members of the Management Board and their surviving dependants amounted to €8,834 thousand in the reporting period after the transfer of a large part of the pension commitments to HVB Trust Pensionsfonds AG (previous-year period: €8,740 thousand).

Share-based remuneration was granted to the members of the Management Board under the Group Incentive Scheme in the reporting period as follows:

SHARES GRANTED TO MEMBERS OF THE MANAGEMENT BOARD OF UNICREDIT BANK AG	2019	2018
Number of shares granted	7,948	14,415
Number of shares committed after capital measures in 2017	—	—
Fair value on grant date (€)	11.838	17.088

For details of share-based compensation, please refer to the disclosures in the Note "Operating costs", where the underlying UniCredit programmes are described.

Loans and advances made to, and contingent liabilities and liabilities assumed for, related parties at the reporting date were as follows: **(€ thousands)**

	2019			2018		
	LOANS AND RECEIVABLES	CONTINGENT LIABILITIES ASSUMED	LIABILITIES	LOANS AND RECEIVABLES	CONTINGENT LIABILITIES ASSUMED	LIABILITIES
Members of the Management Board of UniCredit Bank AG	2,312	593	4,148	2,235	10	3,166
Members of the Supervisory Board of UniCredit Bank AG	—	—	2,735	—	—	4,804
Members of the Executive Management Committee[1]	—	—	4,978	—	—	8,374

1 Excluding members of the Management Board and Supervisory Board of UniCredit Bank AG.

Members of the Supervisory Board and Management Board at HVB, and members of the Executive Management Committee of UniCredit S.p.A. and their respective immediate family members are considered related parties.

Mortgage loans were granted to members of the Management Board and their immediate family members with interest rates of between 0.6% and 1.74% falling due in the period from 2020 to 2049.

All banking transactions involving the group of people listed were conducted at customary market terms with the usual collateral.

Other Information (Continued)

94 Fees paid to the independent auditors

The following table shows the breakdown of fees (excluding value-added tax) recorded as expense in the reporting period, as paid to the independent auditors Deloitte GmbH Wirtschaftsprüfungsgesellschaft, for activities performed for HVB Group:

(€ millions)

	2019	2018
Fee for	**11**	**12**
Auditing of the financial statements	9	10
Other auditing services	2	2
Tax consulting services	—	—
Other services	—	—

95 Employees

Average number of people employed by us:

	2019	2018
Employees (excluding trainees)	13,327	13,652
Full-time	9,346	9,213
Part-time	3,981	4,439
Trainees	283	328

The staff's length of service was as follows:

(in %)

	WOMEN	MEN	2019	2018
	(EXCLUDING TRAINEES)		TOTAL	TOTAL
31 years or more	16.8	15.5	16.2	15.2
from 21 years to less than 31 years	35.5	24.9	30.5	30.6
from 11 years to less than 21 years	25.8	26.5	26.1	26.8
less than 11 years	21.9	33.1	27.2	27.4

96 Offices

	1/1/2019	ADDITIONS NEW OPENINGS	REDUCTIONS CLOSURES	 CONSOLIDATIONS	CHANGE IN CONSOLIDATED GROUP	31/12/2019
Germany						
Baden-Wuerttemberg	15	1	—	—	—	16
Bavaria	287	—	—	—	1	288
Berlin	8	—	—	2	—	6
Brandenburg	7	—	—	—	—	7
Bremen	4	1	—	—	(4)	1
Hamburg	16	—	—	—	—	16
Hesse	11	—	—	—	—	11
Lower Saxony	12	—	—	—	—	12
Mecklenburg-Western Pomerania	4	—	—	—	—	4
North Rhine-Westphalia	8	—	—	—	—	8
Rhineland-Palatinate	14	—	—	—	—	14
Saarland	4	—	—	—	—	4
Saxony	8	—	—	—	—	8
Saxony-Anhalt	9	—	—	—	—	9
Schleswig-Holstein	35	—	—	—	—	35
Thuringia	5	—	—	—	—	5
Subtotal	**447**	**2**	**—**	**2**	**(3)**	**444**
Other regions						
Africa	1	—	1	—	—	—
Americas	9	—	—	—	(2)	7
Asia	6	—	—	—	—	6
Europe	40	—	—	—	1	41
Subtotal	**56**	**—**	**1**	**—**	**(1)**	**54**
Total	**503**	**2**	**1**	**2**	**(4)**	**498**

Other Information (Continued)

97 List of holdings

The separate list of holdings drawn up in compliance with Section 313 (2) HGB, contains all joint ventures, and affiliated companies and associates broken down by whether they are included in the consolidated financial statements or not. The list also includes selected holdings pursuant to Section 271 (1) HGB and structured entities included in the consolidated financial statements, with and without an HVB shareholding.

		SHARE OF CAPITAL IN %			EQUITY CAPITAL	NET PROFIT
NAME	REGISTERED OFFICE	TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY	in thousands of currency units	in thousands of currency units
1 Controlled companies						
1.1 Controlled by voting rights						
1.1.1 Consolidated subsidiaries						
1.1.1.1 Banks and financial institutions						
UniCredit Leasing Finance GmbH	Hamburg	100.0	100.0	EUR	160,013	[2]
1.1.1.2 Other consolidated subsidiaries						
Acis Immobilien- und Projektentwicklungs GmbH & Co. Oberbaum City KG[3]	Grünwald	100.0	100.0	EUR	98	140,951
Acis Immobilien- und Projektentwicklungs GmbH & Co. Parkkolonnaden KG[3]	Grünwald	100.0	100.0	EUR	34	—
Acis Immobilien- und Projektentwicklungs GmbH & Co. Stuttgart Kronprinzstraße KG[3]	Grünwald	100.0	100.0	EUR	43	220
Argentaurus Immobilien-Vermietungs- und Verwaltungs GmbH[3]	Munich	100.0	100.0	EUR	793	[2]
Atlanterra Immobilienverwaltungs GmbH	Munich	90.0	90.0	EUR	(35,412)	950
A&T-Projektentwicklungs GmbH & Co. Potsdamer Platz Berlin KG[3]	Munich	100.0	100.0	EUR	(37,237)	—
Bayerische Wohnungsgesellschaft für Handel und Industrie, Gesellschaft mit beschränkter Haftung	Munich	100.0	100.0	EUR	51	[2]
Bertram Projekt Unodecima Technikzentrum GmbH & Co. KG	Munich	94.0	94.0	EUR	43	2,221
BIL Leasing-Fonds GmbH & Co VELUM KG (share of voting rights: 66.7%, of which 33.3% held indirectly)	Grünwald	100.0		EUR	(2)	—
BIL Leasing-Fonds Verwaltungs-GmbH	Grünwald	100.0	100.0	EUR	28	—
Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Alpha Management KG[3]	Munich	100.0	100.0	EUR	(22,880)	—
Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Gamma Management KG[3]	Munich	100.0	100.0	EUR	(59,493)	—
Food & more GmbH[3]	Munich	100.0		EUR	235	[1.1]
Grundstücksaktiengesellschaft am Potsdamer Platz (Haus Vaterland)	Munich	98.2	98.2	EUR	4,495	[2]
Grundstücksgesellschaft Simon beschränkt haftende Kommanditgesellschaft[3]	Munich	100.0	100.0	EUR	52	1,286
HAWA Grundstücks GmbH & Co. oHG Hotelverwaltung[3]	Munich	100.0	100.0	EUR	276	1,158
HAWA Grundstücks GmbH & Co. oHG Immobilienverwaltung[3]	Munich	100.0	100.0	EUR	54	454
H.F.S. Immobilienfonds GmbH	Munich	100.0	100.0	EUR	26	6,339
H.F.S. Leasingfonds GmbH	Ebersberg	100.0	100.0	EUR	(4)	(7)
H.F.S. Leasingfonds Deutschland 1 GmbH & Co. KG (Immobilienleasing)[3]	Munich	100.0	100.0	EUR	22,519	161,453
H.F.S. Leasingfonds Deutschland 7 GmbH & Co. KG	Munich	99.4	99.4	EUR	7,006	2,403
HJS 12 Beteiligungsgesellschaft mbH[3]	Munich	100.0		EUR	278	[1.2]
HVB Capital LLC	Wilmington	100.0		USD	1,128	87
HVB Capital LLC II	Wilmington	100.0		GBP	3	—
HVB Capital LLC III	Wilmington	100.0		USD	1,107	90
HVB Funding Trust II	Wilmington	100.0		GBP	2	—
HVB Gesellschaft für Gebäude mbH & Co. KG[3]	Munich	100.0		EUR	871,401	77,742
HVB Hong Kong Limited	Hong Kong	100.0		USD	3,529	751
HVB Immobilien AG[3]	Munich	100.0		EUR	86,644	[1.3]
HVB Projekt GmbH[3]	Munich	100.0	94.0	EUR	72,151	[2]
HVB Secur GmbH[3]	Munich	100.0		EUR	126	[1.4]

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
HVB Tecta GmbH[3]	Munich	100.0	94.0	EUR	1,751	[2]
HVB Verwa 4 GmbH[3]	Munich	100.0		EUR	10,132	[1,5]
HVB Verwa 4.4 GmbH[3]	Munich	100.0	100.0	EUR	10,025	[2]
HVZ GmbH & Co. Objekt KG[3]	Munich	100.0	100.0	EUR	148,091	(1,210)
Hypo-Bank Verwaltungszentrum GmbH & Co. KG Objekt Arabellastraße[3]	Munich	100.0	100.0	EUR	26	(1,570)
Interra Gesellschaft für Immobilienverwaltung mbH[3]	Munich	100.0	93.9	EUR	51	[2]
MERKURHOF Grundstücksgesellschaft mit beschränkter Haftung[3]	Munich	100.0		EUR	16,692	[1,6]
NF Objekt FFM GmbH[3]	Munich	100.0	100.0	EUR	125	[2]
NF Objekte Berlin GmbH[3]	Munich	100.0	100.0	EUR	15,725	[2]
Omnia Grundstücks-GmbH & Co. Objekt Haidenauplatz KG[3]	Munich	100.0	94.0	EUR	26	(18)
Omnia Grundstücks-GmbH & Co. Objekt Perlach KG[3]	Munich	100.0	100.0	EUR	3,956	722
Orestos Immobilien-Verwaltungs GmbH[3]	Munich	100.0	100.0	EUR	56,674	[2]
Othmarschen Park Hamburg GmbH & Co. Centerpark KG[3]	Munich	100.0	100.0	EUR	(18,942)	—
Othmarschen Park Hamburg GmbH & Co. Gewerbepark KG[3]	Munich	100.0	100.0	EUR	(44,083)	—
Portia Grundstücks-Verwaltungs-gesellschaft mbH & Co. Objekt KG[3]	Munich	100.0	100.0	EUR	500,014	17,202
Rolin Grundstücksplanungs- und -verwaltungsgesellschaft mbH	Munich	100.0	100.0	EUR	79	19
Salvatorplatz-Grundstücksgesellschaft mbH & Co. oHG Saarland[3]	Munich	100.0	100.0	EUR	1,534	2,156
Salvatorplatz-Grundstücksgesellschaft mbH & Co. OHG Verwaltungszentrum[3]	Munich	100.0	100.0	EUR	2,301	10,846
Selfoss Beteiligungsgesellschaft mbH[3]	Grünwald	100.0	100.0	EUR	25	[2]
Simon Verwaltungs-Aktiengesellschaft i.L.	Munich	100.0		EUR	2,976	(19)
Sirius Immobilien- und Projektentwicklungs GmbH	Munich	100.0	100.0	EUR	(143,835)	[2]
Solos Immobilien- und Projektentwicklungs GmbH & Co. Sirius Beteiligungs KG[3]	Munich	100.0	100.0	EUR	(62,731)	950
Spree Galerie Hotelbetriebsgesellschaft mbH[3]	Munich	100.0	100.0	EUR	249	[2]
Structured Invest Société Anonyme	Luxembourg	100.0		EUR	7,557	274
T & P Frankfurt Development B.V.	Amsterdam	100.0	100.0	EUR	(7,271)	3
T & P Vastgoed Stuttgart B.V.	Amsterdam	87.5	87.5	EUR	(14,485)	11
TERRENO Grundstücksverwaltung GmbH & Co. Entwicklungs- und Finanzierungsvermittlungs-KG[3]	Munich	75.0	75.0	EUR	(268,579)	—
TIVOLI Grundstücks-Aktiengesellschaft	Munich	100.0	100.0	EUR	15,728	8,212
TRICASA Grundbesitz Gesellschaft mbH & Co. 1. Vermietungs KG[3]	Munich	100.0	100.0	EUR	12,282	1,108
TRICASA Grundbesitzgesellschaft des bürgerlichen Rechts Nr. 1	Munich	100.0	100.0	EUR	25,989	2,352
UniCredit Beteiligungs GmbH	Munich	100.0		EUR	1,175	[1,7]
UniCredit Capital Markets LLC	New York	100.0	100.0	USD	145,064	8,832
UniCredit Direct Services GmbH[3]	Munich	100.0		EUR	933	[1,8]
UniCredit Leasing Aviation GmbH	Hamburg	100.0	100.0	EUR	28,309	820
UniCredit Leasing GmbH[7]	Hamburg	100.0		EUR	452,026	[1,9]
UniCredit U.S. Finance LLC	Wilmington	100.0		USD	116,175	529
Vermietungsgesellschaft mbH & Co. Objekt MOC KG[3]	Munich	89.3	89.3	EUR	(94,870)	1,823
Verwaltungsgesellschaft Katharinenhof mbH[3]	Munich	100.0		EUR	708	[1,10]
V.M.G. Vermietungsgesellschaft mbH	Munich	100.0	100.0	EUR	204	[2]
Wealth Management Capital Holding GmbH	Munich	100.0		EUR	20,557	[1,11]

Other Information (Continued)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	SHARE OF CAPITAL IN % OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
WealthCap Entity Service GmbH	Munich	100.0	100.0	EUR	1,245	681
WealthCap Equity GmbH	Munich	100.0	100.0	EUR	1,944	1,607
WealthCap Equity Management GmbH	Munich	100.0	100.0	EUR	1,354	1,329
WealthCap Fonds GmbH	Munich	100.0	100.0	EUR	824	312
WealthCap Immobilien 1 GmbH & Co. KG	Munich	100.0	100.0	EUR	(309)	(153)
WealthCap Immobilien 2 GmbH & Co. KG	Munich	100.0	100.0	EUR	1,295	136
Wealthcap Immobilienankauf Komplementär GmbH	Munich	100.0	100.0	EUR	27	2
WealthCap Immobilienfonds Deutschland 36 Komplementär GmbH	Munich	100.0	100.0	EUR	(176)	109
WealthCap Immobilienfonds Deutschland 38 Komplementär GmbH	Munich	100.0	100.0	EUR	95	172
WealthCap Initiatoren GmbH	Munich	100.0	100.0	EUR	1,344	(239)
WealthCap Investment Services GmbH	Munich	100.0	90.0	EUR	9,937	[2]
WealthCap Investments, Inc.	Wilmington	100.0	100.0	USD	2,682	818
WealthCap Investorenbetreuung GmbH	Munich	100.0	100.0	EUR	155	[2]
WealthCap Kapitalverwaltungsgesellschaft mbH	Grünwald	100.0	100.0	EUR	10,000	[2]
WealthCap Leasing GmbH	Grünwald	100.0	100.0	EUR	(80)	11
WealthCap Management Services GmbH	Munich	100.0	100.0	EUR	51	1,763
Wealthcap Objekt Dresden GmbH & Co. KG	Munich	100.0	100.0	EUR	(819)	(743)
Wealthcap Objekt Essen II GmbH & Co. KG	Munich	100.0	100.0	EUR	(257)	(267)
Wealthcap Objekt-Vorrat 25 GmbH & Co. KG	Munich	100.0	100.0	EUR	(459)	(468)
Wealthcap Objekt-Vorrat 32 GmbH & Co. KG	Munich	100.0	100.0	EUR	(144)	(144)
WealthCap PEIA Komplementär GmbH	Grünwald	100.0	100.0	EUR	56	29
WealthCap PEIA Management GmbH	Munich	100.0	94.0	EUR	2,679	1,424
WealthCap Real Estate Management GmbH	Munich	100.0	100.0	EUR	108	[2]
WealthCap Vorrats-2 GmbH	Munich	100.0	100.0	EUR	15	(11)
WealthCap Wohnen 1 GmbH & Co. KG	Munich	100.0	100.0	EUR	(1,004)	(738)
Wealthcap Wohnen 1a GmbH & Co. KG	Munich	100.0	100.0	EUR	(433)	(436)
Weicker S. à r.l.	Luxembourg	100.0		EUR	20,828	170
1.1.2 Non-consolidated subsidiaries[5]						
Acis Immobilien- und Projektentwicklungs GmbH	Grünwald	100.0	100.0	EUR	25	[2]
AGRUND Grundstücks-GmbH	Munich	90.0	90.0			
Altea Verwaltungsgesellschaft mbH & Co. Objekt I KG	Munich	100.0	100.0			
AMMS Ersatz-Komplementär GmbH	Munich	100.0	100.0			
AMMS Komplementär GmbH i.L.	Ebersberg	98.8	98.8			
Antus Immobilien- und Projektentwicklungs GmbH	Munich	90.0	90.0	EUR	(15,922)	950
ANWA Gesellschaft für Anlagenverwaltung mbH	Munich	95.0	93.9			
Arena Stadion Beteiligungsverwaltungs-GmbH	Munich	100.0				
ARRONDA Immobilienverwaltungs GmbH	Munich	100.0	100.0	EUR	(39,626)	975
A&T-Projektentwicklungs-Verwaltungs GmbH	Munich	100.0	100.0			
Aufbau Dresden GmbH	Munich	100.0	100.0	EUR	(22,994)	950
B.I. International Limited	George Town	100.0	100.0			
BIL Aircraftleasing GmbH	Grünwald	100.0	100.0			
BIL Immobilien Fonds GmbH	Munich	100.0	100.0			
Blue Capital Metro Amerika Inc.	Wilmington	100.0	100.0	USD	(113)	217
Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Beta Management KG	Munich	100.0	100.0	EUR	(53,477)	—
Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Grefrath KG (share of voting rights: 68.3%)	Oldenburg	68.5	68.5	EUR	151	(358)
Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Krähenberg KG (share of voting rights: 68.3%)	Oldenburg	68.5	68.5			
Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Mose KG (share of voting rights: 68.3%)	Oldenburg	68.5	68.5			
Golf- und Country Club Seddiner See Immobilien GmbH	Munich	100.0	100.0	EUR	(15,507)	—

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
Großkugel Immobilien- und Projektentwicklungs GmbH	Munich	100.0	100.0	EUR	(3,354)	2
H.F.S. Immobilienfonds Deutschland 1 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 3 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 4 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 6 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 7 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 8 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 9 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 10 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 11 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 12 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 15 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 16 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 18 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 19 GmbH & Co. KG	Munich	100.0	100.0			
H.F.S. Immobilienfonds Europa 2 Beteiligungs GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds Europa 3 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Immobilienfonds GmbH & Co. Europa 4 KG	Munich	100.0	100.0			
H.F.S. Leasingfonds Deutschland 1 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Leasingfonds Deutschland 7 Komplementär GmbH	Munich	100.0	100.0			
H.F.S. Value Management GmbH	Munich	100.0	100.0			
H.F.S. Zweitmarktfonds Deutschland 1 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Zweitmarktfonds Deutschland 2 Komplementär GmbH	Grünwald	100.0	100.0			
Hofgarten Real Estate B.V. (share of voting rights: 50.5%)	Amsterdam	47.2	47.2	EUR	(49,339)	11
HVB Export Leasing GmbH	Munich	100.0				
HVB Gesellschaft für Gebäude Beteiligungs GmbH	Munich	100.0				
HVB London Investments (AVON) Limited	London	100.0				
HVBFF International Greece GmbH	Munich	100.0	100.0			
HVBFF Internationale Leasing GmbH	Munich	100.0	100.0			
HVBFF Kapitalvermittlungs GmbH	Munich	100.0	100.0	EUR	19	2
HVBFF Leasing Objekt GmbH	Grünwald	100.0	100.0			
HVBFF Leasing-Fonds Verwaltungs GmbH	Munich	100.0	100.0			
HVBFF Objekt Beteiligungs GmbH	Munich	100.0	100.0			
HVBFF Produktionshalle GmbH i.L.	Munich	100.0	100.0			
Hypo-Bank Verwaltungszentrum GmbH	Munich	100.0	100.0			
HYPO-REAL Haus- und Grundbesitz Gesellschaft mbH	Munich	100.0	100.0	EUR	128	2
HYPO-REAL Haus- und Grundbesitz Gesellschaft mbH & Co. Immobilien-Vermietungs KG	Munich	80.0	80.0			
Landos Immobilien- und Projektentwicklungs GmbH	Munich	100.0	100.0			
Life Britannia GP Limited	Edgware	100.0	100.0			
Life Britannia Management GmbH	Grünwald	100.0	100.0			
Life Management Erste GmbH	Munich	100.0	100.0	EUR	24	2
Life Management Zweite GmbH	Grünwald	100.0	100.0	EUR	26	2
Life Verwaltungs Erste GmbH	Munich	100.0	100.0			
Life Verwaltungs Zweite GmbH	Grünwald	100.0	100.0			
Motion Picture Production GmbH	Grünwald	51.2	51.2			
Movie Market Beteiligungs GmbH i. L.	Munich	100.0	100.0			
Omnia Grundstücks-GmbH	Munich	100.0	100.0	EUR	26	2
Omnia Grundstücks-GmbH & Co. Betriebs KG	Munich	100.0	94.0			
Othmarschen Park Hamburg Wohn- und Gewerbepark GmbH	Munich	100.0	100.0	EUR	102	2
"Portia" Grundstücksverwaltungs-Gesellschaft mit beschränkter Haftung	Munich	100.0	100.0			
Projekt-GbR Kronstadter Straße München	Munich	75.0	75.0	EUR	(5,690)	—
Quinterra Gesellschaft für Immobilienverwaltung mbH	Munich	100.0	100.0	EUR	26	2
Redstone Mortgages Limited	London	100.0				

Other Information (Continued)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
RHOTERRA Gesellschaft für Immobilienverwaltung mbH	Munich	100.0	93.9	EUR	26	2
Roncasa Immobilien-Verwaltungs GmbH	Munich	100.0	100.0	EUR	(35,220)	950
Salvatorplatz-Grundstücksgesellschaft mit beschränkter Haftung	Munich	100.0	100.0	EUR	711	2
TERRENO Grundstücksverwaltung GmbH	Munich	75.0	75.0			
TERRENO Grundstücksverwaltung GmbH & Co. Objektgesellschaft Grillparzerstraße KG	Munich	75.0		EUR	(3,002)	(3)
Terronda Development B.V.	Amsterdam	100.0	100.0	EUR	(15,006)	(2)
Tishman Speyer Berlin Friedrichstraße KG i.L. (share of voting rights: 96.6%, of which 7.1% held indirectly)	Munich	97.1	5.9			
Trinitrade Vermögensverwaltungs-Gesellschaft mit beschränkter Haftung	Munich	100.0				
VCI Volta Center Immobilienverwaltungs GmbH	Munich	100.0	100.0	EUR	(20,147)	950
WealthCap Aircraft 27 GmbH & Co. KG	Grünwald	100.0	100.0			
WealthCap Aircraft 27 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Canadian Management Inc.	Toronto	100.0	100.0			
WealthCap Dritte Europa Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap Equity Sekundär GmbH	Munich	100.0	100.0			
WealthCap Erste Kanada Immobilien Verwaltung GmbH	Munich	100.0	100.0			
WealthCap Europa Erste Immobilien – Objekt Niederlande – Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap Europa Immobilien Fünfte Objekte Österreich Komplementär GmbH	Munich	100.0	100.0			
WealthCap Europa Immobilien Siebte Objekte Österreich Komplementär GmbH	Munich	100.0	100.0	EUR	15	307
WealthCap Europa Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap Immobilien Deutschland 39 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Immobilien Nordamerika 16 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Immobilien Nordamerika 17 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Immobilien Services GmbH	Munich	100.0	100.0			
WealthCap Immobilien und Verwaltung Sekundär GmbH	Munich	100.0	100.0			
WealthCap Immobilien 40 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Immobilien 41 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Immobilien 42 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Immobilien 43 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Immobilien 44 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Immobilienfonds Deutschland 36 GmbH & Co. KG	Munich	100.0	100.0			
WealthCap Immobilienfonds Deutschland 37 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Los Gatos 121 Albright Way GP, Inc.	Wilmington	100.0	100.0			
WealthCap Management, Inc.	Wilmington	100.0	100.0			
WealthCap Mountain View GP, Inc.	Atlanta	100.0	100.0			
Wealthcap Objekt Freiburg GmbH & Co. KG	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 13 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 17 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 20 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 21 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 25 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 26 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 28 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 30 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 20 GmbH & Co. KG	Munich	100.0	100.0	EUR	353	8,532
Wealthcap Objekt-Vorrat 33 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 34 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 35 GmbH & Co. KG	Munich	100.0	100.0			

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Wealthcap Objekt-Vorrat 36 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 37 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 38 GmbH & Co. KG	Munich	100.0	100.0			
WealthCap Portfolio 3 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Portfolio 4 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Portfolio 5 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Private Equity GmbH	Munich	100.0	100.0			
WealthCap Private Equity Sekundär GmbH	Munich	100.0	100.0			
WealthCap Private Equity 19 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Private Equity 20 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Private Equity 21 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Private Equity 22 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Real Estate GmbH	Munich	100.0	100.0			
WealthCap Real Estate Komplementär GmbH	Munich	100.0	100.0			
WealthCap Real Estate Sekundär GmbH	Munich	100.0	100.0			
WealthCap SachWerte Portfolio 2 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Spezial Büro 6 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Spezial Büro 7 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Spezial Portfolio Immobilien 1						
Komplementär SARL	Luxembourg-Findel	100.0	100.0			
Wealthcap Spezial Portfolio Private Equity 1						
Komplementär SARL	Luxembourg-Findel	100.0	100.0			
Wealthcap Spezial Wohnen 1 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Spezial 3 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Spezial 4 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Spezial 5 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Spezial-AIF Büro 7 GmbH & Co.						
geschlossene Investment KG	Munich	100.0	100.0			
WealthCap Spezial-AIF 1 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Stiftungstreuhand GmbH	Munich	100.0	100.0			
WealthCap USA Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
Wealthcap Wohnen Spezial-AIF 1 GmbH & Co.						
geschlossene Investment KG	Munich	100.0	100.0			
Wealthcap Wohnen 1b GmbH & Co. KG	Munich	100.0	100.0			
WealthCap Zweite Europa Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap Zweite USA Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap ZweitmarktWerte Immobilien 4						
Komplementär GmbH	Munich	100.0	100.0			
WealthCap ZweitmarktWerte 5 GP S.à r.l.	Senningerberg	100.0	100.0			
WealthCap 39 Komplementär GmbH	Munich	100.0	100.0			

Other Information (Continued)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %	CURRENCY	SUBSCRIBED CAPITAL in thousands of currency units
1.2 Fully consolidated structured entities with or without shareholding				
Altus Alpha Plc	Dublin	0	EUR	40
Arabella Finance DAC	Dublin	0	EUR	<1
BARD Engineering GmbH	Emden	0	EUR	100
BARD Holding GmbH	Emden	0	EUR	25
Buitengaats Holding B.V.	Eemshaven	0	EUR	18
Elektra Purchase No. 28 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 31 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 32 S.A. – Compartment 1	Luxembourg	0	EUR	31
Elektra Purchase No. 33 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 34 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 36 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 37 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 38 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 39 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 41 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 43 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 44 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 46 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 54 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 55 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 56 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 57 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 63 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 64 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 71 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 718 DAC	Dublin	0	EUR	<1
Elektra Purchase No. 911 Ltd.	St. Helier	0	EUR	<1
European-Office-Fonds	Munich	0	EUR	0
GELDILUX-TS-2015 S.A.	Luxembourg	0	EUR	31
GEMMA Verwaltungsgesellschaft mbH & Co. Vermietungs KG (held indirectly)[4, 6.1]	Pullach	6.1	EUR	68,272
HVB Funding Trust	Wilmington	0	EUR	0
HVB Funding Trust III	Wilmington	0	EUR	0
Ice Creek Pool No. 1 DAC	Dublin	0	EUR	<1
MOC Verwaltungs GmbH & Co. Immobilien KG (held indirectly)[4, 6.2]	Munich	23.0	EUR	5,113
Rosenkavalier 2008 GmbH	Frankfurt am Main	0	EUR	25
Rosenkavalier 2015 UG	Frankfurt am Main	0	EUR	8

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2 Joint ventures						
Minor joint ventures[5]						
Heizkraftwerke-Pool Verwaltungs-GmbH	Munich	33.3		EUR	138	1,137
WealthCap Portfolio Finanzierungs GmbH & Co. KG						
(share of voting rights: 50.0%)	Grünwald	—		EUR	71,922	2,236
3 Associates						
3.1 Associates valued at equity						
Adler Funding LLC[4]	Dover	32.8		USD	(1)	16,128
Comtrade Group B.V.[4,7]	Rotterdam	21.1		EUR	52,271	2,438
3.2 Minor associates						
MOC Verwaltungs GmbH	Munich	23.0	23.0	EUR		
paydirekt Beteiligungsgesellschaft privater Banken mbH	Berlin	24.0		EUR		
4 Further holdings according to						
Section 271 (1) HGB[5]						
4.1 Banks and financial institutions						
AKA Ausfuhrkredit-Gesellschaft mbH	Frankfurt am Main	15.4		EUR	246,672	12,040
BBB Bürgschaftsbank zu Berlin-Brandenburg GmbH	Berlin	4.3		EUR	11,893	366
BGG Bayerische Garantiegesellschaft						
mbH für mittelständische Beteiligungen	Munich	10.5		EUR	53,351	1,962
Bürgschaftsbank Brandenburg GmbH	Potsdam	7.8		EUR	29,836	748
Bürgschaftsbank Mecklenburg-Vorpommern GmbH	Schwerin	9.1		EUR	16,637	75
Bürgschaftsbank Nordrhein-Westfalen GmbH –						
Kreditgarantiegemeinschaft –	Düsseldorf	0.6		EUR	36,759	1,320
Bürgschaftsbank Rheinland-Pfalz GmbH	Mainz	1.4		EUR	16,826	221
Bürgschaftsbank Saarland Gesellschaft mit beschränkter						
Haftung, Kreditgarantiegemeinschaft für den Handel,						
Handwerk und Gewerbe	Saarbrücken	1.3		EUR	4,335	21
Bürgschaftsbank Sachsen-Anhalt GmbH	Magdeburg	8.9		EUR	15,999	387
Bürgschaftsbank Sachsen GmbH (share of voting rights: 5.4%)	Dresden	4.7		EUR	43,596	1,581
Bürgschaftsbank Schleswig-Holstein GmbH	Kiel	5.4		EUR	41,174	992
Bürgschaftsbank Thüringen GmbH	Erfurt	8.7		EUR	26,582	636
Bürgschaftsgemeinschaft Hamburg GmbH	Hamburg	10.5		EUR	26,278	1,034
MCB Bank Limited	Lahore	>0		PKR	149,277,729	14,672,352
Niedersächsische Bürgschaftsbank GmbH	Hanover	3.0		EUR	28,283	1,886
Saarländische Investitionskreditbank AG	Saarbrücken	3.3		EUR	65,285	186
4.2 Other companies						
ABE Clearing S.A.S.	Paris	1.9		EUR	27,915	3,194
Acton GmbH & Co. Heureka II KG	Munich	8.9		EUR	70,341	13,647
Amstar Liquidating Trust (share of voting rights: 0.0%)	New York	>0	>0			
Babcock & Brown Limited	Sydney	3.2				
Bavaria Servicos de Representacao Comercial Ltda.	Sao Paulo	>0		BRL	7,316	816
BayBG Bayerische Beteiligungsgesellschaft mbH[8]	Munich	22.5		EUR	237,213	4,370
Bayerischer BankenFonds GbR[8]	Munich	25.6				
BIL Leasing-Fonds GmbH & Co. Altstadtsanierung Freiberg KG						
(share of voting rights: 0.3%)	Grünwald	—	—	EUR	1,057	935

Other Information (Continued)

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Bil Leasing-Fonds GmbH & Co Objekt Verwaltungssitz						
Bankenverband KG (share of voting rights: 0.2%)	Grünwald	—	—			
BIL Leasing GmbH & Co Objekt Verwaltungsgebäude Halle KG						
(share of voting rights: 0.1%)	Grünwald	—	—			
BioM Aktiengesellschaft Munich Bio Tech Development	Planegg	8.5		EUR	3,509	1,352
Blue Capital Equity I GmbH & Co.KG i.L.	Munich	>0	>0			
Blue Capital Equity II GmbH & Co. KG i.L.	Munich	>0	>0	EUR	1,664	13
Blue Capital Equity III GmbH & Co. KG						
(share of voting rights: >0.0%)	Munich	0.8	0.8	EUR	5,098	(589)
Blue Capital Equity IV GmbH & Co. KG	Munich	>0	>0	EUR	11,490	2,052
Blue Capital Equity V GmbH & Co. KG						
(share of voting rights: >0.0%)	Munich	0.1	0.1			
Blue Capital Equity VI GmbH & Co. KG	Munich	>0	>0	EUR	11,412	4,144
Blue Capital Equity VII GmbH & Co. KG	Munich	>0	>0	EUR	5,416	1,762
Blue Capital Equity VIII GmbH & Co. KG						
(share of voting rights: 0.0%)	Munich	0.7	0.7	EUR	7,119	118
Blue Capital Equity IX GmbH & Co. KG						
(share of voting rights: 0.6%)	Munich	0.7	0.7	EUR	3,166	162
Blue Capital Europa Immobilien GmbH & Co.						
Fünfte Objekte Österreich KG	Munich	>0	>0	EUR	5,162	10,881
Blue Capital Europa Immobilien GmbH & Co.						
Siebte Objekte Österreich KG	Munich	0.1	0.1	EUR	6,613	26,935
Blue Capital Metro Amerika Fund, L.P.	Wilmington	0.1	0.1	EUR	111,955	(36,681)
Blue Capital Metropolitan Amerika GmbH & Co. KG	Munich	>0	>0	EUR	100,541	13,174
Boston Capital Partners V, L.L.C.	Wilmington	10.0	10.0			
Boston Capital Ventures V, L.P. (share of voting rights: 0.0%)	Wilmington	20.0		USD	3,514	1,776
BTG Beteiligungsgesellschaft Hamburg mbH	Hamburg	13.6		EUR	4,646	324
BV Capital GmbH & Co. Beteiligungs KG Nr. 1	Hamburg	16.8	16.8	EUR	2,094	237
Carlyle Partners V, L.P. (share of voting rights: 0.0%)	Wilmington	>0		EUR	2,615,490	365,328
Carlyle U.S. Equity Opportunity Fund, L.P.						
(share of voting rights: 0.0%)	Wilmington	0.9	0.9	EUR	845,151	143,045
Charme II (share of voting rights: 0.0%)	Milan	7.7		EUR	1,796	(568)
CHARME INVESTMENTS S.C.A. (share of voting rights: 12.1%)	Luxembourg	13.4		EUR	14,714	(7,964)
China International Packaging Leasing Co., Ltd.	Peking	17.5		CNY	(101,056)	553
China Investment Incorporations (BVI) Ltd.	Tortola	10.8	10.8	HKD	107,609	24,527
CLS Group Holdings AG	Zurich	1.2		GBP	376,009	(18,504)
CMC-Hertz Partners, L.P. (share of voting rights: 0.0%)	Wilmington	7.1				
CME Group Inc.	Wilmington	>0		USD	25,918,500	1,962,200
Earlybird GmbH & Co. Beteiligungskommanditgesellschaft III i.L.	Munich	9.7	9.7	USD	7,589	205
Easdaq NV	Leuven	>0		EUR	713	(896)
EDD AG (share of voting rights: 3.1%)	Düsseldorf	3.0		EUR	22,491	(5,301)
Einkaufsgalerie Roter Turm Beteiligungs GmbH & Co. KG	Munich	>0	>0	EUR	5,720	291
Einkaufsgalerie Roter Turm Chemnitz GmbH & Co. KG	Munich	>0	>0	EUR	47,520	2,629
EURO Kartensysteme GmbH	Frankfurt am Main	6.0		EUR	12,036	202
Film & Entertainment VIP Medienfonds 4 GmbH & Co. KG	Grünwald	9.9	9.9	EUR	22,402	(1,260)
H.F.S. Immobilienfonds Bahnhofspassagen						
Potsdam GmbH & Co. KG	Munich	6.0	6.0	EUR	21,279	2,688
H.F.S. Immobilienfonds "Das Schloss"						
Berlin-Steglitz GmbH & Co. KG	Munich	6.0	6.0	EUR	132,536	119,759
H.F.S. Immobilienfonds Deutschland 4 GmbH & Co. KG	Munich	0.2	0.2	EUR	(894)	(276)
H.F.S. Immobilienfonds Deutschland 8 GmbH & Co. KG	Munich	0.1	0.1	EUR	13,427	2,417
H.F.S. Immobilienfonds Deutschland 9 GmbH & Co. KG	Munich	0.1	0.1	EUR	2,250	(327)
H.F.S. Immobilienfonds Deutschland 10 GmbH & Co. KG	Munich	1.4	1.4	EUR	88,822	257,288
H.F.S. Immobilienfonds Deutschland 12 GmbH & Co. KG	Munich	3.9	3.9	EUR	80,875	2,776
H.F.S. Immobilienfonds Deutschland 15 GmbH & Co. KG	Munich	>0	>0	EUR	14,195	1,648

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H.F.S. Immobilienfonds Deutschland 16 GmbH & Co. KG	Munich	>0	>0	EUR	18,905	37,332
H.F.S. Immobilienfonds GmbH & Co. Europa 3 KG	Munich	>0	>0	EUR	3,138	254
H.F.S. Immobilienfonds Köln GmbH & Co. KG	Munich	>0	>0	EUR	6,548	(55)
H.F.S. Immobilienfonds Köln Supplier-Park GmbH & Co. KG	Munich	>0	>0	EUR	3,005	35,515
H.F.S. Immobilienfonds Schweinfurt GmbH & Co. KG	Munich	>0	>0			
H.F.S. Zweitmarktfonds Deutschland 1 GmbH & Co. KG	Ebersberg	0.1	0.1	EUR	17,440	4,557
H.F.S. Zweitmarktfonds Deutschland 2 GmbH & Co. KG	Ebersberg	>0	>0	EUR	79,713	15,143
HVBFF Life Britannia GmbH & Co Erste KG	Grünwald	>0	>0	EUR	5,383	799
HVB Trust Pensionsfonds AG (share of voting rights: 0.0%)[9]	Munich	100.0	—	EUR	4,276	11
IGEPA Gewerbepark GmbH & Co Vermietungs KG	Fürstenfeldbruck	2.0	2.0	EUR	(6,962)	11,408
Industriepalast in Leipzig Verwaltungs-GmbH & Co. KG i.L.						
(share of voting rights: 6.3%)	Berlin	6.2				
Innovation Group Holdings Limited	Fareham	13.1	13.1			
Interbanking Systems S.A. (Dias S.A.)	Maroussi	0.9		EUR	26,734	0
IPE Tank and Rail Investment 1 S.C.A.	Luxembourg	7.8				
JBG/BC Investor, L.P.	Chevy Chase	0.5	0.5	EUR	70,944	15,598
Kepler Cheuvreux S.A. (share of voting rights: 8.3%)	Paris	10.0		EUR	87,042	21,880
Kreditgarantiegemeinschaft der freien Berufe						
Baden-Württemberg Verwaltungs-GmbH	Stuttgart	1.3				
Kreditgarantiegemeinschaft der Industrie,						
des Verkehrsgewerbes und des Gastgewerbes						
Baden-Württemberg Verwaltungs-GmbH	Stuttgart	2.6				
Kreditgarantiegemeinschaft des						
bayerischen Gartenbaues GmbH	Munich	8.1				
Kreditgarantiegemeinschaft des						
bayerischen Handwerks GmbH	Munich	7.2		EUR	4,846	0
Kreditgarantiegemeinschaft des						
Handels Baden-Württemberg Verwaltungs-GmbH	Stuttgart	2.3				
Kreditgarantiegemeinschaft des Handwerks						
Baden-Württemberg Verwaltungsgesellschaft mbH	Stuttgart	2.5				
Kreditgarantiegemeinschaft des Hotel- und						
Gaststättengewerbes in Bayern GmbH	Munich	9.7		EUR	4,359	0
Kreditgarantiegemeinschaft für den Handel in Bayern GmbH	Munich	2.2		EUR	6,317	0
Kreditgarantiegemeinschaft in						
Baden-Württemberg Verwaltungs-GmbH	Stuttgart	5.1				
Life Britannia First LP (share of voting rights: 1.0%)	Uxbridge	—	—	EUR	3,679	716
Life Britannia Second LP (share of voting rights: 1.0%)	Uxbridge	—	—	EUR	7,038	984
Life GmbH & Co Erste KG	Munich	>0	>0	EUR	95,594	23,043
Life GmbH & Co. Zweite KG	Grünwald	>0	>0	EUR	53,514	(4,916)
Lion Capital Fund I, L.P. (share of voting rights: 0.0%)	London	0.9		EUR	2,429	(410)
LME Holdings Limited	London	>0		USD	57,773	125,004
Martin Schmälzle Grundstücksgesellschaft						
Objekt Wolfsburg GmbH & Co. KG	Munich	>0	>0	EUR	15,711	0
MBG Mittelständische Beteiligungsgesellschaft						
Baden-Württemberg GmbH	Stuttgart	5.0		EUR	76,993	4,504
MBG Mittelständische Beteiligungsgesellschaft						
Rheinland-Pfalz mbH (share of voting rights: 11.1%)	Mainz	9.8		EUR	15,328	445
MBG Mittelständische Beteiligungsgesellschaft						
Schleswig-Holstein mbH	Kiel	3.6		EUR	41,293	2,272
MFP Munich Film Partners GmbH & Co. AZL Productions KG	Grünwald	>0		EUR	3,256	265,647
MFP Munich Film Partners GmbH & Co.						
MI 2 Productions KG i.L.	Grünwald	>0				
Mittelständische Beteiligungsgesellschaft						
Berlin-Brandenburg GmbH	Potsdam	11.6		EUR	21,836	1,774

Other Information (Continued)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	SHARE OF CAPITAL IN % OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
Mittelständische Beteiligungsgesellschaft Mecklenburg-Vorpommern mbH	Schwerin	15.4		EUR	15,950	1,521
Mittelständische Beteiligungsgesellschaft Niedersachsen (MBG) mbH	Hanover	8.2		EUR	14,309	671
Mittelständische Beteiligungsgesellschaft Sachsen-Anhalt mit beschränkter Haftung	Magdeburg	12.7		EUR	24,033	729
Mittelständische Beteiligungsgesellschaft Sachsen mbH	Dresden	11.8		EUR	47,602	908
Mittelständische Beteiligungsgesellschaft Thüringen mbH	Erfurt	13.4		EUR	25,914	970
Motion Picture Production GmbH & Co. Erste KG	Grünwald	>0		EUR	(27,970)	1,458
Mühoga Münchner Hochgaragen Gesellschaft mit beschränkter Haftung[8]	Munich	25.0	25.0	EUR	4,342	2,150
PICIC Insurance Ltd.	Karachi	>0				
PRINCIPIA FUND (share of voting rights: 0.0%)	Milan	10.0				
ProAreal GmbH i. I.	Wiesbaden	10.0		EUR	(93,513)	(26)
REF IV Associates (Caymans) L.P. Acqua CIV S.C.S. (share of voting rights: 0.0%)	Luxembourg	38.3				
Rocket Internet Capital Partners (Euro) SCS (share of voting rights: 0.0%)	Luxembourg	4.4		EUR	255,330	70,530
Saarländische Kapitalbeteiligungsgesellschaft mit beschränkter Haftung (share of voting rights: 8.8%)	Saarbrücken	8.7		EUR	7,593	191
Social Venture Fund GmbH & Co. KG (share of voting rights: 0.0%)	Munich	9.6		EUR	2,524	(903)
Social Venture Fund II GmbH & Co. KG (share of voting rights: 0.0%)	Munich	4.5		EUR	13,102	(1,108)
Stahl Group S.A.	Luxembourg	0.4	0.4	EUR	651,494	914,893
SwanCap FLP II SCSp (share of voting rights: 37.5%)[10]	Senningerberg	—		EUR	831	18,308
SwanCap FLP SCS (share of voting rights: 37.5%)[10]	Senningerberg	—		EUR	474	229
SwanCap TB II SCSp (share of voting rights: 0.0%)[11]	Senningerberg	>0		EUR	416	192
S.W.I.F.T., (Co-operative 'Society for Worldwide Interbank Financial Telecommunication')	La Hulpe	0.3		EUR	407,529	33,513
True Sale International GmbH	Frankfurt am Main	7.7		EUR	4,616	(163)
UniCredit Services Società Consortile per Azioni	Milan	>0		EUR	366,695	17,272
VISA Inc. (share of voting rights: 0.0%)	Wilmington	>0		USD	34,684,000	12,080,000
WealthCap Aircraft 1 GmbH & Co. KG	Munich	>0	>0	EUR	16,729	(5,612)
WealthCap Aircraft 25 GmbH & Co. KG	Grünwald	>0	>0	EUR	32,295	342
WealthCap Aircraft 26 GmbH & Co. KG	Grünwald	>0	>0	USD	43,850	(150)
Wealthcap Büro Spezial-AIF 6 GmbH & Co. geschlossene Investment KG	Munich	>0	>0			
WealthCap Fondsportfolio Private Equity 21 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	6,174	(3,103)
WealthCap Fondsportfolio Private Equity 22 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	859	(470)
WealthCap Immobilien Deutschland 38 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	117,848	20,714
WealthCap Immobilien Deutschland 39 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	155,271	21,638
WealthCap Immobilien Deutschland 40 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	80,933	7,386
WealthCap Immobilien Deutschland 41 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	40,073	5,752
Wealthcap Immobilien Deutschland 42 GmbH & Co. geschlossene Investment KG	Munich	0.9	0.9			
Wealthcap Immobilien Deutschland 43 GmbH & Co. geschlossene Investment KG	Munich	0.2	0.2			

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
Wealthcap Immobilien Deutschland 44 GmbH & Co.						
geschlossene Investment KG	Munich	4.8	4.8			
WealthCap Immobilienfonds Deutschland 30 GmbH & Co. KG	Munich	>0	>0	EUR	46,680	4,773
WealthCap Immobilienfonds Deutschland 31 GmbH & Co. KG	Munich	>0	>0	EUR	37,435	2,284
WealthCap Immobilienfonds Deutschland 32 GmbH & Co. KG	Munich	>0	>0	EUR	51,219	3,024
WealthCap Immobilienfonds Deutschland 33 GmbH & Co. KG	Munich	>0	>0	EUR	58,597	2,614
WealthCap Immobilienfonds Deutschland 34 GmbH & Co. KG	Munich	>0	>0	EUR	40,809	2,619
WealthCap Immobilienfonds Deutschland 35 GmbH & Co. KG	Munich	>0	>0	EUR	125,892	5,456
WealthCap Immobilienfonds Deutschland 37 GmbH & Co. KG	Munich	>0	>0	EUR	62,921	2,429
WealthCap Immobilienfonds Donauwörth 1 GmbH & Co. KG	Munich	>0	>0	EUR	18,846	1,594
WealthCap Immobilienfonds Donauwörth 2 GmbH & Co. KG	Munich	>0	>0	EUR	4,664	591
WealthCap Immobilien Nordamerika 16 GmbH & Co.						
geschlossene Investment KG	Munich	>0	>0	USD	49,886	6,950
WealthCap Immobilien Nordamerika 17 GmbH & Co.						
geschlossene Investment KG	Munich	>0	>0	EUR	49,715	(3,348)
WealthCap Infrastructure Fund I GmbH & Co. KG	Munich	>0	>0	EUR	1,879	(218)
WealthCap Infrastruktur Amerika GmbH & Co. KG						
(share of voting rights: 0.1%)	Grünwald	>0	>0	USD	1,361	(227)
WealthCap Leasing 1 GmbH & Co. KG	Grünwald	5.5	5.5	EUR	30,005	1,641
WealthCap Leasing 2 GmbH & Co. KG	Grünwald	5.5	5.5	EUR	29,298	1,437
WealthCap Leasing 3 GmbH & Co. KG	Grünwald	5.5	5.5	EUR	28,687	1,516
WealthCap Leasing 4 GmbH & Co. KG	Grünwald	5.5	5.5	EUR	27,482	1,312
WealthCap LebensWert 1 GmbH & Co. KG	Grünwald	>0	>0	EUR	(1,139)	545
WealthCap LebensWert 2. GmbH & Co. KG	Grünwald	>0	>0	USD	3,520	1,820
WealthCap Life Britannia 2. GmbH & Co KG	Munich	>0	>0	EUR	1,641	743
WealthCap Life USA 4. GmbH & Co. KG	Grünwald	>0	>0	USD	60,903	1,924
WealthCap Los Gatos 121 Albright Way L.P.	Wilmington	>0	>0	USD	64,590	1,261
WealthCap Mountain View I L.P. (share of voting rights: 0.1%)	Atlanta	—	—	EUR	48,845	7,347
WealthCap Objekt Berg-am-Laim GmbH & Co. KG	Munich	5.2	5.2	EUR	121,259	6,018
Wealthcap Objekt Berg-am-Laim II GmbH & Co. KG	Munich	10.1	10.1	EUR	84,576	910
Wealthcap Objekt Berlin I GmbH & Co. KG	Munich	10.1	10.1			
WealthCap Objekt Berlin II GmbH & Co. KG	Munich	14.6	14.6	EUR	(540)	(774)
WealthCap Objekt Bogenhausen GmbH & Co. KG	Munich	>0	>0	EUR	132,593	2,566
Wealthcap Objekte Grasbrunn und Ismaning GmbH & Co. KG	Munich	10.1	10.1			
WealthCap Objekt Essen GmbH & Co. KG	Munich	5.2	5.2	EUR	(305)	1,548
WealthCap Objekte Südwest GmbH & Co. KG	Munich	5.1	5.1	EUR	64,877	2,832
WealthCap Objekt Frankfurt GmbH & Co. KG	Munich	5.2	5.2	EUR	46,984	1,036
Wealthcap Objekt Fürstenfeldbruck GmbH & Co. KG	Munich	10.1	10.1			
WealthCap Objekt Hackerbrücke GmbH & Co. KG	Munich	5.2	5.2	EUR	33,358	1,683
WealthCap Objekt Hamburg GmbH & Co. KG	Munich	10.1	10.1	EUR	21,172	97
WealthCap Objekt Hannover Ia GmbH & Co. KG	Munich	5.2	5.2	EUR	16,100	959
WealthCap Objekt Hannover Ib GmbH & Co. KG	Munich	5.2	5.2	EUR	3,781	513
WealthCap Objekt Hannover II GmbH & Co. KG	Munich	5.2	5.2	EUR	17,022	451
WealthCap Objekt Hufelandstraße GmbH & Co. KG	Munich	5.2	5.2	EUR	11,748	582
Wealthcap Objekt Nürnberg GmbH & Co. KG	Munich	10.1	10.1			
Wealthcap Objekt Ottobrunn GmbH & Co. KG	Munich	10.1	10.1			
WealthCap Objekt Riem GmbH & Co. KG	Munich	5.2	5.2	EUR	30,298	1,519
WealthCap Objekt Riem II GmbH & Co. KG	Munich	5.2	5.2	EUR	44,970	1,103
WealthCap Objekt Schwabing GmbH & Co. KG	Munich	5.2	5.2	EUR	30,572	981
WealthCap Objekt Sendling GmbH & Co. KG	Munich	5.2	5.2	EUR	59,044	2,405
WealthCap Objekt Stuttgart Ia GmbH & Co. KG	Munich	>0	>0	EUR	18,051	(167)
WealthCap Objekt Stuttgart Ib GmbH & Co. KG	Munich	>0	>0	EUR	19,733	1,194
WealthCap Objekt Stuttgart II GmbH & Co. KG	Munich	5.2	5.2	EUR	24,939	962
Wealthcap Objekt Stuttgart III GmbH & Co. KG	Munich	10.1	10.1			

Other Information (Continued)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN % TOTAL	SHARE OF CAPITAL IN % OF WHICH HELD INDIRECTLY	CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
WealthCap Objekt Theresienhöhe GmbH & Co. KG	Munich	5.2	5.2	EUR	64,248	2,714
WealthCap Photovoltaik 1 GmbH & Co. KG	Grünwald	>0	>0	EUR	28,633	2,984
WealthCap Portfolio 3 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	31,114	7,270
Wealthcap Portfolio 4 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0			
Wealthcap Portfolio 5 GmbH & Co. geschlossene Investment KG	Grünwald	0.3	0.3			
Wealthcap Portfolio 4/5 GmbH & Co. KG	Grünwald	0.1	0.1			
WealthCap Private Equity 10 GmbH & Co. KG	Munich	>0	>0	EUR	4,451	353
WealthCap Private Equity 11 GmbH & Co. KG	Munich	>0	>0	EUR	1,643	325
WealthCap Private Equity 12 GmbH & Co. KG	Grünwald	>0	>0	EUR	56,802	2,854
WealthCap Private Equity 13 GmbH & Co. KG	Grünwald	>0	>0	EUR	45,549	1,785
WealthCap Private Equity 14 GmbH & Co. KG	Grünwald	>0	>0	EUR	26,438	1,198
WealthCap Private Equity 15 GmbH & Co. KG	Grünwald	>0	>0	EUR	10,844	1,161
WealthCap Private Equity 16 GmbH & Co. KG (share of voting rights: 0.3%)	Grünwald	>0	>0	EUR	2,353	273
WealthCap Private Equity 17 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	13,316	795
WealthCap Private Equity 18 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	9,513	580
WealthCap Private Equity 19 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	31,856	(310)
WealthCap Private Equity 20 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	9,155	(98)
WealthCap SachWerte Portfolio 1 GmbH & Co. KG	Grünwald	>0	>0	EUR	26,767	1,499
WealthCap SachWerte Portfolio 2 GmbH & Co. geschlossene Investment KG	Grünwald	>0	>0	EUR	92,608	3,933
WealthCap Spezial-AIF 1 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	169,805	23,317
WealthCap Spezial-AIF 2 GmbH & Co. geschlossene Investment KG	Munich	5.2	5.2	EUR	79,250	5,739
WealthCap Spezial-AIF 3 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	257,916	29,752
WealthCap Spezial-AIF 4 GmbH & Co. geschlossene Investment KG	Munich	>0	>0	EUR	151,895	(76)
WealthCap Spezial-AIF 5 GmbH & Co. geschlossene Investment KG	Munich	10.1	10.1	EUR	165,733	1,382
Wealthcap Spezial Portfolio Immobilien 1 SCS SICAV-SIF	Luxembourg-Findel	>0	>0			
Wealthcap Spezial Portfolio Private Equity 1 SCS SICAV-SIF	Luxembourg-Findel	>0	>0	EUR	4,330	(170)
WealthCap US Life Dritte GmbH & Co. KG	Grünwald	0.1	0.1	USD	3,940	(6,861)
WealthCap Zweitmarkt 3 BASIS GmbH & Co. KG	Grünwald	>0	>0	EUR	30,813	(130)
WealthCap Zweitmarkt 3 PLUS GmbH & Co. KG	Grünwald	>0	>0	EUR	14,550	5,241
WealthCap ZweitmarktWerte Immobilien 4 GmbH & Co. KG	Munich	>0	>0	EUR	8,458	(39)
WH – Erste Grundstücks GmbH & Co. KG	Munich	6.0		EUR	102,433	627
Wohnungsbaugesellschaft der Stadt Röthenbach a.d.Pegnitz mit beschränkter Haftung	Röthenbach a.d. Pegnitz	5.2		EUR	3,698	340

Exchange rates for 1 euro at the reporting date

Currency abbreviation according to the International Organisation for Standardisation (ISO) code.

Brazil	1 EUR =	4.5157	BRL
China	1 EUR =	7.8205	CNY
UK	1 EUR =	0.8508	GBP
Pakistan	1 EUR =	173.67123	PKR
USA	1 EUR =	1.1234	USD

Notes and comments to the list of holdings

Percentages marked < or > are rounded up or down to one decimal place, e.g. < 100.0% = 99.99% or > 0.0% = 0.01%.

1 UniCredit Bank AG has concluded profit and loss agreements with the following companies:

	COMPANY	PROFIT/(LOSS) TRANSFERRED € thousands
1.1	Food & more GmbH, Munich	—
1.2	HJS 12 Beteiligungsgesellschaft mbH, Munich	39,183
1.3	HVB Immobilien AG, Munich	458,606
	of which relating to 2019	417,688
1.4	HVB Secur GmbH, Munich	52
1.5	HVB Verwa 4 GmbH, Munich	(91)
1.6	MERKURHOF Grundstücksgesellschaft mit beschränkter Haftung, Munich	6,699
1.7	UniCredit Beteiligungs GmbH, Munich	(15)
1.8	UniCredit Direct Services GmbH, Munich	(10,972)
1.9	UniCredit Leasing GmbH, Hamburg	(9,543)
1.10	Verwaltungsgesellschaft Katharinenhof mbH, Munich	78
1.11	Wealth Management Capital Holding GmbH, Munich	17,438

2 Profit and loss transfer to shareholders and partners.

3 The exemption under Section 264b HGB and under Section 264 (3) HGB applies to the company.

4 Figures from the 2018 annual accounts are indicated for this consolidated company.

5 Where equity capital and net profit are not stated, the information is omitted due to minor importance compliant with Section 286 (3) 1 No. 1 HGB.

6.1 Equity capital amounts to €15,053 thousand and the net profit €4,245 thousand.

6.2 Equity capital amounts to €127 thousand and the net profit €–.

7 Pursuant to Section 340a (4) No. 2 HGB, all holdings in large corporations with a share of voting rights greater than 5 percent.

8 Despite a holding of more than 20%, UniCredit Bank AG has no significant influence over the company on account of the ownership structure and the voting patterns to date.

9 The company is held by a trustee on behalf of UniCredit Bank AG.

10 UniCredit Bank AG holds the position of a limited partner under company law and participates in the profit of the company.

11 UniCredit Bank AG holds the position of a limited partner under company law but does not participate in the profit of the company.

Other Information (Continued)

98 Supervisory Board

Chairman
Gianpaolo Alessandro
since 3 June 2019
Gianni Franco Papa
until 2 June 2019

Deputy Chairmen
Florian Schwarz
Dr Wolfgang Sprissler

Members
Paolo Cornetta
Beate Dura-Kempf
until 31 January 2019
Francesco Giordano
until 27 November 2019
Olivier Khayat
since 28 November 2019
Prof Dr Annette G. Köhler
Dr Marita Kraemer
Klaus-Peter Prinz
Claudia Richter
since 8 February 2019
Oliver Skrbot
Christian Staack
Gregor Völkl

99 Management Board

Sandra Betocchi Drwenski	**Chief Operating Officer (COO)**
Markus Beumer	**Commercial Banking – Unternehmer Bank**
Dr Emanuele Buttà	**Commercial Banking – Private Clients Bank**
Ljiljana Čortan	**Chief Risk Officer (CRO)**
Dr Michael Diederich	**Spokesman of the Management Board Human Capital/ Arbeit und Soziales**
Jan Kupfer	**Corporate & Investment Banking**
Guglielmo Zadra	**Chief Financial Officer (CFO)**

Munich, 12 March 2020

UniCredit Bank AG
The Management Board

Betocchi Drwenski Beumer Dr Buttà Čortan

Dr Diederich Kupfer Zadra

Declaration by the Management Board

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and Management's Discussion and Analysis includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Munich, 12 March 2020

UniCredit Bank AG
The Management Board

Betocchi Drwenski | Beumer | Dr Buttà | Čortan

Dr Diederich | Kupfer | Zadra

Auditor's Report

INDEPENDENT AUDITOR'S REPORT

To UniCredit Bank AG, Munich

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit Opinions
We have audited the consolidated financial statements of UniCredit Bank AG, Munich, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2019, the consolidated income statement including the consolidated statement of total comprehensive income, the statement of changes in consolidated shareholders' equity and the consolidated cash flow statement for the financial year from 1 January to 31 December 2019 as well as the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of UniCredit Bank AG, Munich, for the financial year from 1 January to 31 December 2019.

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 IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e (1) German Commercial Code (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 31 December 2019 and of its financial performance for the financial year from 1 January to 31 December 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.

Pursuant to § 322 (3) sentence 1 German Commercial Code (HGB), we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions
We conducted our audit of the consolidated financial statements and of the group management report in accordance with §317 German Commercial Code (HGB) and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation"), 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 European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements
Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following we present the key audit matters we have determined in the course of our audit:

1. Loan loss provisions in the credit business

2. Determination of the fair value of financial instruments that are measured at fair value and are not equity instruments

3. IT controls related to financial reporting

4. Change in accounting policy – adoption of the revaluation model in accordance with IAS 16 and the fair value model in accordance with IAS 40

Our presentation of these key audit matters has been structured as follows:

a) Description (including reference to corresponding information in the consolidated financial statements)

b) Auditor's response

c) Key observations

1. Loan loss provisions in the credit business

a) UniCredit Bank AG provides loans to customers. In the bank's consolidated financial statements, loan loss provisions are offset against the balance sheet item "Loans to customers". Furthermore, provisions for credit risks are disclosed under other provisions. A key element of risk provisioning in stage 1 and stage 2, according to IFRS 9, is the allocation of financial instruments to the stages, based on the comparison of the current default risk with the default risk on initial recognition of the financial instrument. The allocation leads to the recognition of the loan loss provision to the amount of the expected one-year credit loss or the expected lifetime credit loss of the financial instrument. The loan loss provision of stage 1 and stage 2 is, therefore, largely determined by the models used to determine the stage transfer, the models for calculating the expected one-year credit loss or the expected lifetime credit loss of the financial instrument and the parameters used. Significant parameters within the calculation models that affect the expected credit loss are; the probability of default, the exposure at default and the loss given default. The risk provisioning of stage 3, in accordance with IFRS 9, is based on assumptions relating to various scenarios relating to expected cash flows from the defaulted loans or from the estimated probability of occurrence of the respective scenarios. Both the valuation parameters and the models for risk provisioning stage 1 and stage 2 have a significant impact on the amount of loan loss provision. Since the determination of the loan loss provision is subject to uncertainty and margin of discretion, this was a key audit matter in our audit. The disclosures regarding the loan loss provisions are enclosed in sections 13 and 54 of the notes to the consolidated financial statements.

b) As part of the audit of the consolidated financial statements, we have initially audited the adequacy and operating effectiveness of the internal controls regarding the recording, processing and valuation of loans as well as the related financial reporting. In doing so, we also took into account the relevant business organization, including the significant IT systems and valuation models. The audit of the valuation included the assessment of the implemented processes and controls for identifying impaired loans, as well as an assessment of the models used to determine the stage transfer between stage 1 and stage 2, and the models used to determine the expected one-year or the expected life time credit loss of the financial instrument. We have used specialists from our Risk Advisory division specialised in credit risk management and IT audit for our audit. The group-wide valuation models for the determination of the loan loss provision of stage 1 and stage 2 were audited by our colleagues from Deloitte & Touche S.p.A., Milan (Italy), as these models were developed and validated by the parent company of the bank in Milan. We have used their results of the work for our purposes. Similarly, we utilised validation reports and third-party audit reports. Furthermore, for a sample of financial instruments measured at amortised cost, we audited the stage 1 and stage 2 loan loss provision by auditing the stage allocation as well as the calculated expected loss. For the audit of the stage 3 loan loss provision, our focus was on the significantly impaired loans, since there are areas of judgement and these have a material impact on the valuation of loans and the recognition of loan loss provisions. We have evaluated the valuation for a sample of the loans based on bank-internal forecasts of the future income and liquidity position of borrowers and assessed the appropriateness of the information basis used for planning purposes. In doing so, we have critically challenged and assessed the underlying assumptions of the legal representatives, with regard to the various expected cash flows of the audited loans, respectively the recovery of collaterals. Similarly, we assessed for the loans in our sample the probabilities of occurrence of the used scenarios with regard to their comprehensibility.

c) We challenged significant assumptions and estimates made by the legal representatives. Overall, the risk provisions are within acceptable ranges.

2. Determination of the fair value of financial instruments that are measured at fair value and are not equity instruments

a) Financial instruments assets, which are valued at fair value and are not equity instruments, are disclosed in the consolidated financial statements under the balance sheet items "Financial assets held for trading", "Financial assets aFVtPL", "Financial assets aFVtOCI", and "Hedging derivatives". Similarly, financial instruments liabilities at fair value are disclosed under the balance sheet items "Financial liabilities held for trading", "Financial liabilities aFVtPL" and "Hedging derivatives". The valuation of these financial instruments was identified as a key audit matter as it is subject to complex accounting principles, valuation procedures and -methods and is partially based on estimates and assumptions made by the legal representatives. The disclosure made by the legal representatives regarding the valuation of financial instruments is enclosed in section 8 of the notes to the consolidated financial statements.

b) We have audited the organizational structure and related processes with regards to the determination of the fair value of financial instruments that are not equity instruments by examination of the adequacy and operating effectiveness of the implemented key controls. In particular, our audit included the independent verification process for pricing, the validation of valuation methods and assumptions, the approval process for new financial instruments, the audit of controls for recording contractual and valuation inputs, the flow of market data, the governance and the reporting. The calculated fair values are adjusted for the Group's creditworthiness, counterparty credit risk, model risk, bid-ask spread, refinancing costs and expected costs in connection with the liquidation of less actively traded instruments. With respect to these adjustments, we examined whether the Bank's assumptions, procedures and models are in line with standard industry practice and we audited whether the valuations are correct and comprehensible. In addition, we have conducted our own independent valuation on a sample of selected financial instruments and compared our results with the valuation performed by the Bank. We have used valuation specialists from our Risk Advisory division for our audit. Noteworthy issues from disputes with counterparties and extraordinary gains or losses from the sale of financial instruments were investigated.

c) The valuation methods selected by the legal representatives of the Bank for the determination of the fair value of financial instruments are in line with industry standards.

3. IT controls related to financial reporting

a) For the preparation of the consolidated financial statements, the Bank uses a large number of IT applications that have numerous interfaces. In order to maintain the integrity of the data used for the preparation of the consolidated financial statements, the Bank has taken various precautionary measurements and implemented controls. The Bank has outsourced its IT services, to a large extent, to UniCredit Services S.C.p.A., Milan (Italy), which has further outsourced a part of these services to other service providers. The IT controls related to financial reporting has been selected as a key audit matter, as the security of information affects many aspects of the accounting and financial reporting process, results in a large audit effort and is characterised by a high level of complexity. We refer to the disclosure of the legal representatives in section 4 Operational Risk in the risk report of the group management report with regards to the outsourcing of IT services.

b) Based on our risk assessment, we have audited the design, implementation and operating effectiveness of the controls related to user rights and change management processes for the significant accounting-relevant IT applications by using IT specialists from our Risk Advisory division. In doing so, we agreed the scope of the ISAE 3402 audit with the ISAE 3402 auditor at UniCredit Services S.C.p.A. and the group auditors of UniCredit S.p.A. and used the audit results of those. We have informed ourselves of the professional competence, independence and regulatory governance of these auditors. When using these reports, we have inter alia critically assessed the reporting related to these audit procedures and audit results.

c) IT controls related to financial reporting implemented by the Bank were enhanced over the past years.

4. Change in accounting policy – adoption of the revaluation model in accordance with IAS 16 and the fair value model in accordance with IAS 40

a) In the consolidated financial statements of UniCredit Bank AG, properties in use (IAS 16) are disclosed under balance sheet item "Property, Plant and Equipment" and investment properties (IAS 40) are disclosed under balance sheet item "Investment Properties". At year-end, the measurement after initial recognition of properties in use was changed to the revaluation model in accordance with IAS 16 and that of investment properties was changed to the fair value model in accordance with IAS 40. The change in accounting policy in accordance with IAS 16 was done prospectively with effect from 31 December 2019 whereas IAS 40 was applied retrospectively as of 1 January 2018. The UniCredit Bank AG determines the fair values of properties in use for all properties considered significant by incorporating external valuation experts and an internal valuation using a discounted cash flow model is used to determine the fair value for all non-significant properties. The determination of the fair values of investment properties were done exclusively by incorporating external valuation experts. The change in accounting policy for both properties in use as well as investment properties was identified as a key audit matter, as it has material effects on the financial statements. Also, the used valuation parameters for the fair value determination are subject to considerable uncertainty and margin of discretion and are based to some extent on estimates and assumptions made by the legal representatives. The disclosures of the legal representatives are in Sections 3, 15, 17, 58 and 59 of the notes to the consolidated financial statements.

b) For the audit of the consolidated financial statements, we have audited the organizational structure and related processes with regards to the determination of the fair value of properties by examination of the adequacy and operating effectiveness of the implemented key controls. In doing so, we focused on the controls implemented to test the internal and external value determination. We audited the fair value determination for a representative sample of properties. In doing so, we audited the applied valuation methodology on its conformity with accounting regulations. We audited the adequacy of applied parameters and assumptions, specifically whether they are within an acceptable range. Further, the subject of our audit was the accurate and complete transfer of the databases. We also attended property inspections performed by the external valuators and performed independent inspections of properties in order to convince ourselves of the conditions of such properties presented in the valuators' reports. We convinced ourselves of the competency, capability and objectivity of the externally appointed valuators. With regards to the change in accounting policies, we assured ourselves of the correct processing of the determined fair values within the accounting department. In doing so, the focus of our audit was on the correct prospective initial application of the revaluation model for properties in use and the correct retrospective initial application of the fair value model for investment properties.

c) We challenged significant assumptions and estimates made by the legal representatives. Overall, the parameters used for the valuation of properties are within acceptable ranges.

Other Information

The executive directors are responsible for the other information. The other information comprises:
– the executive directors' confirmation regarding the consolidated financial statements and to the group management report pursuant to § 297 (2) sentence 4 and § 315 (1) sentence 5 German Commercial Code (HGB) respectively, and
– all the remaining parts of the annual report, with the exception of the audited consolidated financial statements and group management report and our auditor's report.

Our audit 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 audit opinion or any other form of assurance conclusion thereon.

In connection with our group 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 Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements, that comply, in all material respects, with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e (1) German Commercial Code (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 directors are 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 directors are 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 directors are 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 directors are 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 supervisory board 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 audit 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 § 317 German Commercial Code (HGB) and the EU Audit Regulation 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 scepticism 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 audit 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 controls.
- obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures 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 audit opinion on the effectiveness of these systems.
- evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- conclude on the appropriateness of the executive directors’ 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 audit 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 IFRS as adopted by the EU and with the additional requirements of German commercial law pursuant to § 315e (1) German Commercial Code (HGB).
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit 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 audit 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 directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors 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 audit 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.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on June 3, 2019. We were engaged by the supervisory board on July 15, 2019. We have been the group auditor of UniCredit Bank AG, Munich, without interruption since the financial year 2013.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

In addition to the financial statement audit, we have provided to group entities the following services that are not disclosed in the consolidated financial statements or in the group management report:
– Audits and reviews of reporting packages
– Audits pursuant to § 89 of the Securities Trading Act
– Audit of the internal control system of a service organization
– Performing agreed upon procedures
– Audits of financial information or their components
– Review of an assignment of findings to process areas
– Review of archived documents

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Martin Kopatschek.

Munich, March 13, 2020

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

(Prof Dr Carl-Friedrich Leuschner)	(Martin Kopatschek)
Wirtschaftsprüfer	Wirtschaftsprüfer
German Public Auditor	German Public Auditor

The translation of the Independent Auditor's Report is for convenience only; the German version prevails.

Corporate Governance

List of Executives and Outside Directorships

Supervisory Board

NAME, OCCUPATION, PLACE OF RESIDENCE	POSITIONS ON STATUTORY SUPERVISORY BOARDS OF OTHER GERMAN COMPANIES[1]	POSITIONS ON COMPARABLE BOARDS OF GERMAN AND FOREIGN COMPANIES[1]
Gianpaolo Alessandro since 3 June 2019 Group General Counsel, Head of Group Legal and Secretary of the Board of Directors of UniCredit S.p.A., Milan Chairman		Compagnia Aerea Italiana S.p.A., Rome MidCo S.p.A., Rome
Gianni Franco Papa until 2 June 2019 Advisor to the CEO of UniCredit S.p.A., Vienna Chairman		UniCredit Bank Austria AG, Vienna (Chairman) Amundi S.A., Paris
Florian Schwarz Employee of UniCredit Bank AG, Munich Deputy Chairman		
Dr Wolfgang Sprißler Former Board Spokesman of UniCredit Bank AG, Sauerlach Deputy Chairman		Dr. Pfleger Arzneimittel, Bamberg (Deputy Chairman)
Paolo Cornetta Head of Group Human Capital of UniCredit S.p.A., Milan		
Beate Dura-Kempf until 31 January 2019 Employee of UniCredit Bank AG, Litzendorf		
Francesco Giordano until 27 November 2019 Co-CEO Commercial Banking Western Europe of UniCredit S.p.A., Milan		UniCredit Services S.C.p.A., Milan, until 15 April 2019 YAPI ve KREDİ BANKASI A.Ş., Istanbul, until 1 June 2019

1 As at 31 December 2019.

NAME, OCCUPATION, PLACE OF RESIDENCE	POSITIONS ON STATUTORY SUPERVISORY BOARDS OF OTHER GERMAN COMPANIES[1]	POSITIONS ON COMPARABLE BOARDS OF GERMAN AND FOREIGN COMPANIES[1]
Olivier Khayat since 28 November 2019 Co-CEO Commercial Banking Western Europe der UniCredit S.p.A., Milan		UniCredit Bank Austria AG, Vienna UniCredit International Bank (Luxembourg) S.A., Luxemburg (Deputy Chairman) Kepler Cheuvreux S.A., Paris
Prof Dr Annette G. Köhler University professor and Chair of Accounting, Auditing and Controlling, University of Duisburg-Essen, Faculty of Business Administration – Mercator School of Management, Düsseldorf	DMG MORI AKTIENGESELLSCHAFT, Bielefeld, Villeroy & Boch Aktiengesellschaft, Mettlach	DKSH Holding AG, Zurich
Dr Marita Kraemer Former member of the Management Board of Zurich GI Management Aktiengesellschaft (Deutschland), and former member of the Management Board of Zurich Service GmbH, Frankfurt am Main	Allianz Deutschland AG, Munich	Allianz France S.A., Paris
Klaus-Peter Prinz Employee of UniCredit Bank AG, Luxembourg Branch, Trier		
Claudia Richter since 8 February 2019 Employee of UniCredit Bank AG, Fürth		
Oliver Skrbot Employee of UniCredit Bank AG, Buttenwiesen		
Christian Staack Employee of UniCredit Bank AG, Hamburg		
Gregor Völkl District secretary of Vereinte Dienstleistungs-gewerkschaft ver.di Division 1 – Financial Services Munich district, Munich		

1 As at 31 December 2019.

List of Executives and Outside Directorships (Continued)

Supervisory Board committees[1,2]

Audit Committee
Dr Wolfgang Sprißler, Chairman
Francesco Giordano (until 27 November 2019)
Olivier Khayat (since 28 November 2019)
Prof Dr Annette G. Köhler
Oliver Skrbot

Nomination Committee
Gianni Franco Papa, Chairman (until 2 June 2019)
Gianpaolo Alessandro, Chairman (since 3 June 2019,
Chairman since 6 June 2019)
Florian Schwarz
Dr Wolfgang Sprißler

Remuneration Control Committee
Paolo Cornetta, Chairman
Florian Schwarz
Dr Wolfgang Sprißler

Risk Committee
Dr Marita Kraemer, Chairwoman
Gianni Franco Papa (until 2 June 2019)
Gianpaolo Alessandro (since 3 June 2019)
Christian Staack

Trustees[1]

Trustees for Pfandbrief operations pursuant to Section 7 of the German Pfandbrief Act

Bernd Schreiber
President of the Bavarian Department of State-owned Palaces, Gardens and Lakes,
Markt Schwaben

Deputies

Stefan Höck
Chief Ministerialrat in the Bavarian State Ministry of Finance and Regional Identity,
Hohenschäftlarn

Robert Saliter
Chief Ministerialrat in the Bavarian State Ministry of Finance and Regional Identity,
Munich

1 As at 31 December 2019.
2 See also the Report of the Supervisory Board.

Management Board

NAME	POSITIONS ON STATUTORY SUPERVISORY BOARDS OF OTHER GERMAN COMPANIES[1]	POSITIONS ON COMPARABLE BOARDS OF GERMAN AND FOREIGN COMPANIES[1]
Sandra Betocchi Drwenski born 1958 Chief Operating Officer (COO)	HVB Immobilien AG, Munich (Chairwoman)[2]	UniCredit Services S.C.p.A., Milan
Markus Beumer born 1964 Commercial Banking – Unternehmer Bank	DAW SE, Ober-Ramstadt	UniCredit Leasing GmbH, Hamburg (Chairman)[2] UniCredit Leasing Finance GmbH, Hamburg (Chairman)[2]
Dr Emanuele Buttà born 1966 Commercial Banking – Private Clients Bank	WealthCap Kapitalverwaltungsgesellschaft mbH, Munich (Deputy Chairman)[2]	Wealth Management Capital Holding GmbH, Munich (Deputy Chairman)[2]
Ljiljana Čortan born 1971 Chief Risk Officer (CRO)	HVB Immobilien AG, Munich[2] WealthCap Kapitalverwaltungsgesellschaft mbH, Munich[2]	Wealth Management Capital Holding GmbH, Munich[2]
Dr Michael Diederich born 1965 Spokesman of the Management Board Human Capital/Arbeit und Soziales		ESMT European School of Management and Technology GmbH, Berlin FC Bayern München AG, Munich
Jan Kupfer born 1964 Corporate & Investment Banking	Bayerische Börse Aktiengesellschaft, Munich	
Guglielmo Zadra born 1972 Chief Financial Officer (CFO)		

1 As at 31 December 2019.
2 Group directorship.

Report of the Supervisory Board

In the year under review, the Supervisory Board of UniCredit Bank AG (hereinafter referred to as "HVB" or "Bank") discharged the responsibilities incumbent on it by law, the Articles of Association and its By-Laws and within that framework advised the Management Board on the running of the company, continuously monitored its management activities and thus satisfied itself of the legality and regularity thereof, which gave no cause for complaint. The Supervisory Board focused on the economic and financial performance of HVB Group, the implementation of the business and risk strategies including the ICT strategy as well as the Transform 2019 programme at HVB and HVB Group. The Management Board informed the Supervisory Board regularly, promptly and comprehensively of the business situation and the economic position of the individual business units, business policies and fundamental issues concerning corporate management and planning. The Supervisory Board examined the financial development of the Bank and HVB Group, their profitability and earnings situation, liquidity and capital management and the risk situation. A full report was also submitted by the Management Board on significant transactions, legal risks, internal and governmental investigations of the Bank in Germany and abroad, compliance topics and other events of considerable importance to the Bank. This happened primarily during the meetings of the Supervisory Board and its committees, but also outside meetings in written form. In addition, important topics and pending decisions were also discussed at regular meetings between the Spokesman of the Management Board and the Chairman of the Supervisory Board. The Supervisory Board was directly consulted at an early stage on decisions of fundamental importance for the Bank, engaged in comprehensive consultations on the matters at hand and, insofar as this was indicated, voted on the same after conducting an appropriate review. Resolutions of the Supervisory Board were also passed outside meetings, as required.

Meetings of the Supervisory Board

The Supervisory Board held eight meetings in the 2019 financial year, three of which were extraordinary meetings. In addition, key strategies for HVB Group were discussed in-depth at a separate strategy workshop. The Supervisory Board addressed the following subjects in particular:

In a resolution adopted outside a meeting on **25 January 2019**, the Supervisory Board approved the sale of a non-strategic real estate complex in Berlin Friedrichshain-Kreuzberg.

The first meeting of the year on **15 February 2019** focused on the topic of "Strategies of the HVB Group". In a **strategy workshop** held in advance on **13 February 2019**, particularly the HVB Group business strategy and the strategies of Commercial Banking (Commercial Banking UBK and PBK) and Corporate & Investment Banking, the ICT strategy and the risk strategies of the Bank were discussed individually and considered in-depth with the Management Board. The status of implementation of the Transform 2019 programme in the CEO, CFO, CRO and COO business units was also dealt with in this connection. In the meeting on 15 February 2019, the Supervisory Board thus discussed the strategies above, including the Transform 2019 programme and the budget for the year 2019 as well as the Multi-Year Plan 2019 – 2021, with the Management Board. Based on the integrated risk report of HVB Group and the status report on large loan exposures for Q4/2018, the Chief Risk Officer explained the development of the regulatory ratios, the risk-taking capacity as well as credit and market risk, operational risk, reputational risk, liquidity risk and strategic risk. The Supervisory Board was also briefed on the latest status of preparations for the UK's withdrawal from the EU. In addition, the Supervisory Board considered the variable remuneration in 2018 for members of the Management Board and employees of HVB Group, target attainment and the 2018 bonus for members of the Management Board, the remuneration packages and the targets of the Management Board in 2019, the structure of the 2019 Group Incentive System at HVB and the implementation for the Management Board and taking account of the recommendations of the Remuneration Control Committee, adopted resolutions on these matters accordingly. Furthermore, the Supervisory Board, taking account of the recommendations of the Nomination Committee, approved the regular reappointment of Guglielmo Zadra as a member of the Management Board with effect from 1 January 2020.

In the meeting held on **22 March 2019** devoted to the annual financial statements, the Supervisory Board discussed the annual and consolidated financial statements for 2018 including the Management Reports with the independent auditor, Deloitte GmbH Wirtschaftsprüfungsgesellschaft (hereinafter referred to as “Deloitte”), and subsequently approved them at the recommendation of the Audit Committee following its own in-depth review. The Supervisory Board also dealt with the report on relations with affiliated companies (Dependency Report) and approved the Management Board’s proposal on the appropriation of net profit. Moreover, the Supervisory Board considered the process of determining Risk Takers in 2019 at HVB Group and taking account of the recommendations of the Remuneration Control Committee, adopted a resolution in this connection. The Supervisory Board also monitored compliance with regulatory provisions by the Management Board and was briefed on human resources work in 2018. It also deliberated on succession planning for the Management Board and the “fit and proper assessment” of Ms Claudia Richter who had been appointed by the court to succeed Ms Beate Dura-Kempf on the Supervisory Board of HVB with effect from 8 February 2019.

In an extraordinary meeting held on **14 April 2019**, the Supervisory Board dealt intensively with the allegations of various US authorities that the Bank had violated US economic sanctions in the period between 2002 and 2011. In this context, the Supervisory Board discussed in detail the underlying facts and the legal assessment of the alleged violations as well as the advantages and disadvantages of a possible settlement with the US authorities and adopted corresponding resolutions after extensive and detailed legal consultations.

In a meeting on **17 May 2019**, the Supervisory Board discussed in particular the further adaptation of the requirement profiles of the Management Board, the Supervisory Board and key function holders to meet the suitability criteria set out in the EBA/ESMA Guidelines (“Fit & Proper Guidelines”, EBA/GL/2017/12) and taking account of the recommendation of the Nomination Committee, approved the respective adaptation of the requirement profiles for the Management Board and the Supervisory Board. In addition, the Supervisory Board again considered the topic of succession planning for the Management Board and the “fit and proper assessment” of Mr Gianpaolo Alessandro to prepare for the election of Mr Gianpaolo Alessandro to succeed Mr Gianni Franco Papa as a member of the Supervisory Board by the Annual Shareholders’ Meeting on 3 June 2019.

Outside a meeting on **23 May 2019**, the Supervisory Board adopted the proposed resolutions for the Bank’s Annual Shareholders’ Meeting on 3 June 2019.

Based on the recommendation of the Audit Committee, the Supervisory Board approved the granting of the audit engagement for the audit of the 2019 financial statements (including the specification of an audit focus area and the remuneration) to Deloitte on **7 June 2019** outside a meeting.

At an extraordinary meeting held on **17 July 2019**, the Supervisory Board approved the sale and transfer of the shares in the “BARD Offshore 1” wind farm.

In the meeting held on **1 August 2019**, the Management Board explained the business development of the Bank and the results for the first half of 2019 (Half-yearly Financial Report) to the Supervisory Board. The Management Board presented an interim report on the status of implementation of the business strategy and the budget for 2019 and discussed the performance of HVB Group including the Transform 2019 programme and the development of the Commercial Bank PBK. The Supervisory Board was also given an update on the status of selected digital initiatives and activities. Moreover, the Supervisory Board considered (i) the structure of the 2019 Group Compensation Policy for all employees of HVB Group and the implementation of this policy also for the Management Board and (ii) the structure of the Group Termination Payments Policy 2019 for all employees of HVB Group including the implementation of this policy also for the Management Board. Moreover, the Supervisory Board considered the review of the structure of the remuneration systems in 2019 for employees based on the Management Board’s remuneration report and the appropriateness of the remuneration in 2018 for the heads of the Risk Controlling function, the Compliance function and Risk Takers.

Outside a meeting on **4 October 2019**, the Supervisory Board approved the sale of a non-strategic real estate portfolio (consisting of 35 properties used mainly as office buildings in Europe).

Report of the Supervisory Board (Continued)

In the meeting held on **15 November 2019**, the Management Board informed the Supervisory Board of the business development and the result of the first nine months of 2019 (discussion of the figures as at 30 September 2019). Furthermore, the Management Board gave a report on the status of implementation of the business strategy and the 2019 budget as well as on the development in Commercial Banking UBK/Wealth Management and provided information on the current status of the UK's withdrawal from the EU. Furthermore, the Supervisory Board considered the effectiveness of the framework for internal governance issues of HVB and the implementation of the risk culture of HVB. The Supervisory Board also considered the implementation and maintenance of an effective conflict of interest policy for employees and the Management Board of HVB and discussed the implementation of the conflict of interest policy of HVB for the Supervisory Board of HVB. In addition to the succession planning for the Supervisory Board of HVB, the results of the annual evaluation for the Management Board and the Supervisory Board, which was carried out with the aid of an external, independent consultant (auditing company), were presented at this meeting. Based on the preparations carried out at the meeting of the Nomination Committee on 24 October 2019, these results were then discussed by the Supervisory Board as a whole and measures and recommendations for improvement were examined.

The Supervisory Board adopted the proposed resolutions for the Extraordinary Shareholders' Meeting of the Bank on 28 November 2019 outside a meeting on **27 November 2019**. In particular, the Supervisory Board, taking account of the recommendation of the Nomination Committee and after conducting a "fit and proper assessment", proposed to the Extraordinary Shareholders' Meeting that Mr Olivier Khayat be elected as the successor of Mr Francesco Giordano as a member of the Supervisory Board.

In the extraordinary meeting of the Supervisory Board held on **29 November 2019**, the Supervisory Board considered and discussed in detail with the Management Board the key points of the new strategic planning for 2020 – 2023 of HVB Group, focusing particularly on the real estate strategy and the Multi-Year Plan 2020 – 2023. Based on the prior consideration of the Audit Committee at its extraordinary meeting on 26 November 2019, the Supervisory Board addressed the topic of the planned introduction of IAS 16 and IAS 40 for the valuation of land and buildings and the capital development of the Bank together with the expansion of the audit engagement of Deloitte for the 2019 financial year on account of the proposed amendment to the real estate valuation approach and approved the sale of the "Tucherpark" real estate complex.

Legal disputes as well as internal and external investigations

The Supervisory Board solicited information and deliberated on important legal disputes and proceedings on a regular basis last year. On individual issues, external legal advisers were called in to provide advice to the Supervisory Board; the external legal advisers reported to the plenary sessions of the Supervisory Board at regular intervals. Key topics that the Supervisory Board addressed were – as in previous years – the proceedings in connection with trades around the dividend ex-date (cum/ex trades) in particular. The Management Board provided information on this topic to the Supervisory Board on a regular basis. In the year under review, the Supervisory Board was also briefed on further developments and measures regarding the settlement agreements concluded between the Bank and the US authorities to end the investigations on compliance with US financial sanctions.

When required, meetings were also held, or individual agenda items were considered, without the participation of the Management Board. Prior to every Supervisory Board meeting, the Supervisory Board members representing the employees and those representing the shareholders had the opportunity to address the topics of the meeting in question in preliminary discussions, also with the Management Board. Potential conflicts of interests of individual Supervisory Board members were disclosed and taken into account; the Supervisory Board members affected abstained from voting on relevant resolutions of the Supervisory Board.

Supervisory Board committees

To efficiently perform its tasks, the Supervisory Board set up a Nomination Committee, a Remuneration Control Committee, a Risk Committee and an Audit Committee from among its members. Each committee elected a chairman. The composition of the committees is shown in the "Supervisory Board" list in this Annual Report. The responsibilities of each of the committees are defined in the By-Laws of the Supervisory Board.

The cooperation and sharing of content among the individual committees is ensured by at least one member of each committee sitting on another committee. The chairs of the committees coordinated inter-committee topics with the Management Board member responsible in each case and among one another to strengthen cooperation in the committees as a whole. They also exercised their rights to information vis-à-vis the head of the Internal Audit and the Chief Compliance Officer as well as the level below the Management Board, where agreed with the Management Board. As far as necessary, the committees adopted resolutions or gave recommendations to the Supervisory Board for adopting resolutions, also outside of meetings. The chairs of all the committees reported in detail at the next respective plenary session of the Supervisory Board on the topics of the committees' discussions, the outcome thereof and the resolutions passed by the committees.

Nomination Committee

The Nomination Committee met five times in the past year, once at an extraordinary meeting, and in particular performed its duties as defined in Section 25d (11) of the German Banking Act (Kreditwesengesetz – KWG). This consisted above all in assisting the Supervisory Board in the succession planning on the Management Board and the Supervisory Board. In particular, it prepared the re-election of a member of the Management Board and the election of new members of the Supervisory Board. The Nomination Committee also reviewed the Management Board's principles for selecting and appointing individuals to senior management level and supported the Supervisory Board in making corresponding recommendations to the Management Board. In this context, the Nomination Committee prepared the resolution of the Supervisory Board on further adapting the requirements profile of the Management Board and the requirements profile of the Supervisory Board to meet the suitability criteria of the EBA/ESMA Guidelines on the assessment of the suitability of members of the management body and key function holders. With the support of an external, independent consultant (auditing company), the Nomination Committee prepared the annual evaluation of the Management Board and the Supervisory Board pursuant to Section 25d (11) KWG and issued recommendations for action to the Supervisory Board in this connection.

Remuneration Control Committee

In the past year, the Remuneration Control Committee met four times and also met once in a joint meeting with the Risk Committee. In particular, this committee performed the tasks defined in Section 25d (12) KWG and in the German Ordinance on the Supervisory Requirements for Institutions' Remuneration Systems (Institutsvergütungsverordnung – InstitutsVergV). In the 2019 financial year, the Remuneration Control Committee discussed the appropriateness of the remuneration systems for the employees in the 2018 financial year on the basis of the Remuneration Control Report 2018 of the Bank's Remuneration Officer. Based on this report, it held a joint meeting with the Risk Committee to review relevant interfaces between the remuneration system and the risk management system in order to analyse the effects of the remuneration systems on the risk, capital and liquidity situation of the Bank and HVB Group and to ensure that the remuneration systems comply with the requirements set out in Section 4 InstitutsVergV and are oriented towards achieving the goals defined in the business and risk strategy of the Bank, also taking account of the corporate culture. The committee also solicited a presentation of the 2019 annual plan of the Remuneration Officer. Furthermore, it discussed the appropriateness of the total amount of variable remuneration for the Management Board and employees of HVB Group ("bonus-pool") for the 2018 financial year, discussed the evaluation of Management Board members' performance as well as the determination of the respective variable remuneration for the 2018 financial year and the goals set for the individual Management Board members

Report of the Supervisory Board (Continued)

in the 2019 financial year and gave corresponding recommendations to the Supervisory Board. It also discussed the appropriateness of the design of the 2019 Group Compensation Policy for all employees of HVB Group and the 2019 Group Incentive System at HVB and recommended to the Supervisory Board that this system also be implemented for members of the Management Board. In addition, it discussed the appropriateness of the design of the Group Termination Payments Policy 2019 for all employees of HVB Group and recommended its implementation, also for the members of the Management Board. The Remuneration Control Committee assisted the Supervisory Board in reviewing the appropriateness and customary level of the remuneration packages for Management Board members in 2019. It also supported the Supervisory Board in monitoring the process of determining the Risk Takers in 2019 of HVB Group pursuant to Section 15 (3) InstitutsVergV. Moreover, it supported the Supervisory Board in monitoring the appropriateness of remuneration in 2018 for the heads of the Risk Control function, the Compliance function, the Risk Takers and the appropriateness of the structure of the 2019 remuneration systems for employees based on the 2019 Remuneration Report of the Management Board. The Remuneration Control Committee monitored the proper involvement of the internal control functions and all other relevant areas in the structuring of the remuneration systems. Moreover, the committee prepared the Supervisory Board's resolution on the extension of an employment contract of a Management Board member in connection with a renewed appointment and discussed the contractual arrangements as well as the remuneration of the Management Board member in detail. Independent external legal advisers were consulted in individual cases. The Remuneration Officer assisted the Remuneration Control Committee in all of its monitoring and structuring duties with respect to all employee remuneration systems.

Risk Committee

The Risk Committee met five times in the past year and also held joint meetings, once with the Remuneration Control Committee and once with the Audit Committee. The independent auditor and the head of the Internal Audit attended all the committee meetings to provide information. The Risk Committee advised the Management Board in particular on the current and future overall risk appetite and risk strategy of HVB Group and helped the Supervisory Board to monitor the implementation of that strategy by the senior management. In compliance with the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement der Kreditinstitute – MaRisk), the Risk Committee received monthly risk reports. The Chief Risk Officer used the integrated risk reports in the meetings to explain the development of the regulatory financial ratios, risk taking capacity, credit risk, market risk, operational risk, reputational risk, liquidity risk and the strategic risk. In addition, the Risk Committee held discussions in the meetings on individual credit exposures as well as on country, concentration and sector risks. The Risk Committee solicited further reports on the topic of risk and strategy on a regular basis. The four-year forecast (2020 – 2023) on the future development of the credit and market risk of HVB Group was also discussed in the Risk Committee. The reports of the Management Board included subjects concerning the current developments in economic policy and their impact on the Bank's risk profile. The Risk Committee was briefed on the effects of new supervisory requirements by the Management Board on a regular basis. The efficiency of the risk management system was also the subject of detailed discussion with the Chief Risk Officer, the head of the Internal Audit, the Chief Compliance Officer and the independent auditor. The committee solicited reports on a regular basis concerning the status and the progress of the remediation of relevant internal and external audit findings of the Internal Audit, the Compliance function, the independent auditor and the supervisory authorities. The Risk Committee was informed of the principal findings of audits conducted by the supervisory authorities. At three meetings, the Risk Committee discussed at length with the Management Board, the head of the Internal Audit and the independent auditor whether the terms in the customer business were in harmony with the business model and the risk structure of the Bank (Section 25d (8) KWG) and whether all key financial products and services are consistent with the business model and the risk structure of the Bank (EBA Guidelines on internal governance). In a joint meeting with the Remuneration Control Committee, the Risk Committee used the Remuneration Control Report 2018 of the Remuneration Officer to analyse whether the incentives set by the remuneration system take the risk, capital and liquidity structure of the Bank into account, as well as the probability and due dates of revenues. Furthermore, the Risk Committee received regular reports at its meetings on IT security management and IT organisation, one focus of which was monitoring the outsourcing partner UniCredit Services S.C.p.A. In the joint meeting with the Audit Committee, the two committees solicited reports in particular on the situation concerning resources in the CRO, CFO and COO business units, especially in connection with the Transform 2019 programme. Furthermore, an analysis of the Bank's legal risks was discussed with the head of Legal.

Audit Committee

The Audit Committee held five meetings in the reporting year, one of which was an extraordinary meeting and one a joint meeting with the Risk Committee. Representatives of the independent auditor and particularly also the persons from whom the Audit Committee has a right to obtain information (the head of the Internal Audit and the Chief Compliance Officer) attended all of the committee meetings to advise and to provide information. The key responsibilities of the Audit Committee are to monitor the financial reporting process, the effectiveness of the risk management system, particularly the internal control system including the Compliance function and the internal audit system as well as the audit of the financial statements. In the reporting year the meetings thus looked at the preliminary audit of the 2018 annual and consolidated financial statements and the report on relations with affiliated companies, prepared draft resolutions for the Supervisory Board and discussed the 2019 Half-yearly Financial Report and the figures at 31 March and 30 September 2019. The Audit Committee was informed by the independent auditor of the main outcome of the reviews of reporting packages to UniCredit S.p.A. Moreover, the Audit Committee carefully and comprehensively examined the efficiency of the risk management system, particularly the internal control system, the compliance management system and the internal audit system. The efficiency of the individual systems was discussed in-depth with the Management Board, the Internal Audit, the Compliance function and the independent auditor. In this connection the Chairwoman of the Risk Committee or her representative also reported on the assessment of the examination of the efficiency of the risk management by the Risk Committee at two meetings of the Audit Committee. The Audit Committee discussed the quarterly reports of the Internal Audit and the Compliance function on a regular basis in its meetings. The committee was provided with the annual plan of the Internal Audit and the Compliance function. It solicited regular reports on the status and the progress made in the remediation of the relevant internal and external findings of the Internal Audit, the Compliance function, the independent auditor and the supervisory authorities. The Audit Committee was briefed on key results of audits of the supervisory authorities. It also considered the independent auditor's report on the annual audit of the securities account business according to Section 89 of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG), the Bank's outsourcing arrangements, the report of the Data Protection Officer and the annual report of the Legal department including existing legal risks. The Audit Committee requested quarterly reports on the liquidity situation. The committee also assessed the qualification and independence of the auditor and the quality of the audit. It prepared the granting of the audit engagement by the Supervisory Board including the specification of audit focus areas and a recommendation on the amount of remuneration for the independent auditor and an expansion of the audit engagement including the associated additional remuneration for the independent auditor. On the basis of Art. 5 paragraph 4 of Regulation (EU) No. 537/2014 (Audit Regulation) the Audit Committee approved the non-audit services of the independent auditor. Members of the Audit Committee were

Report of the Supervisory Board (Continued)

briefed on the latest status of the current audit of the annual financial statements by the independent auditor. The Audit Committee initiated the procedure for the change in independent auditors in accordance with the Audit Regulation (audit period 2022 to 2030). In an extraordinary meeting the Audit Committee considered the real estate strategy, especially a planned sale of real estate and the planned introduction of IAS 16 and IAS 40 for the valuation of land and buildings at UniCredit Bank AG. Furthermore, the Audit Committee discussed the capital development of UniCredit Bank AG and prepared the expansion of the audit engagement for the 2019 financial year on account of the proposed introduction of IAS 16 and IAS 40 for the valuation of land and buildings including a recommendation on the associated additional remuneration of the independent auditor. In the joint meeting with the Risk Committee, the two committees solicited reports in particular on the situation concerning resources in the CFO, CRO and COO business units, especially in connection with the Transform 2019 programme. Furthermore, an analysis of the Bank's legal risks in 2019 was discussed with head of Legal.

Training and education

The members of the Supervisory Board took part in the training and educational programmes required for their tasks on their own initiative. In the process, they were appropriately supported by HVB. An internal induction programme was offered especially to new Supervisory Board members and written information was provided therefore. HVB offered all Supervisory Board members internal training and educational measures by specialists in the Bank and representatives of auditing companies. The topics covered were in particular financial sanctions and the prevention of money laundering, a status update on the joint venture between CIB & CB/UBK and sustainability at HVB.

Annual financial statements for 2019

The annual financial statements and Management Report of UniCredit Bank AG prepared in accordance with the German Commercial Code (Handelsgesetzbuch – HGB) and the consolidated financial statements and Group Management Report prepared in accordance with International Financial Reporting Standards (IFRS) for the 2019 financial year were audited by Deloitte. The independent auditor issued an unqualified opinion in each case.

The financial statements listed above, together with the Management Board's proposal for the appropriation of the net profit and the independent auditors' report were available to the Supervisory Board. The Audit Committee examined these documents in great detail during the preliminary audit. The lead auditor of the independent auditor reported on the key findings of the audit at the preparatory meeting of the Audit Committee, each of the preliminary discussions and at the subsequent meeting of the Supervisory Board devoted to the annual financial statements. The topics addressed were particularly the internal control system and the risk management system relating to the financial reporting process (ICS) compliant with Section 171 (1) German Stock Corporation Act (Aktiengesetz – AktG). Questions of members of the Supervisory Board were answered in detail and comprehensively. During the meeting of the Audit Committee, the independent auditor also reported on the work performed by the independent auditor in addition to the audit of the financial statements and stated that there were no circumstances speaking against his independence. The Chairman of the Audit Committee reported to the full Supervisory Board on the results of the review by this committee. Upon recommendation by the Audit Committee, the Supervisory Board approved the results of the audit after checking and discussing in-depth all the documents submitted and finding them to be orderly, validated and complete. On the basis of its own examination of the annual financial statements, the consolidated financial statements, the Management Report and Group Management Report as well as the proposal for the appropriation of the net profit, the Supervisory Board determined that no objections were to be raised. The Supervisory Board has therefore approved the annual financial statements and the consolidated financial statements prepared by the Management Board. Consequently, the annual financial statements were adopted. The Supervisory Board also concurred with the Management Board's proposal for the appropriation of the net profit.

UniCredit S.p.A. has held a majority interest in the share capital of HVB since 17 November 2005 and 100% of the share capital of HVB since 15 September 2008. Thus, the Management Board has also produced a report on relations of HVB with affiliated companies for the 2019 financial year in accordance with Section 312 AktG. The report contains the following concluding statement by the Management Board:

"We declare that, based on the circumstances known at the time the legal transactions listed in this report were entered into, or the measures listed in this report were undertaken or omitted, UniCredit Bank AG received appropriate consideration for each transaction and did not suffer any disadvantage as a result of measures undertaken or omitted, or any disadvantages arising were compensated."

Deloitte audited this report and issued the following opinion:
"On the basis of our statutory audit and assessment, we confirm that
1. the actual information contained in the report is correct,
2. the company's performance was not unreasonably high or disadvantages were compensated for the legal transactions mentioned in the report,
3. no circumstances speak in favour of a significantly different assessment to the one given by the Management Board concerning the measures mentioned in the report."

The report of the Management Board on relations with affiliated companies and the related audit report by Deloitte were also forwarded to the Supervisory Board. In the course of the preliminary audit, the Audit Committee and then the full Supervisory Board considered these documents in-depth. The plausibility and consistency, and individual legal transactions between HVB and UniCredit S.p.A. and its affiliated companies were carefully examined together with other cost generating measures initiated by UniCredit S.p.A. The independent auditor took part in the discussion of the Supervisory Board and the preparatory meeting of the Audit Committee, and gave a report on the principal findings of their audit. The Chairman of the Audit Committee reported to the full Supervisory Board on the results of the review by the committee. Following the examination of the report on relations of HVB with affiliated companies in the 2019 financial year prepared by the Management Board compliant with Section 312 AktG, which did not identify any deficiencies, the Supervisory Board is of the opinion that no objections are to be raised about the concluding statement of the Management Board in this report.

Personnel
Ms Beate Dura-Kempf resigned as employee representative on the Supervisory Board with effect from the end of 31 January 2019. She was succeeded by Ms Claudia Richter with effect from 8 February 2019 by court appointment.

Furthermore, Mr Gianni Franco Papa resigned from the Supervisory Board with effect from the end of 2 June 2019. Mr Gianpaolo Alessandro was elected to the Supervisory Board at the Annual Shareholders' Meeting held on 3 June 2019. Mr Gianpaolo Alessandro was elected the new Chairman of the Supervisory Board with effect from 3 June 2019.

With effect from the end of 27 November 2019, Mr Francesco Giordano resigned from the Supervisory Board. He was succeeded by Mr Olivier Khayat, who was elected to the Supervisory Board at the Extraordinary Shareholders' Meeting held on 28 November 2019.

The Supervisory Board thanks the members who have resigned from the Supervisory Board for their long-term, committed and valuable service on this board and also for their commitment and their constructive support for the Bank on the Supervisory Board.

The Supervisory Board would like to thank the Management Board, the employees and the employee representatives for all their hard work and their services in the 2019 financial year.

Munich, 20 March 2020

The Supervisory Board

Gianpaolo Alessandro

Chairman

Additional Information

Summary of Annual Financial Data

(€ millions)

OPERATING PERFORMANCE	2019	2018[3]	2017	2016	2015
Net interest	2,388	2,484	2,541	2,518	2,728
Dividends and other income from equity investments	24	25	11	57	69
Net fees and commissions	973	973	1,103	1,066	1,035
Net trading income	579	693	928	903	525
Net gains/(losses) on financial assets and liabilities at fair value	108	(110)	n/a	n/a	n/a
Net gains/(losses) on derecognition of financial					
instruments measured at amortised cost	13	52	n/a	n/a	n/a
Net other expenses/income	742	845	399	354	318
OPERATING INCOME	**4,827**	**4,962**	**4,982**	**4,898**	**4,675**
Payroll costs	(1,453)	(1,468)	(1,600)	(1,668)	(1,821)
Other administrative expenses	(1,220)	(1,364)	(1,443)	(1,536)	(1,560)
Amortisation, depreciation and impairment losses					
on intangible and tangible assets	(483)	(183)	(227)	(257)	(198)
Operating costs	**(3,156)**	**(3,015)**	**(3,270)**	**(3,461)**	**(3,579)**
OPERATING PROFIT	**1,671**	**1,947**	**1,712**	**1,437**	**1,096**
Net write-downs of loans and provisions for guarantees					
and commitments IAS 39	n/a	n/a	(195)	(341)	(113)
Credit impairment losses IFRS 9	(115)	(16)	n/a	n/a	n/a
NET OPERATING PROFIT[1,2]	**1,556**	**1,931**	**1,517**	**1,096**	**983**
Provisions for risks and charges	313	(919)	(25)	(193)	(194)
Restructuring costs	(363)	(14)	(7)	(645)	(112)
Net income from investments	n/a	n/a	112	39	99
Net gains/losses on disposals on investments	(15)	26	n/a	n/a	n/a
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	**1,491**	**1,024**	**n/a**	**n/a**	**n/a**
Impairment on goodwill	(130)	(288)	—	—	—
PROFIT BEFORE TAX	**1,361**	**736**	**1,597**	**297**	**776**
Income tax for the period	(551)	(253)	(261)	(140)	(26)
PROFIT AFTER TAX	**810**	**483**	**1,336**	**157**	**750**
CONSOLIDATED PROFIT OF FULL HVB GROUP	**810**	**483**	**1,336**	**157**	**750**
attributable to the shareholder of UniCredit Bank AG	793	465	1,332	153	743
attributable to minorities	17	18	4	4	7
Cost-income ratio in % (based on total revenues)	65.4	60.8	65.6	70.7	76.6
Earnings per share of full HVB Group (€)	0.99	0.58	1.66	0.19	0.93

	2019	2018	2017	2016	2015
Balance sheet figures (€ billions)					
Total assets	303.6	287.3	299.1	302.1	298.7
Shareholders' equity	18.9	18.3	18.9	20.4	20.8
Key capital ratios (in accordance with approved financial statements)	**Compliant with CRR II**	**Compliant with CRR**	**Compliant with Basel III**	**Compliant with Basel III**	**Compliant with Basel III**
Core capital (€ billions)	15.0	16.5	16.6	16.6	19.6
Risk-weighted assets (€ billions)					
(including equivalents for market risk and operational risk)	85.5	82.6	78.7	81.6	78.1
Core capital ratio (%)					
(calculated based on risk-weighted assets including equivalents					
for market risk and operational risk)	17.5	19.9	21.1	20.4	25.1
Employees (in full-time equivalents)	12,194	12,252	13,405	14,748	16,310
Branch offices	498	503	553	579	581

1 Net operating profit according to IAS 39 until 31 December 2017.
2 Net operating profit according to IFRS 9 since 1 January 2018.
3 Adjustment due to retrospective application of IAS 40 included.

Contact

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You can call up important company announcements as soon as they have been published by visiting our website at www.hvb.de

Internet
You can call up interactive versions of our annual and half-yearly financial reports on our website: www.hvb.de

Publications
Annual Report (English/German)
Half-yearly Financial Report (English/German)
You can obtain PDF files of all reports on our website: www.hvb.de

UniCredit S.p.A. Profile

Transform 2019: a strategic plan delivered as promised

Transform 2019 was about restructuring and reshaping the Group, with an emphasis on strengthening capital and improving asset quality. We also strengthened our corporate governance in line with best-in-class European companies. We are the only large listed Italian company where the board of directors presents its own list of candidates. We also lifted voting restrictions and converted savings shares into common shares.

Our hard work was acknowledged by the ECB that, at the end of 2019, lowered our SREP pillar 2 requirement by a further 25 basis points, to 175. This is 75 basis points lower than in 2016, an achievement we are very proud of and another recognition of the outstanding work done by the team over these last three years.

SIGNIFICANT DE-RISKING

Gross NPEs down by more than **€50bn** since 2015, to

€25bn

with an end 2019 **Gross NPE ratio of 5.0 per cent** and a **Net NPE ratio 1.8 per cent**

MATERIAL COST REDUCTION

€2.3bn

net cost reduction since 2015 with C/I ratio reduced by more than **7 percentage points to 52.7 per cent in 2019**

IMPROVED ROTE

More than doubled our profitability with **underlying RoTE in 2019** of

9.2 per cent

up from 4 per cent in 2015

STRONG CAPITAL POSITION

Pro forma[1] CET1 ratio of

13.1 per cent

as at the end of 2019, equivalent to a pro forma[1] **MDA buffer** of **300 basis points**, **above** our **200 to 250 basis point** target range

1 Pro forma 2019 CET1 ratio and MDA buffer including deduction of share buyback of €467m, subject to supervisory and AGM approval.

Team 23: a new strategic plan, further building on our pan European strengths

While Transform 2019 represented a strong cost efficiency and de-risking effort, Team 23 focuses on strengthening and growing our customer base. All our key strategic initiatives focus on customer experience, which we will monitor precisely while making sure we increase our process optimisation. We will also continue to manage the business with tight cost discipline, focusing on high asset quality and ensuring we maintain a very strong capital level at all times. We work on this from a position of strength, thanks to Transform 2019. We will deliver a recurring dividend with a mix of cash and share buybacks.

Our strategy remains unchanged

UniCredit is a simple successful Pan European Commercial Bank, with a fully plugged in Corporate & Investment Banking (CIB), delivering a unique Western, Central and Eastern European network to its extensive and growing client franchise

As "One Bank, One UniCredit" we will continue to build on our existing competitive advantages

Truly local with **13 leading commercial banks*** and a unique reach through our fully plugged in CIB and international branch network

Provide "banking that matters" for all our 16 million clients across Europe. UniCredit is:

- Supporting our individual clients and the European mid-market corporate clients, that are the backbone of the European economy, as the second largest corporate lender in Continental Europe
- Ranked in the top three by assets in Italy, Germany and Austria and first by assets in CEE, on a consolidated basis
- We have a well-diversified business with a third of our lending coming from Italy, a third from Germany and Austria, and a third from CEE and CIB

A fully plugged-in CIB business, **focused on supporting the Group's clients**, with top of the league tables rankings, demonstrates our strong product offer and our ability to create significant cross-selling and synergies across the Bank

* Assuming full regulatory deconsolidation of Yapi

Unique network: pan European footprint

Commercial banks

International branches and representative offices*

* Including UC Luxembourg and UC Ireland. Other International branches and representative offices In Asia and Oceania, North and South America, Middle East and Africa.

"Banking that matters" for our clients

16 m clients

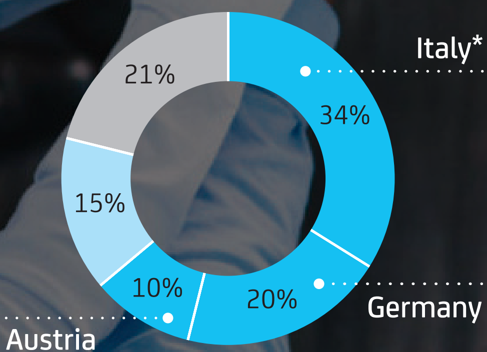
#2 for loans to corporates in Europe

#3 ranking for assets in IGA

#1 by total assets in CEE

Well-diversified business

>430 Commercial loans, bn



Western Europe | CEE | CIB

* Italy including Non Core and Group Corporate Centre.

Market-leading CIB

- **Most active player in EUR Bonds** since 2013 (cumulative)
- **#1** in EUR Bonds in Italy, Germany, Austria
- **#1 All Covered Bonds in EUR**
- **#1** EMEA Corporate Loans EUR denominated
- **#1** Syndicated Loans in Italy, Austria and CEE; #2 in Germany

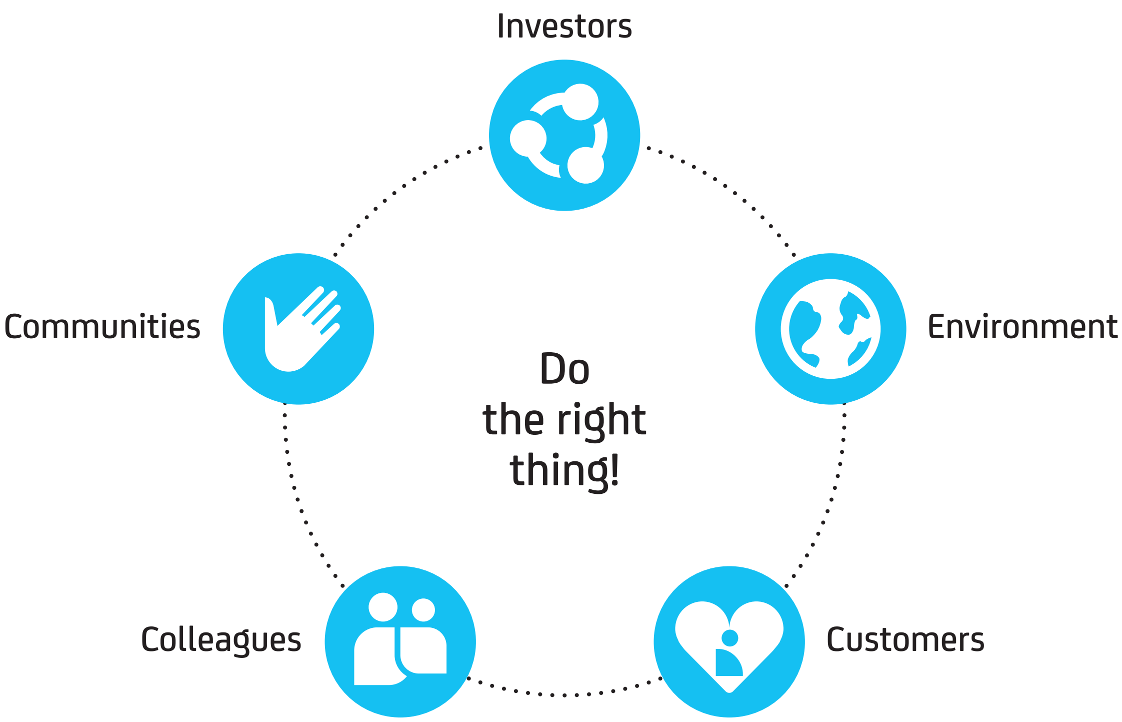
Source: Dealogic, period: 1 Jan-31 Dec 2019.

How we achieve results in UniCredit: Do the right thing!

At UniCredit, our corporate culture is based on two core values: Ethics and Respect. Our commitment to always "Do the right thing!" is our guiding principle for interactions with all our stakeholders: investors, customers, colleagues and communities.

In the fourth quarter of 2019, we announced new ESG targets as part of our long-term commitment to sustainability – part of our Group's DNA and a key component of our business model. Building a sustainable future is an important challenge for both people and businesses. Every company has to do more than 'business as usual' – it is time to act and make an impact.

"Do the right thing!" to generate sustainable results



We adhere to the highest standards and principles with external monitoring and recognition. This include the Task Force on Climate-Related Financial Disclosures, Principles for Responsible Banking and OECD Business for Inclusive Growth Coalition. Our commitment to ESG places us in the 99th percentile of the FTSE Russell ESG ratings, a constituent of the FTSE4Good Index Series. Standard Ethics identified us as the only bank in Italy with an EE+ rating, strong compliance and the ability to manage key reputational risks.


UniCredit Leadership Team Meeting, Millennial Board presentation, Dec 2019

Environment

Every team member of UniCredit is committed to protect the environment: the entire UniCredit team was involved in "Climate day" on Friday September 20th, submitting more than 1,200 new ideas on what UniCredit can do concretely. All these suggestions will be implemented, under the leadership of the Group "millennial board", made of 10 millennial team members, who bring a tremendous energy and vision to our Group to "Do the right thing!". We are committed to reducing our direct environmental impact by further cutting greenhouse gas emissions. By 2023 all electricity consumption in Western Europe will come from renewable energy sources, by when we will also remove all single-use plastic from all our headquarters. We are working to make an ever bigger difference through our indirect emissions, partnering with our customers in the shift to a low carbon economy. As already announced, we will fully exit thermal coal mining projects by 2023 and not finance any new projects in thermal coal mining or coal fired power generation. We will increase our renewable energy sector exposure, granting more energy efficiency loans to our customers.

Social

We have committed € 1 billion to Social Impact Banking (SIB) initiatives throughout the Group between now and end 2023. This builds on our success in Italy, where we have already disbursed over 100 million euros. The programme is now being rolled out in 10 more markets. Art4Future is supporting SIB with the sale of a limited number of expensive pieces to provide the capital to extend more social loans and buy art pieces of young artists from our different countries.
In addition, we will continue to promote culture through important associations and our UniCredit Foundation will carry on addressing important social needs, while supporting study and research.

Governance

All companies looking to grow and thrive must also focus on diversity and inclusion. Different perspectives help improve processes and behaviours, bringing more sustainable organisations. Creating a positive and inclusive workplace is key to innovation and growth. This is why UniCredit is working on different initiatives to ensure diversity and inclusion is at the forefront throughout the Group, to increase the active participation by women and minorities at all levels of the bank.



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Banking that matters.

HypoVereinsbank

Member of UniCredit